Part I: Project Information

GEF ID
10984

Project Type
MSP

Type of Trust Fund
GET

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

Project Title
Implementation of National Biosecurity Framework of Ethiopia

Countries
Ethiopia

Agency(ies)
UNEP

Other Executing Partner(s)
Environmental Protection Authority of Ethiopia

Executing Partner Type
Government

GEF Focal Area
Biodiversity

Sector

Taxonomy
Focal Areas, International Waters, Freshwater, Lake Basin, River Basin, Biomes, Constructed Wetlands, Mangrove, Learning, Land Degradation, Food Security, Biodiversity, Supplementary Protocol to the CBD,

Biosafety, Protected Areas and Landscapes, Terrestrial Protected Areas, Productive Landscapes, Community Based Natural Resource Mngt, Species, Wildlife for Sustainable Development, Crop Wild Relatives, Threatened Species, Invasive Alien Species, Plant Genetic Resources, Mangroves, Lakes, Rivers, Tropical Dry Forests, Wetlands, Desert, Grasslands, Mainstreaming, Influencing models, Stakeholders, Gender Equality, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Beneficiaries, Women groups, Gender results areas, Access and control over natural resources, Participation and leadership, Capacity Development, Capacity, Knowledge and Research

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

10/28/2023

Expected Implementation Start

1/1/2024

Expected Completion Date

12/31/2027

Duration

48In Months

Agency Fee($)

172,369.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-3-8	Further development of biodiversity policy and institutional frameworks through the Implementation of the Cartagena Protocol on Biosafety	GET	814,415.00	1,000,000.00
BD-2-6	Address direct drivers to protect habitats and species through the Prevention, Control and Management of Invasive Alien Species	GET	1,000,000.00	3,000,000.00
		Total Project Cost($)	**1,814,415.00**	**4,000,000.00**

B. Project description summary

Project Objective

To develop, strengthen and implement a national biosecurity framework to detect, control and effectively manage biological invasions/introductions in Ethiopia

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
I. Policy, regulatory and technical Frameworks on Biosecurity	Technical Assistance	1. Policy and Regulatory instruments on Biosecurity established ?	1.1 Policy on Biosecurity, strategy and action plans on IAS and LMOs developed 1.2 Measures to operationalize the Biosafety Proclamation through updated biosecurity directives focused on biosafety and biosecurity measures on IAS	GET	200,000.00	440,919.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
II. Institutional capacity building for the management and control of Invasive Alien Species (IAS) and the implementation of the Cartagena Protocol on Biosafety	Technical Assistance	2. Fully operational institutional frameworks for the management of LMOs and IAS including an updated information system established	2.1 Updated inventory and map of IAS developed 2.2 Coordinated, harmonized and functional admin systems put in place for management of LMOs and IAS 2.3 Built and operationalized a laboratory facility to handle LMO and IAS detection upgraded 2.4 Operational manuals for handling including detection, risk assessment and management, emergency responses operated	GET	962,000.00	2,204,564.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
			2.5 Decision making systems for IAS and LMOs tested through selected pilot studies			
			2.6 A capacity building and training strategy on Biosecurity developed for identified stakeholders			
			2.7 Functioning multi-stakeholder platforms in place in the project sites and related levels of local government			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
III. A National biosecurity Knowledge and Information Management System	Technical Assistance	3. A National biosecurity Knowledge Management System is established to inform effective IAS prevention, control, monitoring and management, in partnership with key stakeholders	3.1 A National Biosecurity Information System (NBIS), including a participatory monitoring network using citizen science and modern ICTS (information, communication technology Systems) is operationalized	GET	352,415.00	693,148.00
			3.2 National biosecurity communication and awareness plan is implemented			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
IV. Project Monitoring and Evaluation	Technical Assistance	4. Effective Project Coordination and delivery meeting agreed measurable outputs and indicators	4.1 A comprehensive project monitoring and evaluation (M&E) framework developed and implemented drawing on best practices and lessons learnt 4.2 Mid-Term/ Terminal Evaluation	GET	140,000.00	308,639.00
				Sub Total ($)	**1,654,415.00**	**3,647,270.00**
Project Management Cost (PMC)						
				GET	160,000.00	352,730.00
				Sub Total($)	**160,000.00**	**352,730.00**
				Total Project Cost($)	**1,814,415.00**	**4,000,000.00**

Please provide justification

The project's goal is to create, strengthen, and implement institutional biosecurity frameworks for the management of invasive alien species and living modified organisms through coordinated risk analysis, monitoring, enforcement, and management systems of biological invasions/introductions in accordance with the Convention on Biological Diversity, Cartagena Protocol , and relevant Invasive Alien Species regulations.

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($)
Recipient Country Government	Environmental Protection Authority	In-kind	Recurrent expenditures	4,000,000.00
			Total Co-Financing($)	**4,000,000.00**

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($)
UNEP	GET	Ethiopia	Biodiversity	BD STAR Allocation	1,814,415	172,369	1,986,784.00
			Total Grant Resources($)		**1,814,415.00**	**172,369.00**	**1,986,784.00**

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 ($)

50,000

PPG Agency Fee ($)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Ethiopia	Biodiversity	BD STAR Allocation	50,000	4,750	**54,750.00**
				Total Project Costs($)	**50,000.00**	**4,750.00**	**54,750.00**

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
100,000.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
100,000.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Dabaeta chian of mountain		Habitat/Species Management Area	90,000.00			
Firka River Basin		Habitat/Species Management Area	10,000.00			

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

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

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)

Indicator 2 Marine protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
50,000.00	0.00	0.00	0.00

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
50,000.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Lemba Wetland		Habitat/Species Management Area	25,000.00			
Wetland Bochese and Abayi Danaba		Habitat/Species Management Area	25,000.00			

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)

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)
70000.00	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)
	15,000.00			

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)
15,000.00			

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)
	40,000.00			

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)
100000.00	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)
15,000.00			

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)
20,000.00			

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)
40,000.00			

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)
	25,000.00			

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

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	981355	0	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	981,355			
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting	2024			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting	2028			
Duration of accounting	3			

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

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	2,000			
Male	4,000			
Total	6000	0	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

Through the Prevention, Control, and Management of Invasive Alien Species and the Implementation of the Cartagena Protocol on Biosafety and its Nagoya-Kuala Lumpur Protocol on genetic resources and ABS, the proposed project interventions will support BD-2-6 and BD 3-8 addressing drivers to protect habitats and species. The project interventions will make sure that capabilities and tools are created to support science-based decision making in the management of invasive alien species through a coordinated Risk Analysis based approach to management of biological organisms and the sustainable use of biodiversity through contemporary biotechnology. The outcomes and deliverables will support the new Kunming-Montreal Global Biodiversity Framework (GBF) for 2030, particularly Target 6 on Invasive Alien Species, which aims to eliminate, minimise, reduce, and/or mitigate the effects of invasive alien species on biodiversity and ecosystem services by managing alien species' introduction pathways, preventing the introduction and establishment of priority invasive alien species, and managing invasive alien species, and Target 17 on Biosafety, which involves preserving biodiversity, managing genetic resources and associated benefits, as well as engaging with the final users of genetic resources through pre- and post-approval monitoring procedures. The project will also support Targets 20 and 21 by ensuring best available data, prior informed consent or advanced informed agreements in the handling of biological introductions, inclusion and transparency in decision-making with clearly delineated roles for all stakeholders, and strengthening communication, awareness-raising, education, monitoring, research, and knowledge management. This project will also support methods for managing and restoring the forest landscape, which will benefit BD-4 Programme 9 and LD-2 Programme 3. According to the strategies and initiatives carried out by CBD and CPB, biodiversity is an "asset" that significantly aids in sustainable development. The implementation of a set of coordinated actions across government ministries and sectors is necessary to achieve the targets which support the implementation of the CPB. These coordinated actions typically include 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. The listed areas are not included in the WDPA-IUCN list, the data in the CEO endorsement is derived from important bird areas of Africa code (IBA). This is summarized and inserted under the Section on core indicators in the CEO endorsement template and the portal entry. A reference is provided below. Notes on WDPA ID for Core indicators 1.1 and 2.1 Name Important Bird Areas (IBA code) National code WDPA IDs Lake-Zuway (Bochese and Abayi Danaba wetland) ET041 68 NEW Bahirdar-Lake-Tana (Firka River Basin, Lemba Wetland) ET07 15 NEW Dabaeta mountain chain - - NEW Source: Ethiopian Wildlife Conservation Authority ? See https://datazone.birdlife.org/userfiles/file/IBAs/AfricaCntryPDFs/Ethiopia.pdf

Part II. Project Justification

1a. Project Description

1.1 Background and context

Overall Development context

The global environmental and/or adaptation problems, root causes and barriers that need to be addressed.

Ethiopia is known for its rich natural resources and is endowed with a substantial amount of water resources. Ethiopia has also been identified as one of the eight centers of origins of different cultivated crops (e.g. Teff, Barley, Wheat, Coffee, and Sorghum). The country?s diverse environmental conditions and cultural history of the people make Ethiopia an important primary and secondary center for many cultivated species, serving as an economically and ecologically important source of germplasm. Ethiopia has a rough, mountainous topography, with elevations ranging from Mount Ras Dashen in North Gondar, which is 4,620 metres above sea level, to the Dalol Depression in the Afar area, which is 116 metres below sea level. Ethiopia is blessed with a variety of environmental conditions that are home to an astoundingly wide variety of plant, animal, and microbial genetic resources that play important economic, social, and environmental functions. This is due to the combined influence of the aforementioned elements. However, direct and indirect pressures like invading alien species and new biological introductions to the national ecosystems have had a negative impact on these resources.

Current context with the IAS and LMOs in Ethiopia

The Biosecurity Project of Ethiopia 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 Ethiopia, 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)

Invasive Alien Species (IAS) are currently becoming one of the potential threats of Biological Invasions to both water bodies and dry landscapes of the country. There are about 35 invasive alien species identified in Ethiopia and prioritization of invasive alien species was done by considering facts such as the magnitude of invasiveness, threats to local biodiversity, socio-economic and human health impacts. Priority species are Parthenium weed (*Parthenium hysterophorous*), Mesquites (*Prosopis juliflora*), Water hyacinth (*Eichhornia crassipes*), Lantana (*Lantana camara*), striga species and Ductylopius coccus (Cochineal) and Calotropis procera. Invasive alien species (IAS) is becoming increasingly problematic in Ethiopia and is the second most important factor that affects environment and biodiversity in global perspective (GEF, 2003, UNEP 2010).

Parthenium hysterophorus and *Prosopis juliflora* are causing significant damage to crop and rangeland species leading to changes in vegetation composition. *Eichhornia crassipes* known commonly as Water hyacinth has been causing an enormous problem in lakes, water reservoirs and irrigation canals. Other equally important invasive species include the parasitic weeds such as *Striga*, *Orobanche* and *Cuscuta species*, and *Lantana camara*, a perennial widespread shrub. The parasitic weeds such as Striga, Orobanche and Cuscuta species (EARO, 2016). There are newly emerging invasive alien species around the country which are becoming a very serious source of concern including *Calothropis procera* and Mimosa *invisa* (MoLF, 2017).

These invasive alien plant species seriously endanger agriculture, way of life, and human health in many regions of the country. They are the second biggest threat to biodiversity after habitat destruction. Due to their specific qualities, they may produce seeds for a longer period of time as long as the environment allows and do not require a special environment for seed germination, rapid seedling growth, or seed production. These invasive alien species outcompete, infect or spread diseases, compete with the native species, hybridise with them, or even attack them. As a result, social instability and economic suffering are increased, which hinders sustainable development, economic growth, the reduction of poverty, and food security. These invasive alien species are having a significant influence on the farming and fishing livelihoods of populations in Ethiopia.

Water bodies in Ethiopia's crater lakes and natural lakes, including Lake Tana, Lake Abaya, the Baro River, and the Koka Dam reservoir, are suffering serious problems as a result of a widespread invasion by water hyacinth. Water hyacinth has been a problem for society, the economy, and the environment ever since it first appeared in Ethiopia. First and foremost, water hyacinth makes it impossible to reach water bodies by forming thick, impenetrable mats. This thus has an impact on a variety of water-related economic activities, including fishing, irrigation, transportation, navigation, and tourism. Water hyacinth was identified by the Regional Environmental Bureau as the most hazardous vegetation damaging Lake Tana in 2011. In 2014, Ethiopian researchers discovered that water hyacinth had overtaken 128 kilometres, or nearly one-third of the lake's shoreline. The task is difficult. With the invasion of water hyacinths, ecological, benthic, and littoral variety is decreased while the population of disease-carrying insects such as malaria and bilharzia vectors is enhanced. Water hyacinth invasion also has an impact on biodiversity because the dense mats of the weed that cover the water's surface cause the water to become oxygen-depleted, which negatively impacts all aquatic life.

It is well recognised that a thick water hyacinth cover increases evapotranspiration and has the ability to lower the amount of water present. These water bodies' ecosystems are impacted in similar ways, particularly due to eutrophication and the release of deadly gases from decomposition. If left unchecked, water hyacinth can completely cover lakes and ponds, drastically altering water flow and killing native aquatic vegetation by preventing sunlight from reaching them. Fish are frequently killed when the degradation processes reduce the amount of dissolved oxygen in the water. Invasion by water hyacinths also caused rotting, creating health issues due to deteriorated water quality, increased siltation, and potential for floods.

Even though the government and local community have made efforts to manage watersheds using various watershed management interventions, a significant amount of nutrients that promote the growth and development of water hyacinth continue to enter Ethiopian lakes and other bodies of water. Lack of buffer zones around water bodies, which would be important in preventing nutrients from entering the water bodies, makes this situation worse.

An intentional and well-coordinated effort should be made to manage invasive alien species, as demonstrated by Lake Tana, which is the source of the Blue Nile River, which is significant on a regional and global scale. There is a risk that the water hyacinth could eventually colonise all downstream water resources development plans, including the multipurpose Ethiopian Renaissance Dam that is currently under construction, according to various studies and surveys conducted by various institutions. As a member of the Nile's riparian states, Ethiopia strives to realise a common vision for sustainable socioeconomic development based on sound environmental management principles and supported by scientifically sound risk analysis methodologies through the equitable use of and benefit from the basin's shared water resources. However, water hyacinth would be one of the main obstacles to attaining not only Ethiopia's ambition but also those of other downstream nations if it were not managed and controlled.

Water hyacinth has overtaken large-scale sugar crops in the Awash Basin's Koka Lake, which provides water for the region's cascade dams and horticulture industry. In the rift valley lakes basin, Lake Ziway, which offers a variety of services including floriculture production, is also a victim of the weed. Abaya Lake in the Southern States, Nationalities, and Peoples Region presents an even greater challenge for water hyacinth removal due to the lake's invasion by a sizable crocodile population. Surveys done thus far also reveal that water hyacinth has spread to the Baro River, a tributary of the White Nile. As a result, Ethiopia's water hyacinth problem is now a national issue that necessitates strategic and coordinated action. It is no longer restricted to a particular region or a problem with a single water body. The methods and capacities established will be modified to support additional possible regions where the Directorate at the Ethiopian Environmental Protection Authority is required to deal with the issue of invasive alien species.

Living Modified Organisms (LMOs)

Research in agricultural biotechnology was started decades ago by the Ethiopian Agricultural Research Institute (EIAR) and other universities. Production of disease free, best and genetically uniform quality planting material in short time through plant tissue culture was the priority research area in the early 2000s. Ultimately, more than 60 mass propagation protocols for high value crops have been developed. Gradually, molecular studies in plant, microbial and animal breeding was started and currently there are more than hundred research activities under plant, microbial and animal biotechnology research programs in EIAR and many more at Bio and Emerging Technology Institute (BETiN).

Ethiopia is currently collaborating with other countries in the Africa region and international organizations in agriculture biotechnology. Activities include confined and contained research trials of Genetically Modified (GM) crops. The first GM crop in Ethiopia was Bt-cotton in 2016 with funding from Ministry of Science and Technology (MoST), the then Ministry of Innovation and Technology (MINT). This was to address critical cotton production problem in the country as the result of cotton boll worm (insect pest) and the high demand for cotton due to flourishing textile industrial parks in the country.

In Ethiopia, based on the national interest of enhancing cotton production, Bt-cotton project was developed and funded by the Government. The Bt-cotton hybrid seeds were obtained from an Indian company; JK Agri Genetics (JKCH 1947 and JKCH 1050) were evaluated under confined conditions in 7 major cotton growing areas of Ethiopia in comparison with local or adapted varieties (non-GM) and Sudanese GM variety in 2016 and 2017 respectively. The permission to conduct confined research was issued by the Ministry of Environment, Forest and Climate Change (MEFCC), now Environmental Protection Authority based on the amended proclamation no. 896/2015.

The introduction of Ethiopia's biosafety regulatory frameworks has significantly advanced genetic engineering research and development. For instance, the release of Bt-cotton, insect resistant cotton into the environment has been authorized. Water Efficient Maize for Africa (WEMA), also known as

TELA maize, conducted a confined field trial (CFT), and approved for environmental release. Additionally, the EPA issued special permits for CFTs for BT-DT Maize, Enset (*Enset Ventricosum*), BT-GT Cotton and Soybean for contained (laboratory) test. Genome editing research is also being conducted by Ethiopian scientists and international collaborators on crops important to the nation's economy, such as Ethiopian mustard, sorghum, and teff, in keeping with global advancements in contemporary biotechnology. Through ongoing research, the EPA continues to build capacity in biosafety in order to provide a regulatory response based on sound science evidence before release to the environment. It was within this context that Ethiopia ratified the Cartagena Protocol on Biosafety in 2003 and the Council of Ministers approved the biosafety Proclamation No. 655/2009 to support the regulation and management of Genetically Modified Organisms. The regulation was amended in 2015 with proclamation number 896 to align its content and scope to new developments in modern biotechnology and biosafety. This revision constituted an important landmark towards the establishment of enabling environment for safe and responsible application of modern biotechnology in Ethiopia.

To support implementation of the Protocol, Environmental Protection Authority has developed six directives and 4 draft guidelines and 1 regulation namely:

? The content of an application for undertaking deliberate release of modified organisms.

? Risk assessment parameters for modified organisms.

? Management of risks from any transaction involving modified organisms.

? Determine the requirements for transport and storage of modified organisms.

? Establish major contents of an application for the special permit to engage in the transactions of modified organisms for research or teaching.

? Establishment of Institutional Biosafety Committee

? Draft Genome editing guideline

? Draft food and feed safety assessment guideline

? Draft public awareness guideline

? Establishment of National Biosafety Advisory Committee regulation

? Draft SOP and monitoring and inspection checklist for GMOs/LMOs

The National Biosafety Advisory Committee with 13 members represented by concerned institutions including Ministry of Health, Ethiopian Biodiversity Institute, Universities and Consumer associations to mention few of them. To ensure that all activities conducted comply with the Biosafety (Amended) Proclamation and its directives, EPA has approved directives on Institutional biosafety Committee. The Committee has the role to initially review applications before submission to EPA and undertake monitoring and inspection for compliance of research involving modified organisms in line with the existing regulatory provisions.

As per the current situation analysis and ongoing developments, the proposed project provides an opportune time to harmonize and consolidate efforts based on risk analysis and scientific evidence to support the management of IAS and decision making. The interventions will build institutional capacity to manage new introductions of biological organisms guided by environmental safeguard and safety principles in the sustainable use of biological diversity.

Ethiopia is a signatory to the Convention on Biological Diversity and the Cartagena protocol on biosafety and is intending to implement its provisions including capacity-building, infrastructure and awareness raising at all levels in the management of biological introductions as an approach anchored on the risk analysis principle of risk assessment, risk management and risk communication. The key innovation in the proposed project is to develop and implement a science-based biosecurity approach to the management of biological introductions anchored on the risk analysis through a coordinated and multi sector-based approach. Biosecurity measures grounded on a risk analysis-based approach, coordinated and multi sectoral efforts and a safety-first principle could help in addressing the challenges Ethiopia is facing with biological invasions or introductions to its ecosystems. Ethiopia is seeking GEF Funding to address the issues raised above.

1.2 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)[1]1. In 2019, the 24th year of commercialization of biotech crops, over 190.4 million hectares across 29 countries, were under GM crops in 2019[2]2.

1.3 Threats, Root causes and barrier analysis -

Threats and their immediate root causes

There are several **critical threats in** Ethiopia **caused by IAS/LMOs** that the project will address and each of them has several underlying factors discussed below. Climate change is likely to exacerbate the spread of IAS and intensify their impacts on biodiversity and the economy in Ethiopia. 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).

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 Ethiopia. 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, agriculture, and tourism industries negatively.

Possible adverse impact (threats) of Living Modified Organisms (LMOs) on biodiversity and natural ecosystems.

As a Party to the Cartagena Protocol on Biosafety, Ethiopia recognises the great potential benefits that LMOs derived from modern biotechnology could bring to the country in terms of the promotion of human well-being. Particularly, it helps in meeting critical needs for food security through enhanced food production, reduction in the use of agro-chemicals, 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, Ethiopia 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 adverse impacts of genetically modified crops or derived product on non-target organisms and the environment. Therefore, it becomes 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 adverse effect of GMOs. 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 resources of the following institutions in the fields of education, research and innovation

such as Universities, BETiN, EIAR, and other relevant organizations to optimize the application of risk assessment techniques.

Barriers

Legislative and institutional obstacles, which includes lack of sectoral cooperation, limited operational, regulatory and management skills, and lack of enforcement mechanism and compliance must be removed in order to create a strong IAS/LMOs management system. There is a low level of public understanding on the importance and worth of biodiversity. Due to lack of awareness, there is little political will and public pressure to develop and expand Ethiopia's IAS/LMOs management structure. The biodiversity targets and indicators of the newly adopted Kunming-Montreal Global Biodiversity Framework (GBF) for 2030 provides a renewed global impetus at large and for national actions. Implementation of biosecurity and sustainable management of biological resources faced with different challenges that need to be addressed to achieve the overall goal of halting loss of biodiversity by 2030. In Ethiopia several barriers have been identified that are 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 issues described above are characterized by several key deficiencies and barriers to the effective integration of IAS and LMO issues into biological resource management activities across all relevant sectors. These barriers include:

Fragmented policy, regulatory and institutional frameworks

Implementation of Biosecurity measures in Ethiopia is currently fragmented and sectoral. The policy and regulatory measures are vested in 3 major sectoral agencies (Environmental Protection Authority, Ministry of Agriculture and Ministry of Health). Environmental Protection Authority has the mandate to implement environmental policy of the country and is in charge implementing the proposed biosecurity project. What is lacking is the need for strengthened inter institutional coordination and focus beyond sectoral matters as biosecurity measures are cross cutting.

The biosecurity mandates are outlined in Section 2 (Stakeholders) and numerous pieces of legislation are existing in different sectors. Relevant legislation covers plant health: (3 laws, 18 decrees, and 3 decisions); animal health - 5 laws, 24 decrees, 2 ordinances, 4 decisions; food safety - 1 law, 4 decrees; environmental protection - laws, decrees; and biosafety - 1 laws, 6 directives.

There are no provisions in the constitution that are directed at food safety or animal and plant health. However, some of the human rights provisions can be construed as incorporating the basic tenets of *Biosecurity*. The right to a "clean and healthy environment" is one of the rights that Ethiopian citizens are accorded as part of their fundamental and inalienable human rights (art. 44). What constitutes a clean and healthy environment is not explained in the Constitution. But a healthy environment requires protection of flora and fauna from organisms, chemicals, pests and invasive species. A clean and healthy environment cannot be ensured where minimum requirements of plant and animal health are absent. Thus, the protection of the environment against harmful substances or practices stems from the construction of these constitutional provisions. Whilst there are constitutional provisions that could be directed to address biosecurity issues in the area of food/plant and animal safety, the current policy and regulatory environments which is highlighted as a key barrier does not have the needed risk analysis-based policy and regulatory instruments with support human rights-based approaches in handling the identified barrier.

A corresponding duty is imposed on the government to refrain from negatively affecting the health and development rights of the people (art. 92) and to promote those rights by issuing relevant protection schemes. All actors (state agents and non-state actors alike) shall respect the constitutional safeguards that are in place to ensure the balance between economic development and environmental protection (art. 43). The Constitution also provides for the improvement of the livelihood of the people of Ethiopia. Ethiopians also enjoy a right to be consulted on the adoption of policies and the implementation of projects affecting their communities. Prior informed consent of those communities is a pre-condition to the implementation of such projects.

Ethiopian citizens also have a right to be protected from undue displacement from areas where they live. In the event that this is compulsory (for instance, in case of health emergencies), people are entitled to monetary or non- monetary compensation, including relocation with adequate state assistance.

The absence of constitutional provisions which are t specific to food safety or the protection of animal and plant health have been seen as challenge in mainstreaming biosecurity in relevant sectors. However, the existing constitutional provision lays down the basic conceptual framework for the setting of *Biosecurity* norms in the sectors of human health, environment and plant and animal health.

Policy coverage of Biosecurity in Ethiopian Environment

In addition to incorporation of environmental issues in the Constitution, the framework of environmental protection in Ethiopia involves the formulation of an overarching environmental policy. The policy outlines principles to be followed in order to ensure respect for environmental values, considering the economic, social and cultural circumstances of the country. The policy provisions relevant for Biosecurity in Ethiopia are discussed below.

The Environment Policy of Ethiopia (EPE) was approved by the Council of Ministers in 1997. The overall EPE goal is "to improve and enhance the health and quality of life of all Ethiopians and to promote social and economic development through the sound management and use of natural, human made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of future generations to meet their own needs".

In the EPE goal, there are features pertinent to the enhancement of human health and the protection of animals and plants from pests and diseases. The policy targets as an ultimate goal the protection of the health and quality of life of the people. Though this goal does not provide for a list of the activities identified as harmful to human health, it can be inferred from the specific policy provisions that some elements of Biosecurity are instrumental to achieving the goal.

Principles of intra- and intergenerational equity are echoed in the policy in the sense that Ethiopian nationals have the right to utilize available natural resources, while at the same time they have the duty to conserve them for the use of future generations. Conservation of biodiversity and ecosystems appears in the policy. The policy also prohibits causing harmful and irreversible consequences to the natural and cultural heritage of the country.

The EPE contains sectoral and cross-sectoral elements that are of significance to Biosecurity. Under the sectoral policies, the most relevant aspects are those dealing with genetic, species and ecosystem biodiversity; human settlements, urban environments and environmental health; control of hazardous materials; and cultural and natural heritage. At the cross- sectoral level, EPE tries to link thematic issues like environment and population, community participation in decision-making, tenure and access rights to land and natural resources, and the importance of environmental impact assessment (EIA) and community participation in decision-making. EIA has a particular significance to ensure that the Ethiopian people and environment are safeguarded from alien elements that negatively affect the food system, ecosystems or any component of the environment. Owing to the importance of the EIA tool, a Biosecurity approach is a basic need.

The EPE envisages measures to develop and disseminate sustainable technologies to enhance agricultural production. This section of the policy can be the basis for regulating products of modern biotechnology under the draft National Biosafety Framework, particularly as regards the intentional release of such products into the environment.

There is a policy provision stating that ecosystems should be safeguarded from possible biological contamination through quarantine legislation. The possibility that some animals or plants may be infected with diseases and pests is also articulated in the policy for future action.

The EPE urges actions for the restriction of exotic species from biodiversity hotspot areas, thereby limiting the spread of some potentially invasive plants. Though the country does not have a stand-alone policy or specific legislation on invasive alien species, this policy element can be used as a basis for future actions. The possible adverse effects of invasive alien species on biodiversity are also recognized under the water resources conservation section of the EPE. Its objective is to ensure that any proposed introduction of exotic species into water ecosystems is subject to detailed ecological studies and EIA. It also recognizes that natural ecosystems, particularly wetlands and upstream forests, are fundamental to rendering ecosystem services and hence deserve conservation. As with invasive alien species, despite this policy statement there is no law in place governing conservation and utilization of fisheries resources.

The policy goals laid down in the EPE seem to reflect the government's commitment to conserve natural resources and protect the environment. However, this commitment has to be substantiated through detailed and enforceable rules. The EPE has a mechanism for its periodic revision, although no initiative has been taken in that respect after the adoption of the policy.

In spite of the policy foundation, the quarantine laws of the country are far from meeting international standards. The problems emanating from the movement into and out of the country of organisms that can be categorized as plant pests and animal diseases remain without an adequate legislative response.

The policy environment in Ethiopia is currently fragmented and weak; the critical information required by the different stakeholders is not available; and the implementation of prevention and control programmes is slow or inadequate and capacity is lacking.

The regulatory framework relating to plant protection, animal health and IAS contains the following gaps: a sectoral approach with the major emphasis on productive sectors, an absence of policy direction on the management of invasive alien species; limited surveillance at the border posts; lack of measures for the detection of IAS; and the absence of provisions for contingency and emergency planning, early detection and rapid response, eradication, and sustainable management of IAS. The regulatory framework relating to food safety is vested in the Ministry of Health. The regulatory framework relating to biosafety is very broad in scope covering both LMOs and their products, the target text is limited to the field of safe regulations governing modern biotechnology, an absence of a recognized and applicable methodology for risk assessment, a lack of precision on the notion of competent administration, and an absence of a system for prevention, analysis and risk management.

This fragmentation is reflected in the institutional framework for biosecurity. The Ministry of Agriculture and the Environmental protection authority have the main responsibility and capacity for the management of invasive plants and plant pests, but its activities are restricted to the management of those species of agricultural significance. Environmental Protection Authority has been involved in projects to manage invasive plants with environmental impact such as water hyacinth, but this approach focuses on single

species management only and does not consider all stages of the IAS management hierarchy from prevention to restoration. This situation is paralleled in the Ministry of Health and the Water Resources Commission where the focus is on disease and vector management for animals of direct economic value but with very little focus on the possibility of vertebrate introductions (notably fish) or microbial introductions (e.g. viruses including SARS-COV) becoming invasive. The Forest sector under the then commission of Environment, Forest and Climate Change has a mandate for IAS management in protected areas but is unable to execute this effectively. The fragmented food safety institutional environment is summarized under section 2 Annex Q on the role of stakeholder institutions in Biosecurity. For biosafety there is doubt about the credibility of controls (possibility of illegal importation of LMOs into the national territory).

Insufficient capacity to integrate biosecurity issues into (multiple) key sectors

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 Ethiopia but is insufficient for 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 was made in the ongoing Ethiopian Biosafety Framework Project and earlier executed UNEP-GEF Invasive Alien Species Project for Africa during which 3 trainer of trainers? workshops were conducted resulting in the development of training manuals, guidelines and customized course notes. The training manuals, together with trained trainers constitute essential resources that can be used to roll out training to wider constituents. However, training is not synonymous with capacity building as the training must be used regularly if it is to be truly transformative. This use will require an enabling legislative, policy, regulatory and institutional framework and effective knowledge management. Capital equipment and supplies for LMO detection are also required, especially for laboratories designated for LMO Detection and testing activities on IAS. The ongoing National Biosafety Framework Project is being supported to procure and donate laboratory equipment to the former Ethiopian Environment and Forest Research Institute, now EFD, even though the mandate to be to EPA for LMO detection, diagnostics and monitoring. Amongst the equipment procured is a Real-Time PCR which is essential in carrying out testing of LMO and IAS.

Inadequate implementation of cost-effective risk-based biosecurity measures: IAS management has rarely taken an integrated approach in which IAS considerations are embedded into the management of other anthropogenic pressures, such as land degradation, fragmentation and pollution that render a system vulnerable to IAS and compound their impact. The continued growth of trade and transport-related movements has increased IAS risks for Ethiopia especially as Ethiopia is a main destination or transport hub. The risks posed also have an impact on shared biological resources in the region. Successful management initiatives have been undertaken in health (e.g., the One Health Programme which is taking a multi-sectoral, multidisciplinary, synergistic and holistic approach to the management of health-related

issues in Ethiopia). However, good practice has not been systematically transferred to other sectors (e.g. introduction of risk-based biological control as adopted in the agricultural sector has not been utilized for biodiversity conservation. This inconsistent application of good practice has serious implications for management effectiveness of all landscapes including Protected Areas (PAs). By failing to mainstream biosecurity concerns, the country runs the risk of addressing one environmental concern at the expense of another.

Insufficient knowledge, awareness and access to useful, timely and detailed information of relevance to biosecurity:

Most people in Ethiopia are aware of specific issues that relate to biosecurity, generally related to outbreaks of human and animal disease, zoonotic diseases and agricultural pests. However, awareness about IAS and biosafety as a generic issue with environmental, social and economic impacts is low. Most people in Ethiopia would probably not be familiar with the term ?invasive alien species? or ?living modified organism?. Without basic levels of awareness about the causes and consequences of biological invasions, and biosafety, it is unlikely that the general public will provide the consistent support and collaboration that an effective biosecurity framework requires. Although the information baseline about IAS and LMOs is imperfect a great deal of relevant information has been collected and assembled during the Ethiopia Biosecurity Project. For example, critical invasive species pathways have been identified, the biosafety baseline situation has been evaluated, black and white lists of invasive species have been produced and generic IAS and LMO contingency plans for incursions have been drawn up. However, critical information is still lacking. It is essential that invasion risks of live imports and potential IAS vectors are assessed in a timely manner. This requires rapid access to relevant and credible information. EIA do not systematically incorporate assessments of IAS risk, partly due to inadequate information on native and non-native alternatives to recommended (potentially invasive) plants to be used for purposes such as landscaping, agroforestry and erosion control. Invasive species distributions in Ethiopia have not been systematically assessed nor have the

vulnerability of different climatic zones to different biological invaders; knowledge which is becoming increasingly important in the light of climate change. In the realm of biosafety, information has been gathered, mainly from commercial interests proposing LMO introductions, to inform an environmental risk analysis but less work has been done with regards to the assessment of the potential socio-economic impacts of LMO introductions. The precursors to a knowledge management system have been produced under the Ethiopian Biosafety Project but there is not yet an easy to access one stop shop through which to obtain relevant information.

During the execution of the national biosafety project and internal work on invasive alien species, information gained suggests a small and progressive increase in the awareness in the general public on Biosafety. There has also been an increased implementation of officially mandated biosecurity measures

and improved management strategies that were influenced by Cartagena Protocol on Biosafety outputs. Behavioral change concerning GMOs revealed an increased acceptance of GMOs as being potentially useful if introduced under a strict regulatory regime. As recommendation, a thorough orientation of key stakeholders on GMO through training is recommended; with the modules covering biosafety, risks and benefits of modern biotechnology, risk analysis of GMOs, and public awareness, consultation and participation. Furthermore, it is strongly recommended that a survey of this kind is undertaken at the beginning of the project to ensure that the project implementation team is aware of prevailing Knowledge, Attitude, and Practice (KAP) levels among the key stakeholders as a prelude to capacity building work to ensure a sound foundation for future efforts. A national biosecurity communication plan and strategy should be developed and implemented on a large scale. Hence, there is need for further support to carry out more awareness raising activities within the Ethiopia Biosecurity Project to create a wider outreach and more impact. The envisaged project interventions will provide outputs and eventual outcomes that will ultimately contribute to the conservation and sustainable use of biological diversity by strengthening coordination and implementation of national biosafety frameworks in the safe use, transport and handling of Living Modified Organisms through a risk analysis approach.

1.4 The baseline scenario and associated baseline projects

The policy, legal and institutional scenarios on biosecurity currently which presents the baseline are highlighted below.

Policy & Legal scenarios

The policy and legal frameworks and mandates in Ethiopia for the control and management of IAS/ LMOs are currently fragmented across several sectors. Some of the major policies and legal frameworks have been incorporated IAS/LMOs aspects in clear, implied manner are explained as below.

Constitution

According to Proclamation No. 1/1995, Article 44 of the Federal Democratic Republic of Ethiopian Constitution, everyone has the right to a clean and healthy environment, and it is the responsibility of the government to make sure that this is the case for all Ethiopians. This constitutional clause implies the necessity to prevent and manage any environmental effects that IAS, LMOs, and all biological introductions may have.

The Environmental Policy of Ethiopia

The national framework policy on environmental and development issues is known as the Environmental Policy of Ethiopia (EPE), which was released in 1997. It gives all priority sectors with major environmental interfaces guiding principles and crucial policy direction. In order to meet the needs of the present generation without jeopardizing the ability of future generations to meet their own needs, the policy's overall objective is to improve and enhance the quality of life of all Ethiopians and to promote sustainable, social and economic development through the sound management and use of natural, human-made, and cultural resources. The Environmental Policy of Ethiopia (EPE) which was issued in 1997 is the national framework policy on the environment-development issues. It provides guiding principles and key policy direction to all priority sectors that have a significant interface with the environment. The overall goal of the policy is to improve and enhance the quality of life of all Ethiopians and to promote sustainable, social and economic development through the sound management and use of natural, human-made and cultural resources, and the environment as a whole; so as to meet the needs of the present generation without compromising the ability of future generation to meet their own needs.

Ten sectoral and 10 cross-sectoral policy aspects are included in the EPE. The following policy sections: Forest, Woodland, and Tree Resources; Genetic Species and Ecosystem Biodiversity; and Water Resources Conservation expressly address the IAS challenges. IAS prevention and management as well as LMOs are affected by the policy sections on Environmental Impact Assessment (EIA), Environmental Education and Awareness, and Tenure and Access Rights to Land and Natural Resources. However, IAS prevention, control, and eradication are not explicitly stated in Ethiopia's environmental policy, and the problem has mainly been reduced to being seen as just another pest and/or weed concern. The Biosafety Proclamation and Ethiopia's Biotechnology Policy both put further emphasis on LMO control. The EPE contains ten sectoral and ten cross-sectoral policy elements. The IAS issues have been explicitly articulated in the following policy sections: Forest, Woodland and Tree Resources; Genetic Species and Ecosystem Biodiversity; and Water Resources Conservation. The policy section on Environmental Impact Assessment (EIA), Environmental Education and Awareness, and Tenure and Access Rights to Land and Natural Resources have implication to the IAS prevention and management and LMOs. However, IAS prevention, management and eradication are not clearly articulated in the environmental policy of Ethiopia, the IAS issue has largely remained to being narrowly perceived simply as another pest and/or weed problem. The management of LMOs are further highlighted through the Biosafety Proclamation and the Biotechnology Policy of Ethiopia.

National Policy on Biodiversity Conservation and Research

The National Policy on Biodiversity and Research was issued in 1998.The policy generally emphasizes conservation, development and sustainable utilization of biodiversity and sovereign rights over its genetic resources. The policy directives state the need to enact legislation to protect; conserve and sustainably utilize the biological resources in Ethiopia, movement exchange of genetic resources to be governed by the laws and regulations, to reduce the pressure on and avoid degradation of the biological resource have implication to the IAS prevention and management. Despite being the main threat to the preservation of biodiversity and sustainable use, IAS is not specifically mentioned in this strategy statement. However, because IAS is the main threat to biodiversity conservation and sustainable use, this strategy has implications for the need to prevent and regulate any impact of IAS on biodiversity. The Biosafety Proclamation's anchor, the Policy, also contains stipulations. Even though IAS is the major threat to biodiversity conservation and sustainable utilization, IAS is not mentioned explicitly in this policy document. However, this policy has an implication to the need to prevent and control any impact of IAS on biodiversity as IAS is the major threat to conservation and sustainable utilization of biodiversity. The Policy also makes provisions as one of the anchors of the Biosafety Proclamation.

The National Agricultural Research Policy

The National Agricultural Research Policy (NARP) was drafted in October 1994.The major policy objectives to be pursued are ensuring that the various research programs are demand driven, problem-oriented, integrated and complementary, that they alleviate major agricultural constraints, and develop conservation-oriented and sustainable technologies. Several detailed policy guidelines were formulated to help attain these objectives. There are two policy elements in the guidelines, which specifically deal with environmental protection. These are conducting research to develop/select technologies that help to prevent the loss and degradation of agricultural and natural resources and ensuring generation/selection of appropriate technologies targeted at addressing major constraints that could arise in the different agro-ecologies and farming systems.

Policy and Strategy on Forest Development, Conservation and Utilization

The Policy and Strategy on Forest Development, Conservation and Utilization was approved in 2007.The general policy objective is to meet public demand in forest products and foster the contribution of forests

in enhancing the economy of the country through appropriately conserving and developing forest resources. One of its specific objectives is on establishing the foundation wherein forest resources deliver all-embracing services to the country in a sustainable manner, through the prevention of threats as well as the conservation and development of forest resources have an implication to IAS control and management. The policy document has inferred provisions relevant to invasive alien species control and LMOs. Under the subtitle ?Protecting Forest Resources from Threats?, it was stated that remedial actions will be implemented to avert natural or anthropogenic threats on forests placed under any form of ownership to keep forests from devastation.

Water Resources Management Policy

The Water Resources Management Policy (WRMP) was issued in 1999. Its overall goals are to enhance and promote efforts towards an efficient, equitable, and optimum utilization of the available water resource, and contribute to the country?s socioeconomic development on sustainable basis. The policy measure of WRMP regarding environmental sustainability includes the application of EIA in water resource development projects and that the policy encourages effective consideration of environmental sustainability in all water resource management activities. However, the WRMP does not explicitly refer to any measures to address threat from the IAS.

The Rural Land Administration and Land Use (Proclamation No 456/1997 and 456/2005)

The Rural Land Administration and Land Use (Proclamation No 456/1997 and 456/2005) by the Federal Ministry of Agriculture (the then MoARD) asserts a rural land administration that promotes the conservation and management of natural resources. But how this might translate to protect the natural resources from the probable effects of IAS has not been clearly explained. The proclamation on the other hand puts rural land use restrictions by prohibiting free-grazing and excluding areas such as water banks of streams and rivers from use for farming and free grazing except for development of riparian trees, perennial reeds and forage production. Most Regional States have Environmental Conservation initiatives.

Ethiopian National Biodiversity Strategy and Action Plan

The Ethiopian National Biodiversity Strategy and Action Plan (NBSAP) also address IAS (EBI, 2015) under Target 6. The NBSAP is an overarching document to the 1998 policy direction which recognizes IAS and had aimed to reduce areas invaded by invasive species by about 75% until 2020. Although this target is apparently far from substantial achievement given the increasing alarming situation of IAS in the country, an ex-post assessment of the impact of the various intervention measures taken because of the above strategy is worth a consideration to measure its success. It has no provision on LMOs.

Weed Science Research Strategy

The Weed Science Research Strategy (WSRS) was issued in July 2000. The general objective of the strategy is to develop and disseminate weed management technologies, create awareness especially about newly introduced noxious weed species including IAS and LMOs in case they exhibit weediness, and enhance coordination and networking. The specific objectives for short, medium- and long-term IAS management is explicitly addressed as a major component through wide range of planned activities on biology, ecology and integrated management. Further, it is indicated the research approach will be multi-disciplinary, agro-ecologically based, demand driven, gender sensitive and participatory.

Other national policies and strategies

Other national policies and strategies such as Biotechnology policy (2000) and Plant Protection Research Strategy (2000) consider sustainable use of natural resources by minimizing pollution and degradation of resources and keeping pests below economic threshold with emphasis on immediate benefits of the technological interventions.

There was an effort to develop draft National IAS Strategies and Action Plan (NISSAP); by the government of Ethiopia (GoE) and UNEP/GEF project lead by the EIAR in 2006-2008 but it was not approve and implemented.

In certain cases, there has been specific strategies developed for the purpose of controlling or managing the IAS. For instance, the Ethiopian Prosopis Strategy (MoLF, 2017) and the National Water Hyacinth

Strategy (MoWIE, 2019). Along with the Ethiopian Prosopis Strategy initiative for the control or management of Prosopis, other initiatives of national IAS management guidelines were also prepared that are highlighted above. However, reports show that threats of invasive plants in Ethiopia have been less studied, and some appear to be off the limit to control showing the insufficient institutional capacity and limited focus in the research, monitoring and control of IAS supported by appropriate policy. Ethiopia is also a signatory to various international conventions such as Convention on Biological Diversity (CBD), United Nations Convention to Combating Desertification (UNCCD) and International Plant Protection Convention (IPPC) which has some relevance to IAS prevention, management, control and eradication.

The policies and strategies in most instances are not specifically dealing with IAS but are generally intended to ensure a safer and sustainable natural resource management; moreover, there has not been a standalone clear national policy document and binding legal framework dedicated to IAS management in Ethiopia.

Institutional Scenario

IAS prevention, control and management involves several stakeholders, such as federal institutions, regional state institutions, city administrative, non-governmental organizations and professional societies, private sectors, international partners, and local communities. The duties and responsibilities of key stakeholders are defined through legal mandate articulated in the respective establishment proclamations. However, mandates are not necessary always clear and explicit regarding the IAS in the existing related policies, strategies and programs. LMOs are managed through the Biosafety Proclamation.

Stakeholder analysis was made to identify the major stakeholders from Government institutions, non-governmental institutions and international agencies. A brief summary of the institutional baselines is presented below:

House of Peoples Representative (water, irrigation lowland and environment development affairs standing committee)

The House of Peoples Representatives is one of the two legislative bodies in the Federal Democratic Republic of Ethiopia which has the power to approve and ratify legislations (policies, proclamations, etc.) and control and follow-up the performances of the executive wing and judiciaries. It has different standing committees which are responsible for follow-up of specific sectors. The then Standing

Committee of Agriculture, Pastoralist and Environmental Protection Affairs, now re-named as ?water, irrigation lowland and environment development affairs standing committee? is one of these committees which is responsible for following-up on environmental issues involving biological introductions including LMOs and IAS.

Environmental Protection Authority (EPA)

The powers and responsibilities of the EPA include:

? Preparing, reviewing and updating the preparation of environmental policies, strategies and laws and upon approval of applications, monitoring and enforcement of permits.

? Establishing a system for environmental impact assessment of public and private projects, as well as social and economic development policies, strategies, laws and programs; and

? Undertaking consultation with competent agencies to formulate environmental safety polices and laws in relation to biosafety and invasive alien species.

The Proclamation also has provisions that treat the conditions under which sectoral environmental units and regional environmental offices are to be established. The EPA is an entity with regulatory functions and has established institutional frameworks at Directorate level to coordinate IAS and Biosafety issues. The EPA has the responsibility of administering Environmental Impact Assessment ? which is an instrument verifying the likely environmental consequences of development projects as well as strategic government documents. This role put the commission at a strategic place to assess and manage potential risks related to introduction of biological organisms including LMOs and IAS in the country. In addition, Ethiopian Biodiversity Institute (EBI), the then Ethiopian Environment & Forest Research Institute (EEFRI), now renamed as ?Ethiopian Forest Development? (EFD) and Ethiopian Wildlife Conservation Authority (EWCA), which are dealing with IAS are accountable to Environmental Protection Authority.

Ethiopian Biodiversity Institute (EBI)

The Institute was established as the Institute of Biodiversity Conservation and Research (IBCR) in 1998 by Proclamation No. 120/1998 and amended in 2004 by Proclamation No. 381/2004. The Institute was

re-established as the Ethiopian Biodiversity Institute (EBI) in 2013 by Regulation No.291/2013. Currently, the institute is accountable to Ministry of Agriculture.

The Institute has initiated various policy and law, surveyed genetic diversity, undertaken both in-situ and ex-situ conservation, conducted conservation, sustainable use and access and benefit sharing research, studied community knowledge, and issued permits on import or export of biological samples of plant, animal and microbial genetic resources.

The Institute has, among others, the following powers and duties that are pertinent to IAS management:

? Enrich the country?s biodiversity resource through encouraging the traditional system of exchange of species by Ethiopian communities, and as appropriate, through the re-introduction of species from international sources and repatriating germplasm of Ethiopian origin from elsewhere in the world;

? Issue directives on, and give import or export permits for, the introduction of biodiversity specimens into or out of the country.

? Control and follow up the negative impacts of invasive alien species on the country?s biodiversity.

? Undertake research relevant to ensure the conservation and sustainable utilization of biodiversity and the sharing of benefits arising from their utilization and monitor the impact of processes and category of activities that have or are likely to have adverse impact on biodiversity and devise the appropriate methods for their conservation and sustainable use.

The institute has an explicit IAS role. The institute conserves germplasm that is collected from areas threatened by many factors including through invasion by IAS. It also undertakes biological monitoring, which is related to early warning and intervention. According to Regulation No. 291/2013, the Institute is mandated to grant or deny permits for the importation of specimens or samples of species.

The then Ethiopian Environment and Forest Research Institute (EEFRI) (reformed as the Forest Development)

The Ethiopian Environment and Forest Research Institute was established by Regulation No. of 327/2014 of the Council of Ministers of FDRE on December 26/2014, EEFRI is an autonomous nationally mandated government Research institute whose mission is to adapt relevant local and exotic technologies, conduct prudent research projects, and disseminate technologies, skills and policy briefs:

and also coordinate research projects that are carried out by higher learning and other research institutions and serve as a national repository where scientific data, reports, thesis, dissertations, and research publications in the areas of climate change, environment and forestry are stored, processed and used. EEFRI conducts research on IAS related to forest protection, environmental and ecosystem management.

Ethiopian Wildlife Conservation Authority

Ethiopian Wildlife and Conservation Authority (EWCA) was established through Proclamation No. 575/ 2008, EWCA has a responsibility to establish, administer and develop wildlife conservation areas (wildlife conservation area is an area designated for the conservation of wildlife, and includes national wildlife conservation parks, wildlife sanctuaries, wildlife reserves and wildlife-controlled hunting areas).

The EWCA fosters broad-based participation in the development, protection, rational utilization and management of wildlife. EWCA is also responsible for the issuance of permits for hunting wildlife, and for the establishment of facilities in national parks, game reserves or wildlife conservation areas that are under its jurisdiction. EWCA is also responsible for implementing policies, laws and regulations pertaining to wildlife conservation protected areas and it has a role in mitigating IAS in protected area through mobilizing local communities, which are potentially under threat from IAS. Currently authority is accountable to the Ministry of Tourism.

Ministry of Agriculture (MoA)

It was established as the Ministry of Agriculture and Rural Development (MoARD) by Proclamation No.383/2004 and re-established as Ministry of Agriculture (MoA) in 2019. The Ministry has powers related to the issue of plant invasive species and development of modern biotechnology products for the food and agriculture sectors of the country. Its functions include among others.

? Monitoring events affecting agricultural development and to set up an early-warning system;

? Conducting quarantine controls on plants, seeds, animals and animal products brought into or taken out of the country including pest risk analysis and management; and

? Taking the necessary measures to prevent outbreaks of animal and plant disease and migratory pests.

Ethiopian Institute of Agricultural Research (EIAR)

The establishment of the former IAR dates back to the late 1940s with a mandate to coordinate and undertake agricultural research. The IAR was changed to EIAR and was established by Proclamation No. 79/1997. The institution was restructured as a semi-autonomous entity through Proclamation No. 382/2004 to coordinate research activities in agriculture and to build research capacity and establish a research system that responds to development needs.

EIAR has responsibilities that align to IAS management through its mandate to formulate agricultural research strategies and undertake or cause the undertaking of agricultural research activities based on the Agricultural Research Policy and Strategy. Moreover, EIAR undertakes plant protection and weed management research in Ethiopia and had an experience in undertaking research on IAS and assists the drafting of policies, laws/ regulations and strategies for control of IAS. Its role as the National Executing Agency for the earlier GEF Project RBIPMA (Removing of Barriers to Invasive Plant Management in Africa) has considerably strengthened EIAR?s IAS-related capacity. Through its Biotechnology directorate, the Institute undertake confined and contained laboratory research on LMOs too.

Ministry of Water and Energy

The Ministry of Water and Energy is mandated, among others, to undertake studies pertaining to the utilization of the waters of trans-boundary rivers and upon approval, follow up the implementation of same and prepare plans that help to properly utilize water resources. The Ministry of Water Resources has an inferred IAS role in its mandates, particularly on IAS issues that relate to water bodies and movements of IAS facilitated by water by water.

Plan and Development Commission (Reformed as Plan and Development Ministry)

Plan and Development Ministry is responsible for and oversees both federal and sectoral development plans in a given fiscal year. The Ministry is identified as a key player to assist and ensure inclusion and

mainstreaming of LMOs and IAS issues in the sectoral and coordinated management plans, assess related costs and identify key interventions with expert advice from EPA and other related agencies.

Regional States

Regional States have the power to formulate and execute economic, social and development policies, strategies and plan of actions within their own regions. In accordance with the laws of the Federal Government, regions have the right to administer the natural resources of the region and have established various implementing organs that are also relevant to the management of IAS and LMO issues. These institutions are mainly designated as agricultural and/ or environmental bureaus and mandated to conduct quarantine control on plants, seeds, animals and animal products brought into or taken out of the regions and to monitor and enforce permit conditions on LMOs in consultation with the EPA. Their mandates are to:

? Ensure that laws, regulations and directives issued in relations to the protection, conservation and utilization of water, forest, soil fisheries and wildlife are respected in the regions.

? Prevent and control disasters caused by migrating and common plant pests and animal diseases by means of traditional and modern mechanisms.

? Supervise the implementation of directives issued to control damage caused by the depletion of natural resources and the prevention of water, soil and air pollution.

? Follow-up on directives issued to control damage to environment caused by degradation of natural resources and air pollution.

? Developing systems that aid in the evaluation of environmental impact and to follow up and to monitor their implementation.

The Bureaus of Agriculture and environment are relevant organs for the follow up and implementation of a future national IAS strategy and Biosafety issues at the grass root levels through the conservation of biodiversity in their regional states and domestic quarantine control. In addition, the bureaus are coordinating the efforts of farmers to manage IAS. Some of the Regional States have enacted laws/decrees pertaining to IAS in their Regional Land Use Policies, which states ?land holders are obliged to protect their landholdings from Striga and Parthenium.?

City Administrations

Like any other parts of the country, cities have challenges with IAS and must manage movements of LMOs through potential releases in the food and related markets. Addis Ababa and Dire-Dawa city administrations are identified as key stakeholders in prevention and control of IAS by mobilizing the residents of the cities.

Local Communities

Local communities are responsible for various activities related to not only control and prevention of IAS existing in their localities but also in control of the re-emergence and restoration of areas cleared from the IAS.

Some of the projects which have either contributed or are currently contributing, and which can be constituted as the baseline scenario are listed below.

There have been several interventions by both the UN and other development agencies and government to support biosafety capacity building and interventions on management of Invasive Alien Species at national levels. The current baseline scenario depicts fragmented efforts to address the management of the introduction of biological organisms especially Invasive Alien Species and Living Modified Organisms without a science based and risk analysis approach to support decision making. There are current efforts by government through budgetary and other external interventions to address the situation including the Government led Water Hyacinth project, the UNEP-GEF Biosafety Project, the Water Efficient Maize for Africa (WEMA/TELA) project by AATF and the African Network of Biosafety Expertise (ABNE) support on policy and regulatory environment reviews to support decision making on Biosafety. To support the process, there is an ongoing government effort on policy and regulatory review and reforms to strengthen the national biosecurity response to the management of biological introductions in Ethiopia. Some of the projects which are either contributed or are currently contribution which can be constituted as the baseline scenario are listed below:

i. The UNEP-GEF Global Umbrella Project on ?Development of National Biosafety Frameworks? ? Ethiopia developed its National Biosafety Framework in 2007.

ii. GEF ID: 4078 - Implementation of Cartagena Protocol on Biosafety through Effective Implementation of National Biosafety Framework ? ongoing ? The key results currently are the Biosafety Proclamation with six directives, designated laboratory for LMO Detection, ongoing actions to support Decision making in Biosafety

iii. Support by ABNE/NEPAD ?Institutional and capacity building support to the creation of functional biosafety systems in Ethiopia has been supported through training of regulators in the basics of biosafety science, policy and regulation, GM crop risk assessment and management, and biosafety communication and awareness raising (see https://www.nepad.org/nepad-oncontinent/african-biosafety-network-of-expertise-abne-ethiopia)

iv. The UNEP-GEF Biosafety Clearing House Project ? Support to Parties in information sharing and experience in using the Biosafety Clearing House to support national biosafety systems

v. GEF ID: 2140 - Removing Barriers to Invasive Plant Management in Africa (a regional project with pilot case studies in Ethiopia, Ghana, Uganda and Zambia (see https://www.thegef.org/project/removing-barriers-invasive-plant-management-africa). The project developed draft national IAS management guidelines that includes National IAS Strategies and Action Plan (NISSAP); Cost Recovery Mechanism Procedures for IAS Management; National IAS Communication Strategy; Risk Assessment, Early Detection and Rapid Response Procedures for IAS Management; Generalized Training Modules and Guideline for Integrating IAS Issues into Curricula of Learning Institutions. The proposed project will review, update and finalize these guidelines for national approval in line with current science and technology developments guided by a biosecurity approach.

The proposed project will also contribute to ongoing work on the COMESA biotechnology/ biosafety regional policy. It will create a platform for assessment and testing of the process and lessons learnt in both the development and implementation of the national biosafety framework and the interventions on invasive alien species in Ethiopia.

SECTION 2: PROPOSED ALTERNATIVE SCENARIO

The national systems for the management of biological introductions are at varying levels in terms of LMOs and invasive Alien Species. The current scenario depicts a fragmented approach with laws and institutional measures that need to be operationalized. The proposed alternative scenario will be anchored on a risk analysis-based approach with supportive systems for testing, treatments/management of IAS,

commodity audits, handling and pre-/post-approval monitoring and enforcement measures for LMOs and coordinated decision-making systems. This approach can act as a catalyst for Ethiopia to focus on systems approach to the management of biological introductions based on scientific risk assessment/management and risk communication through clearly defined communication and outreach strategies.

The systemic and institutional barriers to mainstreaming IAS prevention, control and management and LMO management will be removed at the federal, regional and local levels, backed by incentives for community-based natural resource management to make sustainable management decisions on effective biodiversity and ecosystem management.

2.1 Theory of Change

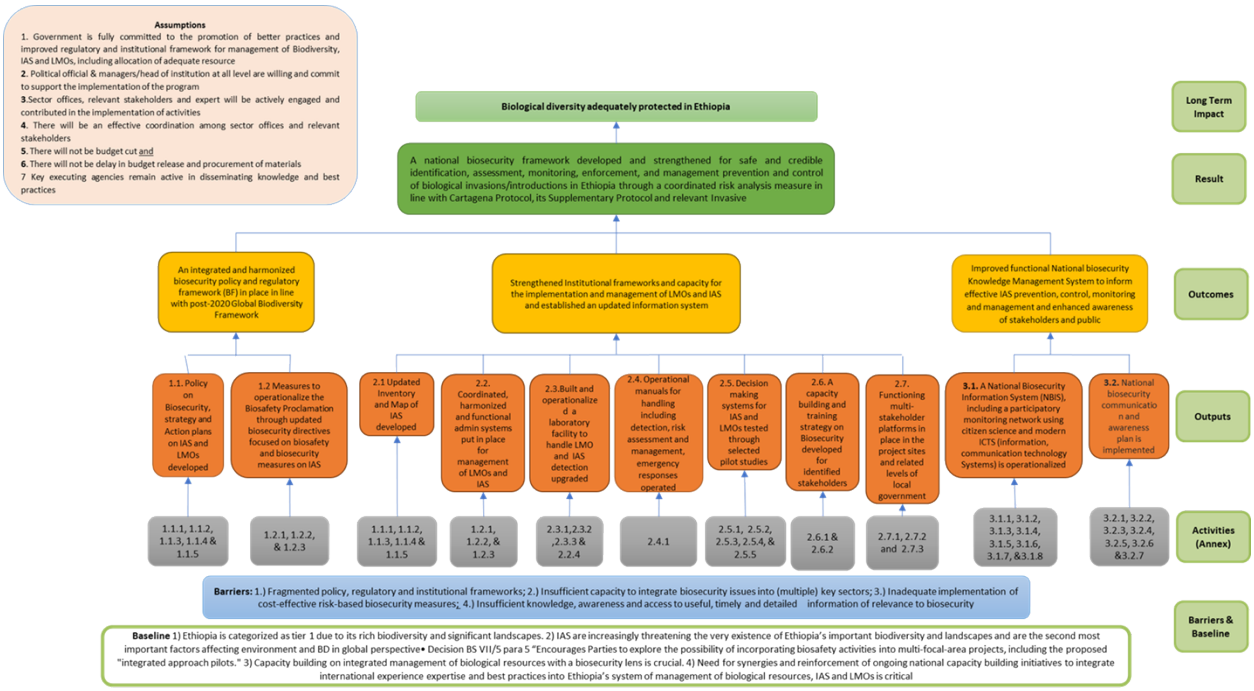
The **Theory of Change (TOC)** (Fig.1*)* identifies three impact pathways: the first creates the policy and institutional frameworks needed for effective prevention, control, and management of IAS/LMOs to secure ecosystem goods and services currently under pressure from IAS/LMOs. It builds the right 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. With the current baseline of limited or no consideration on wetland habitat loss, the project?s demonstration activities and strengthened regulatory framework will pave the way for a more systematic approaches to improving wetlands condition with the introduction of new species.

Addressing land degradation is a priority for Ethiopia. Intensive use of land resources and poor adaptability of applied agricultural practices along with ineffective risk governance have increased a wide-ranging impact of environmental degradation related to severe soil fertility decline and reduction in ecosystem resiliency.

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 proposed project is conceptualized per a Theory of Change as attached (See Figure 1)

Figure 1. Theory of Change



Addendum to the number?s items in the Theory of Change

Activities
Activity 1.1.1. Establishing multi sectoral steering committee and technical team of experts that engaged in the development of Biosecurity policy, strategy and Action plans for IAS and LMOs
Activity 1.1.2. Review existing national and international literature, convention, policies strategies and experiences on biosafety, biosecurity, IAS and LMOs
Activity 1.1.3. Formulating biosecurity policy, strategy and action plan for IAS and LMOs through a consultative process that involve key stakeholders
Activity 1.1.4. Validate biosecurity policy, strategy and action plan for IAS and LMOs
Activity 1.1.5. Supporting and facilitating the approval of policy and strategy
1Activity 1.2.1. Sensitization of policy makers on Integrated Biosecurity Framework (IBF) for development of updated directives for implementation of IBF

Activity 1.2.2. Review and update biosecurity directives on biosafety and biosecurity measures on IAS through a consultation process
Activity 1.2.3 Validate the update biosecurity directives on biosafety and biosecurity
Activity 2.1.1. Establishing a national and regional team/taskforce participate in conducting inventory and developing Map for IAS
Activity 2.1.2. Providing training for team participate in the inventory and developing Map for IAS
Activity 2.1.3. Undertake an assessment of existing Inventory and Map of IAS
Activity 2.1.4. Integrate inventories and generate updated Inventory and maps, and draw black and white list of IAS cross referencing the sites to LMO activities for risk management
Activity 2.2.1. Establishing Administrative system for handling LMOs and IAS
Activity 2.2.2. Undertake procurement of modern equipment and infrastructure for testing and detection of LMOs and IASs at biosecurity posts including ports of entry, by relevant Control & Inspection Services of the Competent National Authority and other relevant administrative departments
Activity 2.2.3. Organize and conduct training for staff on the application of the testing and detection of LMOs and IASs equipment and **infrastructure**
Activity 2.3.1. Prepare a laboratory layout and design
Activity 2.3.2. Identified laboratories equipment?s necessary for handling LMO and IAS detection upgraded
Activity 2.3.2. Prepare detail specification for laboratory equipment and advertising
Activity 2.3.3. Procurement of laboratory equipment for detection of LMOs
Activity 2.3.4. Providing training for staff on the application of the laboratory equipment
Activity 2.4.1. Develop operational manuals for handling including detection, risk assessment and management, emergency responses
Activity 2.5.1. Establishing decision making systems for IAS and LMOs
Activity 2.5.2. Developing decision making tools and instruments
Activity 2.5.3. Identifying selected pilot studies sites for testing decision making systems, tools and instruments
Activity 2.5.4. Providing training on decision making systems, tools and instruments
Activity 2.5.5. Conducting testing of decision-making systems, tools and instruments on the selected pilot studies site
Activity 2.6.1. Conduct institutional capacity and training need assessment

Activity 2.6.2. Conducting awareness creation workshops and Training of Trainers for selected and relevant stakeholders involved in the management of IAS and LMOs such as Port entry officials, Regulatory agency officials, Scientists, Policy makers, Civil society and importers/export
Activity 2.7.1. Establishing project steering committee at federal and on project site
Activity 2.7.2. Establishing stakeholder?s platform which incorporate key and relevant stakeholders actively engaged in the implementation of the project
Activity 2.7.3. Creating partnership with university academic institution and other concerned institution
Activity 3.1.1. Put in place a National Biosecurity Information System (NBIS) for LMO and IAS
Activity 3.1.2. Established an integrated participatory monitoring and enforcement system for risk-based management of LMOs and for prevention, control, monitoring and management of IAS;
Activity 3.1.3. Conduct consultations and validation workshop for the draft NBIS for LMOs;
Activity 3.1.4. Establishing data base /Knowledge management portal in a web site dedicated for the project that link to the relevant national and regional global networks
Activity 3.1.5. Establishing synergy among information hubs such as the International Phytosanitary Portal, the CHM, and national BCH and ABSCH
Activity 3.1.6. Organize and conduct training on the use of data base /Knowledge management portal and web site
Activity 3.1.7. Capture Information, lessons learnt and experience from project interventions and knowledge on biosecurity, biosafety and IAS
Activity 3.1.8. Store/document Information, lessons learnt and experience from project interventions and knowledge on biosecurity, biosafety and IAS.
Activity 3.2.1. Developing the national biosecurity communication and awareness raising plan
Activity 3.2.2. Develop manuals and guidelines on risk-based monitoring, management and control of LMOs and IAS
Activity 3.2.3. Carry out sensitization and awareness creation workshop
Activity 3.2.4. Organize and conduct awareness raising and sensitization program and training workshop for key institutions and relevant stakeholders about biosecurity manuals, guidelines and operating procedures
Activity 3.2.5. Develop, publish and distribute awareness raising publish and print materials
Activity 3.2.6. Post different information, events and program on Social Media platform (Facebook, Telegram, Twitter, etc)
Activity 3.2.7. Develop and broadcast TV/Radio program
Activity 4.1.1. Developing baseline and target

Activity 4.1.2. developing data collection and analysis methodology
Activity 4.1.3. Identifying and set indicators and means of verification
Activity 4.1.4. Document and disseminate best practices and lessons learnt
Activity 4.2.1. Conduct timely progress monitoring assessment
Activity 4.2.2. Conduct Mid- Term/TerminalEvaluation

2.2 Project Components and Expected Outcomes

The **Theory of Change** (Figure 1) 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 will 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.

Impact - Sustainable conservation and Safe use of biological diversity, through risk analysis-based management practices.

Intermediate State: Strengthened institutional, human and regulatory biosecurity capacities to support the management of IAS and LMOs in Ethiopia

Project Development Objective:

To develop and implement a national biosecurity framework to detect, eradicate, control and effectively manage introduced biological invasions/introductions in Ethiopia. The proposed project will focus on sets of actions to develop interventions and responses to the key threats identified and these will include mainly policy, regulatory, institutional capacity and information sharing measures to address the management of IAS and LMOs through a coordinated risk analysis and biosecurity approach. The principal aim of actions will be to ensure the use of best of scientific knowledge and actions in the

monitoring, testing and management of biological invasions and introductions to Ethiopia. The key intervention tools developed will be tested through selected case studies on IAS and field trials on LMOs to gain knowledge and capture data to fine tune the policy and regulatory instruments developed. The project will also develop measures to strengthen the thematic and regulatory processes to support pre- and post-approval management of LMOs through interventions including strengthened risk assessment and risk management systems, handling and transport of LMOs, inspection procedures and transboundary procedures including transit measures and port management of Living Modified Organisms with technically sound Standard Operating Procedures and guidelines. In the area of IAS, the project will focus on generation and update of baseline information on IAS; creation of a dedicated and coordinated institutional environment for the management of IAS; prevention and control of reemergence of IAS; and dedication of resources for information exchange and knowledge management through formal and informal education, curricula development, development of data bases through a dedicated national clearing house or website

The proposed project is conceptualized and summarized below under components and outcomes.

The proposed project has four components:

PROJECT COMPONENT 1 ? Policy, Regulatory and Technical Frameworks on Biosecurity

Outcome 1: **Policy and Regulatory instruments on Biosecurity established**

The project will focus on the review of the existing policy and regulatory environment for IAS and LMOs. Consultative actions will be undertaken to develop a standard national biosecurity policy with a supportive Strategy and action plans which are anchored on risk analysis, consolidation and coordination of sectoral policies and regulatory responses on the management of IAS and LMOs. Measures will be put in place to review and update the current Biosafety Proclamation with biosecurity directives focused on biosafety and biosecurity measures on IAS. Laboratory Biosecurity measures will also be updated in line with international best practices. These tools will be tested through pilot scale activities to fine tune the envisaged responses on policy and regulatory actions to be undertaken.

The **expected outputs** of this component are:

1.1 Policy on Biosecurity, strategy and Action plans on IAS and LMOs developed

1.2 Measures to operationalize the Biosafety Proclamation through updated biosecurity directives focused on biosafety and biosecurity measures on IAS

PROJECT COMPONENT II - Institutional Capacity Building for the Management and Control of IAS and the Implementation of the CPB

Outcome 2: **Fully operational institutional frameworks for the management of LMOs and IAS including an updated information system established**

Though there are some inventories of IAS in Ethiopia, the information is scattered among different institutions at the federal and regional levels. Actions will be taken to review the existing data, access research information and generate maps on IAS in Ethiopia. In addition, black and white lists of IAS will be developed. Where the locations of such IAS are same as ongoing or planned field trials or multi locational trials of LMOs this will be documented and periodically updated to assist researchers and end users in planning remedial actions on IAS and risk management interventions on LMOs. Administrative systems for handling of LMOs and IAS will be finalized and where actions are similar, these will be coordinated and harmonized. Decision making systems to support treatments on IAS and environmental releases of LMOs will be updated and finalized for national acceptance and use. The designated national laboratory for LMOs will be strengthened and legally backed to support national testing on LMOs. In addition, other laboratories will be designated and resourced to support laboratory testing and related actions in the management of IAS especially through field activities at the regional level. The operational manuals on Risk Analysis, emergency responses, decision making systems to be developed will be tested through selected pilot studies to be decided during the Project Preparation phase. The potential pilot sites will include Lake Hara Dembel, Koka reservoir and Afar and Oromia regions.

An institutional capacity building and training strategy on biosecurity will be developed and tested through trainer of trainer workshops targeted at specific stakeholders including Environmental Agency Officials and inspectors, Port and Border officials, regulatory agency officials, Researchers, Policy makers, Civil Society, importers and exporters and handling staff of Ethiopian Airways. Ethiopia airport is a major transit port in Africa, is key to equip handling staff to understand the movement of biological materials with a biosecurity focus. Human and institutional capacity building is a crucial component of the project.

National biosecurity policy and regulatory systems should consider the cross-cutting nature of modern biotechnology, issues of IAS complex and interconnected issues which require adequate scientific, economic, social and environmental considerations. The key and common capacity needs will be identified and grouped during the Project Preparation phase guided by the identified threats and barriers. The capacity programme will also support 4 MSc study programme (two on biosafety and two on IAS).

The **expected outputs** of this component are:

2.1 Coordinated, harmonized and functional administrative system for handling LMOs and IAS established

2.2 Identified laboratories to handle LMO and IAS detection upgraded

2.3 Operational manuals for handling including detection, risk assessment and management, emergency responses,

2.4 Decision making systems for IAS and LMOs tested through selected pilot studies

2.5 A capacity building and training strategy on Biosecurity developed for identified stakeholders involved in the management of IAS and LMOs including Trainer of Trainers workshops for Port entry officials, Regulatory agency officials, Scientists, Policy makers, Civil society and importers/exporters

2.6 Capacity building and guidelines development on emerging technologies (Synthetic Biology, Gnome editing and new plant breeding techniques

2.7 Updated Inventory and Map of IAS developed

PROJECT COMPONENT III: A National Biosecurity Knowledge and Information Management System

Outcome 3 - A national biosecurity Knowledge Management System is established to inform effective IAS prevention, control, monitoring and management, in partnership with key stakeholders.

The project will review existing national information systems and clearing houses for biodiversity management in Ethiopia through participatory and consultative processes. Guided by the SCBD guidance and decision on harmonized clearing houses, the EPA will develop a National Biosecurity Information System (NBIS) to serve as an information and knowledge exchange hub with nodes to the national BCH, the ABS-CH and the CHM and relevant websites on Biodiversity including management of IAS. Forums will be created to assist in information gathering and identification of new IAS and planned interventions will be disseminated through same routes. Relevant databases and national lists on IAS will be made available. Decision making pathways and decisions made will be shared through the same system. To support the planned interventions, a national biosecurity communication and awareness raising strategy and plans will be developed and implemented through sensitization of key

institutions with supportive tools including manual, guidelines, operating procedures, forums among others.

The **expected outputs** of the project component are:

3.1 A National Biosecurity Information System (NBIS), including a participatory monitoring network using citizen science and modern ICT is operationalized to monitor and inform risk-based management of species, pathways and ecosystems based on agreed protocols.

3.2 The national biosecurity communication and awareness raising plan developed and implemented through sensitization for key institutions (manuals, guidelines and operating procedures)

COMPONENT IV ? Project Monitoring and Evaluation (M&E)

<u>Outcome 4</u> - Effective project coordination and delivery meeting agreed measurable outputs and indicators

This component is aimed at ensuring that the project is implemented in line with the intended objectives and outcomes. Variances will be captured and explained. A Project Monitoring and Evaluation Framework will be developed and used for internal monitoring and evaluation activities. To ensure efficient implementation in the early phases the project will ensure that implementing teams are capacitated on soft skills and Monitoring and Evaluation principles. M&E will be conducted during the review and planning meetings at national and joint country levels, through reviewing of progress reports against the work plans, steering committee meetings and the national missions. Gender specific data will also be collected as part of the M & E process. Additionally, there are two scheduled evaluation and review activities - midterm review and end of project evaluation.

The **expected Outputs** of the component are:

4.1. A comprehensive project monitoring and evaluation (M&E) framework developed and implemented drawing on best practices and lessons learnt

4.2. Mid-term and Terminal Evaluation

The proposed project activities as per the work plan along with key deliverables, benchmarks and timelines are placed as **Annex L**.

5.1 Innovation and Sustainability

This approach acknowledges and actively incorporates the issues of scale, proximity and interconnectedness of environmental systems, and utilizes a cross-cutting approach to provide ?joined up? solutions for sustainable development. Addressing biosecurity as a national issue with systemic causes and consequences will help to ensure that a suite of interacting threats to the terrestrial and marine environment are addressed. By tackling issues relating to IAS and LMOs under the biosecurity approach will ensure that limited capacity in risk-based management is maximally utilized, notably using systematic prevention, early detection and rapid response, control and management through pathways and species-based risk analysis process. In addition to IAS and LMOs, other threats include land-based pollutants, nutrients and sediment, disrupted hydrological services, and degradation of critical habitat that have significant negative impacts on important water resources including wetlands, rivers, lakes and other water bodies. The management systems adopted through this project will build on approaches to managing IAS in the earlier GEF Regional Project on IAS and the national biosafety framework project/ The incorporation of biosafety under the biosecurity umbrella; the development of coordination and implementation mechanisms that take into account the greater importance of Biological resources to Ethiopia as Vavilov?s Center, its diversified economy, and its relatively high biosecurity capacity at least in terms of the traditional functions of a national quarantine service. The emphasis, therefore, will be on improving upon existing structures in multiple sectors to embed IAS and LMO considerations, not on creating major 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 internalizing externalities and providing finance for IAS and LMO management operations. This approach of systematic reinforcement and inter-sectoral coordination can be a model for developing countries with 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. Community groups will be contacted early in the PPG process to elicit their interest and cooperation. There is a long and successful tradition of community participation in biodiversity conservation activities in Ethiopia. Embedding IAS considerations into activities undertaken at the site and landscape levels will help the individuals involved and the communities they represent to appreciate the importance of IAS which will enhance their effectiveness as land stewards. The experiential nature of the learning involved in implementing IAS-related activities will complement more traditional training, awareness and knowledge exchange activities to build a practical appreciation of the value of IAS-related knowhow. Experiencing the practical benefits of incorporating biosecurity

considerations into daily operations can help internalize an issue that has, in most countries, persisted as a barely acknowledged externality. The integrated approach to IAS prevention, control, and management developed in this project can serve as a good practice model for developing countries and countries in transition seeking to balance productivity with environmental sustainability.

A. Political and financial terms

Integration of biosecurity issues into national strategic documents ensures that framework will continue to be considered 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 Ethiopia national budget through Environmental Protection Authority of Ethiopia. The project would assist decision makers 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

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In Ethiopia, 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, 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.

5.2 Replicability and scaling-up

The project focuses on addressing biosecurity as a national issue with systemic causes and consequences, addressing threats to terrestrial and marine environments. It aims to maximize capacity in risk-based management through systematic prevention, early detection, rapid response, control, and management through pathways and species-based risk analysis processes. Other threats include land-based pollutants, nutrients and sediment, disrupted hydrological services, and degradation of critical habitats. The

management systems adopted will build on previous projects and focus on improving existing structures in multiple sectors to embed IAS and LMO considerations. The project aims to break down silos and embed biosecurity considerations in sectoral decision-making for improved efficiency, effectiveness, and sustainability. Cost recovery options will be investigated in all sectors to address economic sustainability. The integrated approach to IAS prevention, control, and management can serve as a good practice model for developing countries and transitioning countries seeking to balance productivity with environmental sustainability. By incorporating biosecurity considerations into routine processes, the project seeks to improve the practical understanding of IAS-related knowledge. For emerging nations and those in transition, it will serve as a good practice model for striking a balance between productivity and environmental sustainability. The outcomes of the initiative will encourage experience and practice exchange, innovation, and scaling up within the East African Community, Anglophone Africa, and international gatherings.

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[1] Roberts R.J, 2018; The Nobel Laureates? campaign supporting GMOs. In Journal of Innovation and Knowledge https://www.journals.elsevier.com/journal-of-innovation-and-knowledge accessed 18 January 2019

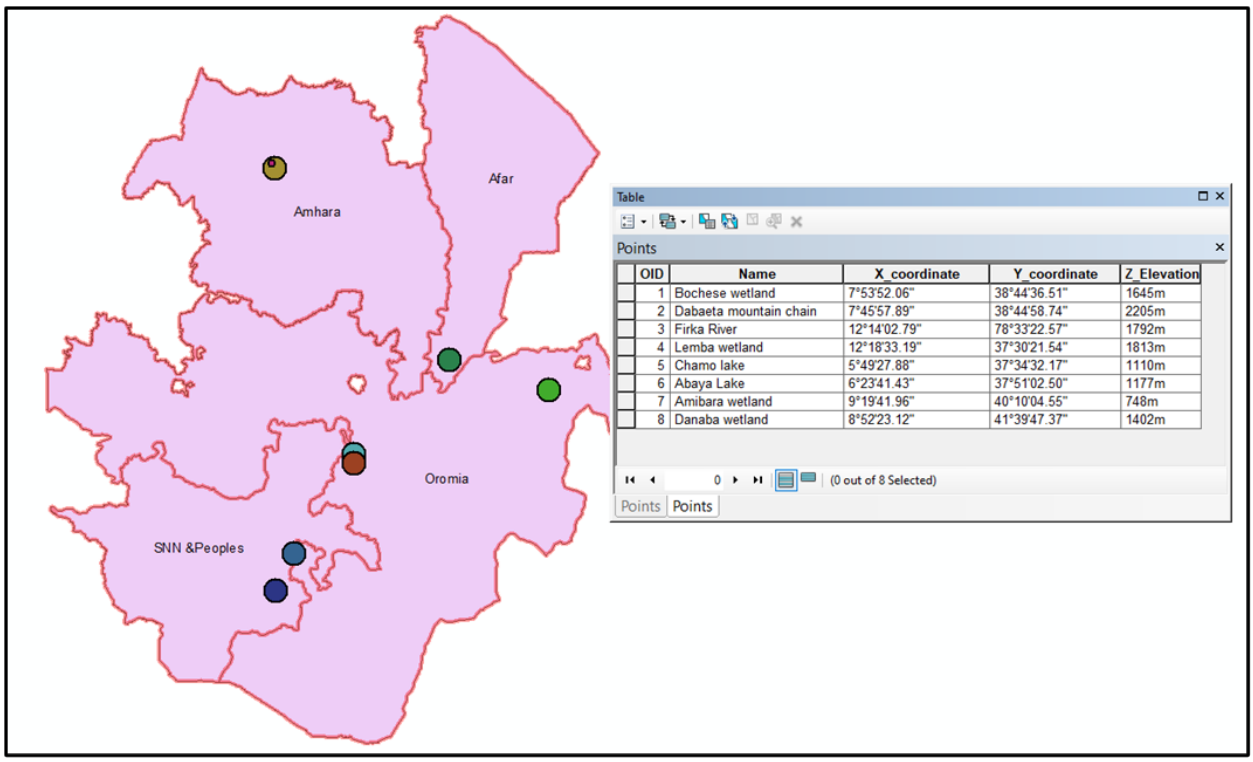
[2] https://www.isaaa.org/resources/publications/briefs/55/

1b. Project Map and Coordinates

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

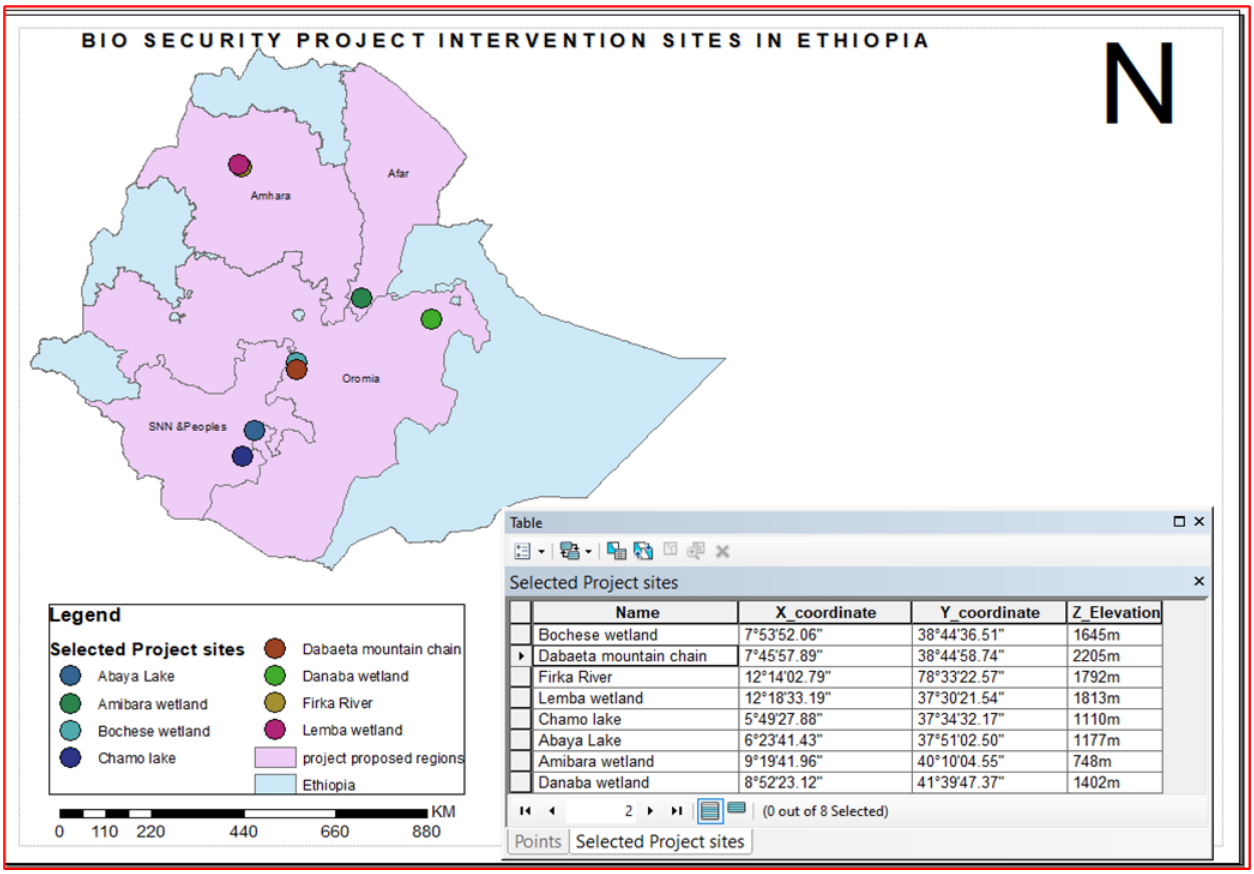
So far there are no maps for IAS and confined and continued LMOs experiments were undertaken in different research centers and on the farmlands of the investors (especially for Cotton experiment done in 7 locations in the country). The GPS coordinates of Ethiopia are **9.1450? N and 40.4897? E.** Find below geo-referenced information and maps on project intervention areas with specific pilot sites indicated.

The project will be implemented at the national level (Ethiopia is located 3? and 14.8? latitude 33? and 48? longitude in the Eastern part of Africa (Horn of Africa) bordering Somalia, the Sudan, Djibouti, Kenya and Eritrea with a total border length of 5,311 km. It is the 10th largest country in Africa. Let's say this, but the project is focused on the selected places where there are invasive alien species in four regions. From the four regions we have eight selected sites that are presented with their location coordinates as follows. The Project map and coordinates is attached as Annex E.



Source: - EIMD directorate 2021 GIS result

The sites on the country map



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.

This stakeholder engagement plan aims at building and maintaining a strong relationship with key stakeholders throughout the execution process of the Ethiopian Biosecurity Project, ensuring their active participation, support, and commitment to achieving the project?s goals.

A comprehensive Stakeholder Engagement Structural Plan (SESP) specifying engagement activities. This plan is tailored to each stakeholder group?s unique influence, needs and interest in the entire project lifespan. The activities specific to each stakeholder group have been identified as follows:

STAKEHOLDER GROUP I: Government Institutions and Agencies.

?Environmental Protection Authority (EPA)

?House of Peoples Representative (Standing Committee of Water, Irrigation, Lowlands and Environmental Development Affairs)

?Ministry of Innovation and Technology (MinT)

?Ministry of Agriculture (MoA)

?Ministry of Women?s and Social affairs (MoWSA)

?Ministry of Water and Energy (MoWE)

?Ministry of Plan and Development (MoPD)

?Ministry of Trade and Regional Integration (MoTRI)

?Ministry of Health (MoH)

?Ministry of Industry (MoI)

?Ministry of Education (MoE)

?Ministry of Finance (MoF)

?Ministry of Irrigation and Lowlands (MILLs)

?Ethiopian Biodiversity Institute (EBI)

?Ethiopia Forest Development (EFD)

?Ethiopian Institute of Agricultural Research (EIAR)

?Ethiopian Wildlife Conservation Authority (EWCA)

?Ethiopian Customs Commission (ECC)

?Ministry of Transport and Logistics

?Bio and Emerging Technology Institute (BETiN)

?Ethiopian Media Authority (EMA)

?Regional States and City Administrations

Group 1 Stakeholder Roles:

1. Environmental protection Authority (EPA): is the statutory head of the Biosecurity Project Coordination Unit and will coordinate with relevant national ministries, agencies and other stakeholder entities and organizations, taking the lead in the policy, regulatory and institutional planning process notably in the lobbying team for the passing into law of the text of an overarching biosecurity act and its

accompanying supplementary text of application.

With its stakeholder role, EPA will coordinate and ensure the mainstreaming of biosecurity concerns into the identified land restoration projects and initiatives. EPA, ensuring that Biosecurity measures are integrated in these activities in support of the Bonn Challenge under the Biodiversity, Climate change and Land degradation focal areas.

As custodian of the implementation of risk-based management to LMO transfer, handling and use, EPA within the context of Biosecurity project has to identify and train personnel on LMO detection, and monitoring. In collaboration with the appropriate stakeholder Ministries, prepare strategies for mainstreaming biosecurity capacity into the national education systems. EPA will also establish gender equality and equity during all the implementation process of the project as stipulated in the project?s gender action plan.

2. House of Peoples Representative (Standing Committee of Water, Irrigation, Lowlands and Environmental Development affairs)

The House of Peoples Representatives is one of the legislative bodies in the Federal Democratic Republic of Ethiopia which has the power to approve and ratify legislations (policies, proclamations, etc.) and control and follow-up the performances of the executive wing and judiciaries. It has different standing committees which are responsible for follow-up of specific sectors. Standing Committee of Agriculture, Pastoralist and Environmental Protection Affairs is one of these committees which is responsible for following-up on environmental issues involving biological introductions including LMOs and IAS. And also the standing committee is responsible to follow up the legal framework (policies, proclamations, regulations, etc.) implementation and institutional set up related to GMOs and IAS.

3. Ministry Innovation and Technology: overseeing all state-funded research institutions in Ethiopia. It is responsible for innovating research to ensure that related to control mechanisms of IAS and support regulation and monitoring research that is related to GMO. MinT will provide expertise on the development and implementation of research related to biosecurity. They will also provide experts to support the development of technical manuals and guidelines on risk analysis, detection and monitoring using biosecurity measures.

4. Ministry of Agriculture (MoA)

The Ministry has powers related to the issue of plant invasive species and development of modern biotechnology products for the food and

agriculture sectors of the country. Its functions include among others;

?Monitoring events affecting agricultural development and to set up an early-warning system.

?Conducting quarantine controls on plants, seeds, animals and animal products brought into or taken out of the country including pest risk analysis and management; and

?Taking the necessary measures to prevent outbreaks of animal and plant disease and migratory pests is charged with the development, implementation and evaluation of state policy on livestock, fisheries and the harmonious development of animal industries.

This Ministry is directly responsible for the majority of activities that concern domestic animal-related biosecurity in Ethiopia.

It promotes the development of sustainable pastoral development, encourages and assists the provision of agricultural extension services to

pastoralists and also responsible for land use planning at the national level.

It will be part of the Project Steering and Technical Committee that should assist in the incorporation of risk-based decision-making processes in the management of biological invasions in pastoral systems as well as in the training of relevant personnel in risk-based biosecurity decision making processes.

5. Ministry of Women?s and Social affairs (MoWSA)

Ministry of Women?s and Social affairs, responsible for the promotion and protection of the rights of women and children and to improve their living conditions as well as gender equality in all spheres of life in Ethiopia. MoWSA facilitates access to quality healthcare, education, and other basic social services for women and children, protecting women and children from gender-based violence, discrimination, and abuse. The Ministry will be useful in

components of the project that relates to creating awareness, training, advocacy and research.

Ensure, involve and monitor whether the project is gender sensitive on the project preparation and implementation phases.

It also responsible for the coordinating the implementation of social policies, programs and activities aimed at improving the living conditions of vulnerable groups. In addition, it also ensures the promotion and protection of the rights of vulnerable populations in Ethiopia. Moreover, the Ministry is responsible for strengthening public- private partnerships and collaboration with civil society organizations, development partners, and other stakeholders in addressing biosecurity related concerns amongst the vulnerable populations.

6. Ministry of Water and Energy (MoWE)

The Ministry of Water and Energy is mandated, among others, to undertake studies relating to the utilization of the waters of trans-boundary rivers

and upon approval, follow up and prepare plans that help to properly utilize water resources. The Ministry of Water and Energy has an inferred IAS management role in its mandates, particularly on IAS issues that relates to water bodies and movements of IAS facilitated by water, implementing control mechanisms of invasive species that invade water bodies in collaboration with relevant stakeholders.

7. Ministry of Trade and Regional Integration (MoTRI)

Ministry of Trade and Regional Integration, responsible for promoting and defending the quality of products for local/foreign markets, and monitoring the application of importation standards in conjunction with relevant administrations. The ministry through its agencies will assist in development of biosecurity and monitoring standards as it relates to trade and movement of products during project execution.

8. Ministry of Health (MoH)

Ministry of Health is responsible for the care of all public health services in Ethiopia. Key stakeholder for activities concerned with biosecurity relating to the management of disease vectors. MoH is represented in the Project Steering and /or Technical Committee as appropriate and involved in the policy, regulatory and institutional planning process. The Ministry ensures the incorporation of the issue of biological invasions into decisions relating to vector management in Ethiopia. The Ministry is expected to provide expertise particularly in the area of disease vector management.

9. Ministry of Industry (MoI)

Ministry of Industry is responsible for the local transformation of agricultural and forestry products in conjunction with organization such as Ethiopian Forestry Development and Ethiopian Wildlife Conservation Authority the promotion and development of quality of

products meant for the local market and export in conjunction with the relevant administrations. The Ministry facilitates the manufacturing of products (i.e. Briquettes) and the management of IAS through control by utilization.

10. Ministry of Education (MoE)

Ministry of Education oversees the execution of all higher education in Ethiopia. It is responsible for the content and quality of tertiary education including courses of relevance to biosecurity as taught at universities in Ethiopian. MoE will provide expertise on tertiary curriculum development, assist the project in incorporating biosecurity into relevant tertiary education courses as well as provide expertise on training and capacity building during project execution. The laboratory services and detection methodologies for LMOs and IAS as applicable, is expected to be provided by this stakeholder which has an indispensable role in envisaging the integration of Biosecurity Capacity in regulatory, institutional and national education systems.

11. Ethiopian Wildlife Conservation Authority (EWCA)

Ethiopian Wildlife and Conservation Authority was established through Proclamation No. 575/ 2008. EWCA has a responsibility to establish, administer and develop wildlife conservation areas. Wildlife conservation area is an area designated for the conservation of wildlife, and includes national wildlife conservation parks, wildlife sanctuaries, wildlife reserves and wildlife-controlled hunting areas.

The Ethiopian Wildlife Conservation Authority (EWCA) fosters broad-based participation in the development, protection, rational utilization and management of wildlife and also responsible for the issue of permits for hunting wildlife, and for the establishment of facilities in national parks, game reserves or wildlife conservation areas that are under its jurisdiction. EWCA is also responsible for implementing policies, laws and regulations pertaining to wildlife conservation protected areas and it has a role in mitigating IAS in protected area through mobilizing local

communities, which are potentially under threat from IAS. Currently authority is accountable to Ministry of Tourism.

12. Ethiopian Institute of Agricultural Research (EIAR)

The establishment of the former Institute of Agricultural Research (IAR) dates back to the late 1940s with a mandate to coordinate and undertake agricultural research. The IAR was changed to EIAR and was established by Proclamation No. 79/1997. The institution was restructured as a semi-autonomous entity through Proclamation No. 382/2004 to coordinate research activities in agriculture and to build research capacity and establish a research system that responds to the development needs.

Ethiopian Institute of Agricultural Research (EIAR) has responsibilities that align to IAS management through its mandate to formulate agricultural research strategies and undertake or

cause the undertaking of agricultural research activities based on the Agricultural Research Policy and Strategy. Moreover, EIAR undertakes plant protection and weed management research in Ethiopia and had an experience in undertaking research on IAS and assists the drafting of policies, laws/ regulations and strategies for control of IAS. Through its Biotechnology directorate, the institute undertake confined and contained laboratory research on LMOs too.

13. Ethiopian Biodiversity Institute (EBI)

The Institute was established as the Institute of Biodiversity Conservation and Research (IBCR) in 1998 by Proclamation No. 120/1998 and amended in 2004 by Proclamation No. 381/2004. The Institute was re-established as the Ethiopian Biodiversity Institute (EBI) in 2013 by Regulation No.291/2013. Currently, the institute is accountable to Ministry of Agriculture.

The institute has initiated various policy and law, surveyed genetic diversity, undertaken both in-situ and ex-situ conservation, conducted conservation, sustainable use and access and benefits sharing research, studied community knowledge, and issued permits on import or export of biological samples of plant, animal and microbial genetic resources. The Institute has, among others, the following powers and duties that are pertinent to IAS management:

Enrich the country?s biodiversity resource through encouraging the traditional system of exchange of species by Ethiopian communities, and as appropriate, through the re-introduction of species from international sources and repatriating germ plasma of Ethiopian origin from elsewhere in the world;

Issue directives on, and give import or export permit for, the introduction of biodiversity specimens into or out of the country;

Control and follow up the negative impacts of invasive alien species on the country?s biodiversity

Undertake research relevant to ensure the conservation and sustainable utilization of biodiversity and the sharing of benefits arising from their utilization and monitor the impact of processes and category of activities that have or are likely to have adverse impact on biodiversity and devise the appropriate methods for their conservation and sustainable use.

The institute has an explicit IAS role. The institute conserves germplasm that is collected from areas threatened by many factors including through invasion by IAS. It also undertakes biological monitoring, which is related to early warning and intervention. According to Regulation No. 291/2013, the Institute is mandated to grant or deny permits for the importation of specimens or samples of species.

14. Ministry of Plan and Development (MoPD)

The Ministry of Plan and Development is responsible and oversees both Federal and Sectoral development plans in a given fiscal year. The ministry is identified as a key player to assist and ensure inclusion and mainstreaming of LMOs and IAS issues in the sectoral and coordinated management plans, assess related activities.

15. Ethiopian Forestry Development (EFD)

Ethiopian Forestry Development is mandated for the conservation and protection of forests and tree and the licensing and sale of forest products. This organization manages invasive species that threaten forest systems and protected areas.

EFD is the key stakeholder for activities concerned with biosecurity relating to trade in forest products. EFD plays a significant role in land degradation initiatives regarding collaboration in decision making process to address biological invasions in relation to some land restoration measure. Implementation of the

restoration initiative, climate change and land degradation focal areas is supervised by EFD. The former EEFRI, now turned to under EFD, used to conduct research on IAS related to forest protection, environmental and ecosystem management. It used to host the national LMO Detection Laboratory which supports testing and monitoring of LMOs in Ethiopia.

16. Ministry of Finance (MoF)

The Ministry of Finance is one of the key macro institutions with mandates focusing on fiscal policy, public finance and external economic. The Ministry of Finance, among others is given the following powers and duties.

As per Article 16 of the Proclamation No.1097/2018 Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation, the Ministry of Finance is given the powers and duties (among others) to:

Formulate economic cooperation and fiscal policies that particularly serve as a basis for

taxes, and duties; follow up the proper implementation of same; initiate reform recommendations.

Mobilize, negotiate and sign foreign development assistance and loans, and follow up the implementation of same.

Establish a favourable legislative framework to promote and facilitate the implementation of PPP financed infrastructure projects by enhancing transparency, fairness and long-term sustainability.

Prepare the Federal Government fiscal budget, make disbursements per the approved budget, and evaluate the utilization of the budget;

Pursue international partnerships with countries and organizations to mobilize additional financial and non-financial resources to support national development plan

Ensure sustainable debt management and effective utilization of externally mobilized resources, and others

17. Ministry of Irrigation and Lowlands (MILLs)

The Ministry of Irrigation and Lowlands (MILLs) is a newly established ministry through Proclamation NO. 1263/2021 under the new government structure of Ethiopia. The ministry was established to bridge the gap that existed between water/energy infrastructures and required agricultural productivity. Due to the importance and needed focus on sustainable development in irrigation and lowland to achieve food sovereignty, food security and improvement of livelihoods, irrigation as well as lowland development and governance initiatives have been elevated to administerial institution.

Per the proclamation, the Ministry is mandated to:

Initiate policies, strategies, and laws with respect to irrigation development, lowlands, and drought-prone areas; prepare detailed programs compatible with the national development plan

for their implementation and implement the same upon approval.

Facilitate the proper utilization of ground water and surface water resources of the country for irrigation in consultation with the Ministry of Water and Energy.

Promote irrigation development projects through different means and create conducive conditions for private investors to gain incentives in accordance with the law.

In collaboration with Ministry of Agriculture (MoA) and Ministry of Water and Energy (MoWE), expand irrigation development in pastoral and semi pastoral areas.

Accelerate the expansion of irrigation development to achieve food security and eventually export income.

Develop irrigation projects that are supported by innovative technologies that will enhance productivity and adopt mechanisms for effective use of water.

18. The Ministry of Mines (MoM)

It was established in 2018 under Proclamation No 1097/2018 and its responsibilities:

?Promote the development of mining, Petroleum and Natural Gas without exposing the extracted sites

?Ensure the proper collection, maintenance and accessibility to users of data on minerals, petroleum, Natural Gas

?Encourage investment through creating conducive conditions for exploration and mining operations

?Regulate, in cooperation with concerned organs, the market for precious and ornamental minerals produced at traditional level and small-scale mining operations comply with law concerning environmentally friendly

?Organize as may be necessary, research and training centres that may assist the enhancement of the development of mining, petroleum and Natural Gas

?Issue License to private investors engaged in exploration and mining operations and ensure

that they conduct mining and exploration operations and meet financial obligations in accordance with their concession agreement

?Ensure the quality standards of petroleum and natural gas products, set standards for petroleum storage and distribution facilities and follow up the enforcement of the same and make rehabilitation of degraded lands

?In cooperation with appropriate organs, determine the volume of petroleum reserve and ensure that it is maintained

?In cooperation with concerned organs organize and build the capacity of individuals engaged in traditional mining operation and give the capacity building technique to reducing IAS.

19. Ethiopian space science and Geo-Spatial Institute. (ESSGSI)

It is established on the proclamation No.1263/2021for the sake of availing geospatial

information as country?s wise: it has the following responsibilities

?collect, produce, store, organize, administer and distribute geospatial information;

?establish, preserve and cause the preservation of geodetic ground control points that enable to determine direction, distance and height in the country;

?undertake surveying activities and collect, document, analyze and disseminate the result;

?prepare, produce, and disseminate general purpose map;

?prepare, produce, and disseminate special map;

?undertake revision and updating of general purpose and special purpose maps so that they depict the current situation;

?prepare, publish and distribute national and regional atlases; and atlases prepared on various thematic areas;

?co-ordinate and control geospatial information produced by other bodies;

?provide competency certificates for professionals and organizations engaged in geospatial information activities at the Federal level;

?undertake presentation of international and regional boundaries on map following the approval by pertinent government body and render technical assistance to the responsible bodies to delineate, demarcate and administer the boundaries;

?plan and undertake training activities to support human resource development activities related to geospatial information;

?plan and perform research activities related to geospatial information;

?conduct studies and collect service fee in accordance with the principle of cost sharing upon the approval of the Government;

Ethiopian Custom Commission (ECC)

The Commission due to strategic positioning at the borders, the Customs Administration provides assistance to certain administrations by

ensuring compliance with the texts they prepare or initiate biosecurity inclusive. In addition, the Commission has the following mandates:

The development, implementation and monitoring of specific legislation.

?Control the import and export of prohibited or restricted goods

?Prevent and control customs

Ministry of Transport and Logistcs (MoTL)

The Ministry has a mandate to:

?prepare national plans pertaining to the development of transport infrastructure;

?ensure the establishment and implementation of regulatory frameworks to guarantee the provision of reliable and safe transport services

?identify and implement measures that mitigate the impact of transport infrastructure and services on the environment and the climate;

?regulate transit services related to import and export of goods; and ensure that the national logistic system is efficient and competitive;

Bio and Emerging Technology Institute (BETin)

The institute is mandated for supporting, organizing, and directing the various research works conducted separately in different universities and research institutes.

The institute will resolve and address the major challenges in society that are related to health, food security, the realization of sustainable development and facilitate the basement of industrialization, work on human development and to establish the general framework and basic structures for national innovative research.

BETIn mainly focuses on world-class research activities in biotechnology and emerging technology which are major pillars for the nation?s Economic development.

It is concerned with supporting comparable research activities in the country, working out capacity building, and paving the way for scientific research which are in line with society?s ethics and moral values that are

subsequently used in the social and economic benefits for the people.

Ethiopian Media Authority (EMA)

Media agencies and internal communication units of the respective stakeholder Ministries as well as other communication networks in NGOs and Civil Society Organizations would play defined roles in an anticipated communication strategy.

This stakeholder engagement plan is designed to promote stakeholder buy-in, establish collaborative relationships, reduce conflict and negative impacts, build support for the project and enhance the likelihood of the success of the Ethiopian Biosecurity Project and ensure the sustainability of the project impacts. A stakeholder communication strategy is envisaged to enable dissemination of information about the project, creating opportunities for mutual feedback and participation. Regular communication with stakeholders through various channels, such as emails, media (radio,

television), periodic newsletters, social media prompts, as well as meetings to keep them informed about project updates, progress and outcomes are key aspects that should encourage cohesion amongst stakeholders during the project implementation. Effective communication within and amongst stakeholder groups to a large extent, will minimize conflicts during project execution.

Regional States and City Administrations

Regional States have the power to formulate and execute economic, social and development policies, strategies and plans of actions within their own regions and city Administration. In accordance with the laws of the Federal Government, regional and city Administration have the right to administer the natural resources of the regions and city Administration and have established various implementing organs that are also relevant to the management of IAS and LMO issues. The relevant stakeholders with in the regions and city administrations are responsible to conduct biosecurity related

activities in collaborated and coordinated manner. Their mandates are to ensure that laws, regulations and directives issued in relations to the protection, conservation and utilization of water, forest, soil, fisheries and wildlife are respected in the regions and city Administration

?prevent and control disasters caused by migrating and common plant pests and animal diseases by means of traditional and modern mechanisms,

?monitor and enforce permit conditions on LMOs in consultation with the EPA

?supervise the implementation of directives issued to control damage caused by the depletion of natural resources and the prevention of water, soil and air pollution

?Follow-up on directives issued to control damage to environment caused by degradation of natural resources and air pollution,

?Developing systems that aid in the evaluation of environmental impact and to follow up and to monitor their implementation.

STAKEHOLDER GROUP II: Private Sector

Within the framework of public-private partnership, the private sector is expected to collaborate with the government, NGO?s and other stakeholders in the implementation of the Ethiopia Biosecurity Project. This can include through providing technical expertise and other resources based on their individual experiences in on-going projects or completed projects related to biosecurity in Ethiopia.

Organizations that engage in profit-seeking activities and have a majority private ownership (i.e., not owned or operated by a government). This term includes financial institutions and intermediaries, multinational companies, micro, small and medium-sized enterprises, co-operatives, individual entrepreneurs, and farmers who operate in the formal and informal sectors.

Private sector engagement occurs on knowledge and information sharing, policy dialogue,

technical co-operation, capacity development and finance.

Knowledge and information sharing: This includes learning-oriented interactions that aim to identify and exchange information about GMO and threats of IAS.

Experiences and best practices among organizations and firms. It also includes initiatives that aim to address information asymmetries in markets. Knowledge and information sharing is characterized by varying degrees of formalization and institutionalization.

Policy dialogue: This includes policy-oriented discussions across sectors that aim to create or change policies or behaviour, including through the adoption of best practices and specific standards. Such as GMO adoption and IAS policies, strategies etc.

Technical assistance: Mostly provided in the context of development finance, technical assistance includes the direct provision or

funding for the provision of specialized advice and support to private sector actors.

Capacity development: This includes efforts to enhance individual or organizational learning and develop the abilities of actors to perform functions, solve problems and achieve objectives.

Finance: This includes transfers in cash, goods or services for which no repayment is required and transfers for which (re)payment is required to support specific projects, programs or private sector entities.

Private sector: Organizations that engage in profit-seeking activities include:

The Ethiopian Academy of Sciences

The Ethiopian Academy of Sciences is an autonomous, non-profit, non-governmental, organization established in March 2010 by a group of prominent scholars who wish to promote the sciences and bring about development, prosperity and improved health services for the Peoples of Ethiopia.

The Academy aims to advance the development of all the sciences, including the natural sciences, mathematics, the health sciences, agricultural sciences, engineering, social sciences, humanities, fine arts and letters.

The Academy is committed to assist in the national development agenda and to advance the natural and cultural heritage of the nation. As an important partner to the government, it involves relevant government institutions, ministries, universities and other organizations in its effort to achieve its goals.

?Stimulate the development of problem-solving technologies and research, knowledge of applied sciences, social sciences, art, indigenous knowledge and innovative thinking that help to improve quality of life;

?Advise the government on science and socio-economic issues;

?Enhance scientific research on areas of special importance with the active involvement of Ethiopian scholars from all disciplines;

?Create a network among Ethiopian scholars and science and art community around the world;

?Exalt the works of Ethiopian scholars for the world community;

?Create appropriate channels to disseminate major findings in all disciplines;

?Sustain the active engagement and benefits of women and other underprivileged and marginalized groups in all scientific works.

Labor liaison agency

Contribute to the creation of an environment that is conducive to the emergence and growth of sustainable enterprises by ensuring economic efficiency, democratic governance and social equity.

They influence working conditions at the enterprise level.

They also influence the policy and regulatory environment in which companies operate, thus making a substantive contribution towards enhancing productivity and competitiveness

through the creation of appropriate conditions for sustainable enterprise development.

They promote participation, representation and empowerment of their members through legitimate and effective organizations, enabling them to influence policies and to demand greater accountability and transparency from decision-making bodies.

They also participate in the formation of broad-based social consensus on development and policy directions.

Chambers of Commerce

The Roles of Chambers of Commerce:

?Performing the role of spokesman of the business community.

?Collection and communication of information relevant to business and trade to members.

?Making representations to government regarding any legislation which is detrimental to their interests. For example, Chambers of

Commerce have made representations to the government regarding the Fringe Benefit Tax (FBT).

? Making representation to the government regarding any proposed legislation. For example, the Chambers of Commerce have made representations regarding the proposed Competition Commission.

?Requesting the government for any new legislation to promote trade and commerce. For example, Chambers of Commerce have been representing to the government the need for an exit policy (freedom to close down unviable businesses).

?Requesting the government for changes in existing legislation. For example, Chambers of Commerce have been requesting the government to amend labor laws to serve as a forum for settlement of disputes among members by means of Arbitration.

?Maintenance of information and statistical bureaus in order to provide necessary information to its members.

?Organizing industrial fairs and trade exhibitions to create awareness among buyers and promote members? businesses.

?Organizing lectures, seminars and workshops for the benefit of its members. For example, Chambers of Commerce conduct meetings and workshops after the Union Budget is presented to make members aware of the changes in tax provisions

?Providing support to members who are contesting elections for Legislative Assembly or Parliament.

?Providing library facility for knowledge enhancement of members.

?Running educational programs, conducting examinations and awarding diplomas to members

Consumer Associations

Consumer association at national and local levels have undertaken a wide range of actions that draw on their well-honed skills in independent research, advocacy, testing and publishing. A majority of these actions involve inter-alia:

?Educating consumers with a view to changing their attitudes and behaviour concerning on perception of GMO.

?providing consumers with timely information about popular products and services;

?monitoring and exposing misleading "claims" by product manufacturers and advertisers, and helping governments draw up codes of practice, laws and regulations that outlaw them;

?researching "labelling" schemes to help consumers identify ethical and "green" and processed GMO products;

?conducting campaigns in response to specific consumer-related problems;

?Advocating for the interests of consumers at relevant national, regional and international fora; and networking and cooperating with biosecurity

projects on consumer issues of shared concern and interest.

STAKEHOLDER GROUP III: Civil Society Organizations

Civil Society Organizations are expected to play a major role in awareness raising and information dissemination of the project. They will contribute to the elaboration of interventions under this Component and provide expertise in community engagement and outreach activities.

The Watershed committee (WC), an international partnership of government agencies, non-governmental organizations, and community groups that work together to improve the management of the Watershed for the watershed aiming to address a range of issues related to watershed management, including biodiversity protection, disaster risk reduction and protection of critical ecosystem services. WC is charged with managing one of the species

of interest in Project water hyacinth (Eichhornia crassipes) found in the surrounding of Bahir Dar area in the Amara Region of Ethiopia.

STAKEHOLDER GROUP IV: Local Communities

Indigenous and local communities can play a crucial role in the Ethiopia biosecurity project by providing their traditional knowledge and practices related to biodiversity and ecosystem management. These communities presumably have a deep understanding of their local ecosystems and can contribute to the development of biosecurity protocols suited to their particular ecosystems. They can also be very effective in educating and raising awareness amongst other community members to promote sustainable management practices

Local communities are responsible for various activities related to not only control and prevention of IAS existing in their localities but

also in control of the re-emergence and restoration of areas cleared from the IAS.

STAKEHOLDER GROUP V: Non-governmental Organizations

The stakeholder role of non-governmental organizations (NGOs) in the execution of project is very significant as they can bring unique perspectives and expertise to the project. Some of the stakeholder roles NGOs can play span from advocacy, awareness raising amongst policymakers and the public, technical support for capacity building, monitoring and evaluation as well as resource mobilization and funds to support project execution. Regional and global (international) non-governmental organizations working on biodiversity constitute important stakeholders in the execution process of the project for instance Centre for Agriculture and Bioscience International (CABI), Nature and biodiversity union (NABU), PELUM Ethiopia Consortium, Farm Africa, Melca Ethiopia etc can be mentioned as key stakeholder for the execution of this project.

There have been several interventions by both the UN and other development agencies and Governments to support biosecurity capacity building and interventions on management of Invasive Alien Species at national levels.

STAKEHOLDER GROUP VI: Youth Groups

The stakeholder role of youths in the execution of the project is very significant. It is incumbent upon the project coordination team to make use of the youths in the important role of awareness raising and education through social media platforms and other channels. Youths can equally be engaged in advocacy for policies that encourage the implementation of biosecurity initiatives with policymakers and community leaders. They definitely should be actively involved in the tree planting/forest restoration and the control and management of Invasive Alien Species. They are expected to bring in innovative ideas and new technologies to the

project, promoting sustainable and creative solutions to biosecurity threats and should be encouraged to do so at all levels of the project execution. Youth representation in terms of number and gender should be given due consideration. Their participation is critical under all the activities.

List of potential key stakeholders to support the biosecurity project:

S/N	Organization/ Institution	Related Duties & Influence on IAS & LMO Domains	Institutional Role	Localization & Contact Details
1.	Environmental Protection Authority	EPA charged with the duty to protect the environment in Ethiopia. EPA is Responsible for the approval of all importation requests for LMOs and the setting of conditions for import and the issuing of certification for export. Hosts the Office of focal point for	EPA is Project Coordination Unit. - will coordinate with relevant national ministries, Institutions and other organizations. Taking the lead in policy, regulatory and institutional planning process notably in the lobbying team for the passing into law of the text of an overarching biosecurity act and its accompanying supplementary	www.epa.gov.et tel 2511111704038

		the Cartagena Protocol Responsible for the assessment of the environmental impacts of potential LMO introductions to Ethiopia.	text of application. Ensure the mainstreaming of biosecurity concerns into all land restoration projects and initiatives. Provide relevant data on the implementation of The Restoration Initiative-Challenge under the Biodiversity, Climate change and Land degradation focal areas. Representation and coordination of Biosecurity Steering and Technical Advisory Committees Implementation of risk-based management to LMO transfer, handling and use. Ensure that biosecurity considerations are integrated into Climate Change adaptation and mitigation activities to minimize biological invasions-related risks. Incorporation of the issue of biological invasions in	

			environmental planning. Establishment of expertise particularly in the area of biosafety all through the project implementation period. Prepare the National Biosecurity Communication Strategy and Action Plan. Follow up and report on biosecurity mainstreaming into the tertiary education sector. Ascertain gender equality and equity during all the implementation process of the project as specified in the project?s gender action plan.	
2.	House of Peoples Representative (Standing Committee of Water, Irrigation, Lowlands and Environmental Development affairs)	The House of Peoples Representatives is one of the two legislative bodies in the Federal Democratic Republic of Ethiopia It has the power to approve and ratify legislations (policies, proclamations, etc.) and control	Standing Committee of Water, Irrigation, Lowlands and Environmental Development affairs which is responsible for following-up on environmental issues involving biological introductions including LMOs and IAS.	

		and follow-up the performances of the executive wing and judiciaries. It has different standing committees which are responsible for follow-up of specific sectors.		
3.	Ministry of Agriculture (MoA)	Responsible for preparing and implementing Government policy in agriculture and rural development. Responsible for the majority of activities that concern plant-related biosecurity in Ethiopia and plays a significant role in land management for agriculture and ecosystem services. Ensures the preparation and follow-up of regulations in the agricultural sector. Ensures plant protection through prevention of entry of pests and diseases. Undertakes seed testing, supports	MoA, will continue to take the lead in activities concerning the implementation of risk-based management of the imported and exported plants and plant products. It will ascertain the incorporation of risk-based decision-making processes in pest management and will provide expertise particularly in the area of plant protection. Involved in policy, regulatory and institutional planning process Is a member of the Biosecurity Technical Advisory Committee Incorporation of risk-based decision-making processes in pest	Website: http://www.moa.gov.et/ (link is external) Email: Eyasu.Abraha@moa.gov.e (link sends e-mail) Phone number: 251-116460746 Location Ethiopia See map: Google Maps (link is external) ET Postal address: P.O. Box 62347

		the development of IPM and the introduction of biological control agents, the development and monitoring of regulations and standards, and crisis management in agriculture. Responsible for the training of agriculture personnel. Promotes sustainable agricultural development. Prepares and implements land-use policy. Direct and coordinates the implementation of the Food Security Programme. Supervising Farmers and Farmer Associations. Promotes the development of sustainable pastoral development. Encourages and assists the provision of agricultural extension services to pastoralists. Conducts quarantine	management systems Intensification of training of relevant MOA personnel in risk-based biosecurity decision making processes. Mmanagement of the introduction of diseases with animal and animal products will be undertaken by the Animal Health section of MoA Operates zoo-sanitary control in accordance with the principles outlined in the WTO/SPS Agreement and by the standards developed. Supervise sanitary control in maritime and river fishing, and ensure safety of food of animal and fishery origin ? Ensure the incorporation of risk-based decision-making processes in the management of biological invasions in pastoral systems. ? Assist in the incorporation of the issue of biological invasions into decisions relating to vector management, and	

		controls on animals and animal products brought into or taken out of the country. Takes the necessary measures to prevent outbreaks of animal disease. Training and technical supervision in breeding. Studies and research for the renewal of fish and fish resources. In charge of the Society for the Development and Exploitation of Animal Production	will provide expertise particularly in the area of animal health and management of zoonotic diseases ? Representation of MoA in policy, regulatory and institutional planning process ? Incorporation of the issue of biological invasions into animal import and export decision-making ? Provision of expertise in the area of animal health	
4.	Ministry of Education (MoE)	MoE, oversees the execution of all higher education in Ethiopia. It is responsible for the content and quality of tertiary education including courses of relevance to biosecurity as taught at universities in Ethiopia.	MoE will provide expertise on tertiary curriculum development, assist the project in incorporating biosecurity into relevant tertiary education courses. Provide expertise on training and capacity building during the project execution. They will also provide laboratory services at the designated	Phone: +251-11-155-3133 Email: info@moe.gov.et

			laboratories at the selected University To provide LMO Detection and PCR/ELIZA based methodologies to support detection of LMOs and IAS as applicable.	
5.	Ministry of Innovation and technology (MINT)	oversees all state-funded research institutions in Ethiopia. It is responsible for directing research to ensure that it conforms to the demands of the country?s development planning. oversees the work of related to biosecurity through its agricultural research and extension activities.	MINT, will provide expertise on the development and implementation of research related to biosecurity They will also provide experts to support the development of technical manuals and guidelines on risk analysis, detection and monitoring using biosecurity measures.	
6.	Ministry of Health (MoH)	MoH is responsible for the maintenance of all public health services in Ethiopia. Management of biological invasions with human health legislation e.g., disease vectors.	Key stakeholder for activities concerned with biosecurity relating to the management of disease vectors Representation of MoH on Project Advisory Committee Representation of MoH in policy, regulatory and	contact: - 251 115518031 Website: www.moh.gov.et

			institutional planning process Member of Biosecurity Technical or Advisory Committees as appropriate Incorporation of the issue of biological invasions into decisions relating to vector management Training of relevant M personnel in risk-based biosecurity decision making processes Provision of expertise particularly in the area disease vector management.	
7.	Ministry of Industry (MoI)	responsible for the local transformation of agricultural and forestry products in conjunction with Ministry of Forestry and Wildlife, etc., and promotion and management of quality of products meant for the local market and for export in conjunction with the relevant administrations	It has several departments of relevance to biosecurity such as the Department of Quality Development which also harbors the focal point for the Codex Alimentarius. In this regard, MoI will be in charge of creating norms and standards for LMO management in Ethiopia during the project implementation	Website: www.ethiopia.gov.et/English/MOTI/Pages/Home. E-mail(s): moi@moi.gov.et. P.O. Box 704

			and in the operationalization of the national biosecurity system.	
8.	Ministry of Trade and Regional Integration (MoTRI)	Responsible for promoting and defending the quality of products for local/foreign markets, and monitoring the application of importation standards in conjunction with relevant administrations.	The ministry will assist in development of biosecurity and monitoring standards as it relates to trade and movement of products during project execution.	Telephone +2511151536
9.	Ministry of Plan and Development (MoPD)	MPD, is responsible for land use planning at the national level, public investments and the control and evaluation of development programs. MPD has a strong mandate and is able to carry out activities that require inter-ministerial collaboration. Approval of imports and exports.	MPD can allocate co- finance funds for the implementation of the project. They can coordinate with other ministries to pool resources and ensure effective implementation Examine the policies developed and ensure they align with national development plans, Work closely with other government agencies, stakeholders and partners to ensure policies are effectively implemented. MPD can provide the necessary support to EPA in	Email-ethiopdc@gmail.com

			aspects of coordination to ensure the successful implementation of the Project by other ministerial departments. Provide support in intersectoral linkages and coordination	
10	Ministry of Women?s and Social Affairs (MoWSA)	Responsible for the promotion and protection of the rights of women and children and to improve their living conditions as well as gender equality in all spheres of life in Ethiopia. It is the responsibility of MoWSA Responsible for the coordinating the implementation of social policies, programs and activities aimed at improving the living conditions of vulnerable groups Ensures the promotion and protection of the rights of vulnerable populations in Ethiopia	Facilitate access to quality healthcare, education, and other basic social services for women and children, protecting women and children from gender-based violence, discrimination, and abuse. They will bsupport compon ents of the project that relates to creating awareness, training, advocacy. Strengthening public- private partnerships and collaboration with civil society organizations, development partners, and other stakeholders in addressing biosecurity related concerns amongst the vulnerable populations.	Website: www.mowcy.gov.et/en/ E-mail(s): info@mowca.gov.et Phone: 0115528394 / 0115525455

11.	Ethiopian Custom Commission	Due to strategic positioning at the borders, the Customs Administration provides assistance to certain administrations by ensuring compliance with the texts they prepare or initiate- Biosecurity inclusive. The development, implementation and monitoring of specific legislation.	Provide useful data on surveillance of land, sea and air borders, control of the movement and handling of goods including biological materials at the entry points of the national territory; Application of biosecurity policies at the entry points.	Tel: +251 116 67 54 58 ; +251 115 57 88 51 ; Fax: +251 116 62 98 19 ; Email:hocrecordopr@gmail.com. ecc.gov.et http://ecc.gov.et ? web ? ec
12	Ministry of Transport and Logistics	prepare national plans pertaining to the development of transport infrastructure; ensure the establishment and implementation of regulatory frameworks to guarantee the provision of reliable and safe transport services identify and implement measures that mitigate the impact of transport infrastructure and services on the environment and the climate;		

		regulate transit services related to import and export of goods; and ensure that the national logistic system is efficient and competitive;		
13.	Bio and Emerging Technology Institute (BETin)	The institute is mandated for supporting, organizing, and directing the various Biotech research works conducted separately in different universities and research institutes. The institute will resolve and address the major challenges in society that are related to health, food security, the realization of sustainable development and facilitate the basement of industrialization, work on human development and to establish the general framework and basic structures for national innovative research. BETIn mainly focuses on world-class research activities in biotechnology and emerging		

		technology which are major pillars for the nation?s Economic development. It is concerned with supporting comparable research activities in the country, working out capacity building, and paving the way for scientific research which are in line with society?s ethics and moral values that are subsequently used in the social and economic benefits for the people.		
14.	Ethiopian Media Authority (EMA)	Media agencies and internal communication units of the respective stakeholder Ministries as well as other communication networks in NGOs and Civil Society Organizations would play defined roles in an anticipated communication strategy. This stakeholder engagement plan is designed to promote stakeholder buy-in, establish collaborative		

		relationships, reduce conflict and negative impacts, build support for the project and enhance the likelihood of the success of the Ethiopian Biosecurity Project and ensure the sustainability of the project impacts. A stakeholder communication strategy is envisaged to enable dissemination of information about the project, creating opportunities for mutual feedback and participation. Regular communication with stakeholders through various channels, such as emails, media (radio, television), periodic newsletters, social media prompts, as well as meetings to keep them informed about project updates, progress and outcomes are key aspects that should		

		encourage cohesion amongst stakeholders during the project implementation. Effective communication within and amongst stakeholder groups to a large extent, will minimize conflicts during project execution		
15.	Ethiopian Wildlife Conservation Authority (EWCA)	Provides for the establishment and management of a protected areas system (Sanctuaries, Reserves, Parks, Human Heritage Sites and Sacred Sites) making provision for the conservation and protection of Wildlife. Provide conservation and protection to threated and endangered species by using different conservation method. Management of invasive species that threaten protected areas (Sanctuaries, Reserves, Parks, Human Heritage	Member of the Project Advisory Committee. Involved in the policy, regulatory and institutional planning process. Implementation of the conservation of wildlife Initiative-integration in support of Challenges of Biodiversity, Climate change and other focal areas. Member of the constituted Biosecurity Technical Advisory Committees. Ensures the incorporation of the issue of biological invasions into decisions relating to national park,	Telephone +251 (11) 5 51 43 89 / +251 (11) 5 54 68 05 Mobile: +251 91 031 43 51 Fax +251 (11) 5 54 68 04 Email: kumewak@yahoo.com

		Sites and Sacred Sites) Key stakeholder for activities concerned with biosecurity relating to wildlife conservation.	sanctuary, and reserves. Training of relevant EWCA personnel in risk-based biosecurity decision making processes Provision of expertise particularly in the area of Wildlife pests.	
16.	Ethiopian Institute Agricultural Research (EIAR)	EIAR has responsibilities that align to IAS management through its mandate to formulate agricultural research strategies and undertake or cause the undertaking of agricultural research activities based on the Agricultural Research Policy and Strategy. Moreover, EIAR undertakes plant protection and weed management research in Ethiopia and had an experience in undertaking research on IAS and assists the drafting of policies, laws/ regulations and	Provides identification and control of weed plant species found in Ethiopia and records their distribution? Conservation of plant specimens which serve as reference collection for researchers and scientists doing research on plant species in Ethiopia thereby promoting food security and productivity research. Provides training opportunities to students and professionals on plant taxonomy, biodiversity and conservation.	Website: www.eiar.gov.et/index.php/en Email(s):eiar@eiar.gov.et Phone: +251116454441 P.O.Box: 2003 Addis

		strategies for control of IAS. Its role as the National Implementing Action for GEF Project has considerably strengthened EIAR?s IAS-related capacity. Through its Biotechnology directorate, the Institute undertake confined and contained laboratory research on LMOs too.		
17.	Local communities	Indigenous and local communities can play a crucial role in the Ethiopia biosecurity project by providing their traditional knowledge and practices related to biodiversity and ecosystem management. These communities presumably have a deep understanding of their local ecosystems and can contribute to the development of biosecurity protocols suited to their particular ecosystems. They can also be very effective in	local communities play traditional knowledge and practices related to biodiversity and ecosystem management They can also be very effective in educating and raising awareness amongst other community members to promote sustainable management practices.	All regions and city administration

		educating and raising awareness amongst other community members to promote sustainable management practices Local communities are responsible for various activities related to not only control and prevention of IAS existing in their localities but also in control of the re-emergence and restoration of areas cleared from the IAS.		
	Ministry of Mines	They are responsible to coordinate rehabilitation of the site that extracts minerals	The restoration , the rehabilitation sites must be clearly identify They are responsible to set Rehabilitation mechanisms Land fill works must be done in the site they extract minerals. They are responsible to do not expose for IAS	T?l?phone 01166675480 Email- info@mom.gov.et
19.	Ministry of Finance.	MINFI, thorough its Customs and Excise services, is the front line for the interception of goods at the point of entry	Formulate economic cooperation and fiscal policies that particularly serve as a basis for taxes, and duties; follow up the proper	- Telephone: +251 11 155 2400 - Web:

		for the collection of tariffs and the regulation of border issues relating to terrorism and smuggling ? particularly drugs. MINFI is a key stakeholder in implementing biosecurity measures relevant to trade-related biosecurity pathways. MINFI will incorporate the issue regarding collection of duties and fees into decisions relating to the movement of biological material through entry points, coordinate data on manifests to biosecurity officials at points of entry to facilitate inspection and provide expertise particularly in the area of inspection during the project preparation and execution of planned activities	implementation of same; initiate reform recommendations. Mobilize, negotiate and sign foreign development assistance and loans, and follow up the implementation of same. Establish a favorable legislative framework to promote and facilitate the implementation of PPP financed infrastructure projects by enhancing transparency, fairness and long-term sustainability. Prepare the Federal Government fiscal budget, make disbursements per the approved budget, and evaluate the utilization of the budget; Pursue international partnerships with countries and organizations to mobilize additional financial and non-financial resources to support national development plan	Ministry of Finance website - Org. type: Government Department

			Ensure sustainable debt management and effective utilization of externally mobilized resources, and others	
20	Ethiopian space science and Geo-Spatial Institute.	Responsible to indicate the coordination command area of IAS Delegate maps of the IAS areas Create data base on this sites	they are responsible to set the coordination in web sites way points responsible to construct land cover change of IAS coverage They are responsible to register and document the whole IAS related documents	T?l?phone +251115518445
21	Ministry of Irrigation and Lowlands (MILLs)	Facilitate the proper utilization of Water Initiate policies, strategies, and laws with respect to irrigation development and promote to elimination irrigation sit IAS	Initiate policies, strategies, and laws with respect to irrigation development, lowlands, and drought-prone areas; prepare detailed programs compatible with the national development plan for their implementation and implement the same upon approval with integration of protecting IAS distribution . Promote irrigation development projects through	Address: 2Q88+4XP, Addis Ababa Ethiopia E-mail(s): gmekonnen19@gmail.com, MILLs@gmail.com Phone: +251922261464

			different means and create conducive conditions for private investors to gain incentives in accordance with the law with integration of reducing IAS coverage	
22.	Ethiopian Biodiversity Institute (EBI)	They are responsible to aware the people about people IAS They are responsible to do Environmental impact assessment on IAS	Enrich the country?s biodiversity resource through encouraging the traditional system of exchange of species by Ethiopian communities, and as appropriate, through the re-introduction of species from international sources and repatriating germ plasma of Ethiopian origin from elsewhere in the world; Issue directives on, and give import or export permit for, the introduction of biodiversity specimens into or out of the country; Control and follow up the negative impacts of invasive alien species on the country?s biodiversity Undertake research relevant to ensure the conservation and sustainable	Email -info@ebi.gov.et Phone no--+251116612244\251116615607

			utilization of biodiversity and the sharing of benefits arising from their utilization and monitor the impact of processes and category of activities that have or are likely to have adverse impact on biodiversity and devise the appropriate methods for their conservation and sustainable use	
23	Ethiopia Forestry Development (EFD)	They are responsible to coordinate the IAS forest specious identification, reduction and control mechanisms	Ethiopia Forestry Development provides for the establishment and management of the protected areas systems (Sanctuaries, Reserves, Parks, Human Heritage Sites and Sacred Sites) making provision for the conservation and protection of forests and tree and the licensing and sale of forest products. This organization manages invasive species that threaten forest systems and protected areas. EFD is the key stakeholder for activities concerned with biosecurity relating to trade in forest products. EFD plays a significant role in	Phone 0968585916

			land degradation initiatives regarding collaboration in decision making process to address biological invasions in relation to some land restoration measure. Implementation of the restoration initiative, climate change and land degradation focal areas is supervised by EFD. The former EEFRI, now turned to under EFD, used to conduct research on IAS related to forest protection, environmental and ecosystem management. It used to host the national LMO Detection Laboratory which supports testing and monitoring of LMOs in Ethiopia.	
24.	Ministry of water and energy	The Ministry of Water Resource is mandated, among others, to undertake studies relating to the utilization of the waters of trans-boundary rivers and upon approval, follow up the implementation of same and prepare plans that help to properly utilize water resources.	Coordinate different organizations like rift valley and river basin watershed authority, Nail basin authority and lake Tana and other river development agency to red uce and control IAS that followed water bodies ,	Tel 251116611111\251116611700

		The Ministry of Water Resources has an inferred IAS role in its mandates, particularly on IAS issues that relates to water bodies and movements of IAS facilitated by water, implementing control mechanisms of invasive species that invade water bodies	Make collaborations with technology minster to create the technology that can eliminate water body?s IAS	
25.	Regional States and City Administrations	Enrich the country?s biodiversity resource through encouraging the traditional system of exchange of species by Ethiopian communities, and as appropriate, through the re-introduction of species from international sources and repatriating germ plasma of Ethiopian origin from elsewhere in the world; Issue directives on, and give import or export permit for, the introduction of biodiversity specimens into or out of the country;	It has the role to Enrich the country?s biodiversity resource, Control and follow up the negative impacts of invasive alien species, Undertake research relevant to ensure the conservation and sustainable utilization of biodiversity.	

		Control and follow up the negative impacts of invasive alien species on the country?s biodiversity Undertake research relevant to ensure the conservation and sustainable utilization of biodiversity and the sharing of benefits arising from their utilization and monitor the impact of processes and category of activities that have or are likely to have adverse impact on biodiversity and devise the appropriate methods for their conservation and sustainable use.		

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

rrent responsible bodies for IAS/LMOs

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 was discussed at meetings organized by the Environmental Protection Authority of Ethiopia. During the PIF preparation phase, specific updated information was collected by the local experts from Ethiopian Biodiversity Institute, Ministry of Agriculture, Ethiopian Institute of Agricultural Research Ministry of Water, Irrigation and Energy and Ethiopian Wildlife Conservation Authority 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 was contacted as well and provided with specific information on the current and future policies and educational programs in the related area of topics.

The key stakeholders and their potential roles and interests are as captured in the table below.

------- -- - > **POW ER** --- >	**High power: Low interest**	**High power: High interest**
	1. Ethiopian Custom Authority 2. Ministry of Plan and Development 3. Ministry of Finance	1. House of Peoples Representative (water, irrigation lowland and environment development affairs standing committee) 2. Environmental Protection Authority. 3. Ethiopian Biodiversity Institute 4. Ethiopian Forest Development 5. Ministry of Agriculture 6. Ethiopian Institute of Agricultural Research 7. Bio and Emerging Technology Institute 8. Ministry of Water and Energy 9. Ethiopian Wildlife Conservation Authority 10. Local Communities 11. Regional States and City Administrations
	Low power: Low interest	**Low power: High interest**

	1. Ministry of Mines 2. Ministry of Education 3. Ethiopian space science and Geo-Spatial Institute. (ESSGSI) 4. Ministry of Women and Social Affairs 5. Ministry of Transport and Logistics	1. Ministry of Trade and Regional Integration 2. Ministry of Innovation and Technology 3. Ministry of Health 4. Private Sector 5. NGOs and Civil Societies 6. Ethiopian Media Authority
---------- > **INTEREST** --- >		

Consultation with civil society groups and local communities during the project design was meant to ensure their participation during project preparation and implementation. Though limited, local communities were identified as high-power interest groups as they have been assisting in the management of IAS in the Lake Tana area through manual removal of IAS which is a hindrance to their fishing and related farming activities. In addition, the proposed objective of the project was presented and the envisaged participation, interest and support from Civil Society and Local communities in project preparation and implementation including site-based outreach activities were captured and reflected in pages 29-30, 34 and 37 of the PIF (highlighted in green). Extensive and dedicated consultative discussions were undertaken in the proposed selected pilot sites regions to identify and engage with Civil Society, local communities and indigenous peoples in project preparation during the PPG phase and will be continued during 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;

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)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

Sustainable development goals are designed to end poverty, hunger and women venerability to STIs. Goal 5 focuses on gender equality where Ethiopia has given attention to its implementation. The Constitution of Federal Democratic Republic of Ethiopia also sets out gender issues under Article 7 which focuses on Gender Reference in which the provision of the constitution set out that the masculine gender shall also apply to the feminine gender and in the same constitution Article 35 considers the Rights of women under sub article 6 to ensure that women have the right to full consultation in the formulation of national development policies, the designing and execution of projects, and particularly in the case of projects affecting the interests of women. The National Ethiopian Women?s Policy that was enacted in 1993 has also mapped out the problems of Ethiopian women in all field of development and identified the patriarchal system as the root cause that exposes women to political, economic and social discrimination which is reinforced by traditional practices that give credence to cultural/religious norms and values over women?s human rights.

The project in design will take into consideration the involvement, use, knowledge and management of biological invasions and novel introductions and related safety concerns by undertaking socio economic assessment, stakeholder and gender analysis during the project preparation phase. To ensure participation and involvement of women, children and youth, an approach will be taken into consideration time constraints, knowledge and socio-cultural impediments to their full participation. This approach will guide the selection and representation during the finalization of the Biosecurity Policy and the updated Biosecurity regulatory instruments to ensure women, youth, civil society and private sector are represented on envisaged statutory bodies as per the law through affirmative action.

This same approach will guide the setting up, selection and participation in meetings and training workshops. As envisaged, the project will set up and organize 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 in the biosecurity regulatory measures in Ethiopia.

The proposed project recognizes the importance of involving women in setting up the Policy, Regulatory and Institutional frameworks because women play a critical role in assessing genetic resources both at

the community level, the marketplace and trade across borders with neighboring countries. Women in the Ethiopia depend heavily on the use of natural resources therefore ensuring gender equity will benefit all including women and men in the balanced allocation of resources, involvement and decision-making will result in better incomes and overall well-being for all persons ? women, men, youth and local communities will support efforts on conservation and sustainable use of biological resources.

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

(i) Analysis of livelihoods, gender and vulnerable groups will inform the project design, through assessments of women engagements in handling biotechnology related activities, needs and aspirations, to enable collection of gender specific data. 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 a gender sensitive project design from the start, and thus set up an implementation process that considers the needs and priorities of both women and men. The analysis itself will need to be organized in a way that allows varying approaches and availability to meet the needs and participation of women and men.

(ii) Gender-balanced management: Behavior change and gender-balanced management within community-based organizations (CBOs) 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 biosafety systems guided by needs captured during the gender analysis.

Women will be 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.

(iii) 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 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.

Will the project?s results framework or logical framework include gender-sensitive indicators? yes /no / tbd

Gender-disaggregated performance indicators: Monitoring and evaluation will include gender-specific indicators (e.g. management/regulatory agency positions held by women and men) and indicators of the presumed result of greater gender equity (e.g. increased family income, improved household wellbeing, more efficient businesses, and improved Biosecurity measures). Results will be disaggregated to demonstrate distribution of results across the different genders, biosecurity expertise, opportunities in decision making (through the Technical Committees/ Advisory Panels and the Expert Technical Groups), socio-economic and local communities.

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;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women

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.

As a key stakeholder, the Government of Ethiopia engages private sector in development actives including ensuring their role in the area of proposed project. To ensure the participation of private sector engagement in Biodiversity conservation and sustainable utilization, the Government designed different awareness creation platforms including workshops, training and meetings. Most of the time the private sectors are engaged through contribution of resources including finance and logistics for planned development activities by the Government. Similarly, private sector is involved in the in environmental management and control related activities. For example, there was a good attempt and practice in Oromia which is one of the proposed areas where the proposed project will be implemented, the Ministry of Water and Energy of Ethiopia engaged different stakeholder groups including private sector (floriculture, horticultural farm owners, hotels and lodges) around Lake Hara Dembel in water hyacinth management and control. The management and control of water hyacinth was done by dividing the area of water covered by water hyacinth. The divided area was assigned to different stakeholder groups on a hectare basis so that each stakeholder group had assigned

responsibility of clearing water hyacinth areas (in ha) assigned to them. The assignment of the area to each stakeholder group including private sector was done through formal letter written by Ministry of Water and Energy to concerned stakeholder groups. The same approach was used in the Tana Lake in Amhara region of Ethiopia where the assigned private sector groups contributed money for the purchase of machines used to remove water hyacinth from the lake in addition to other related water hyacinth removal activities.

Private sectors, as indicated above, are playing a significant role in terms of supporting the management of IAS through resource contribution (logistics and finance). Farmers would also participate on the edition from their own farm and communal areas and water bodies. Private sector groups and cooperatives are currently providing machinery and training in the manual management of invasive alien species. All the current field trials currently are supported with introgressed events from the private sector and are also working with the scientists in the field sites as they are likely recipients of the technology. Private Sector engagement will be further reviewed and additional specific inputs for the private sector included as applicable.

Ownership (i.e., not owned or operated by a government). This term includes financial institutions and intermediaries, multinational companies, micro, small and medium-sized enterprises, co-operatives, individual entrepreneurs, and farmers who operate in the formal and informal sectors.

Private sector engagement occurs. They include knowledge and information sharing, policy dialogue, technical co-operation, capacity development and finance

- ? Knowledge and information sharing: This includes learning-oriented interactions that aim to Identify and exchange information about GMO and IAS threats, management and impacts of it on socioeconomic version. .
- ? Experiences and best practices among organizations and firms. It also includes initiatives that aim to address information asymmetries in markets. Knowledge and information sharing is characterized by varying degrees of formalization and institutionalization.
- ? Policy dialogue: This includes policy-oriented discussions across sectors that aim to create or Change policies or behavior, including through the adoption of best practices and specific Standards. Such as GMO adoption and IAS policies, strategies etc.

? Technical assistance: Mostly provided in the context of development finance, technical assistance includes the direct provision or funding for the provision of specialized advice and support to private sector actors.

? Capacity development: This includes efforts to enhance individual or organizational learning and develop the abilities of actors to perform functions, solve problems and achieve objectives.

? Finance: This includes transfers in cash, goods or services for which no repayment is required and transfers for which (re)payment is required to support specific projects, programs or private sector entities.

? Create awareness on Incorporating the GMOs and IAS issues on formal education curriculum.

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:

Assumptions:

The following assumptions are made:

? The executing partners will be implementing activities guided by the threats and barriers identified

? Partners will submit requested data including identified challenges, lessons learnt and best practices, sectoral policy, regulatory and institutional needs.

? Adequate resources will be allocated (technical and institutional) to support project delivery.

Identified Issues

Risk	Level	Management strategy
Biosecurity measures lack broad based support leading to poor compliance.	L	A high degree of collaboration among different stakeholders is necessary, so it is important to develop a participatory framework for project development and implementation. The participatory framework will help develop structures to maximize intra- and inter-sectoral collaboration (Project Steering Committee and technical committee composed of Inter-ministerial Teams). These structures will be built to maximize collaboration among the component lead agencies. The roles delegated to other entities will be formalized through applicable agreements (e.g., MoUs) with EPA using clear ToRs that will be developed during the commencement of the project. During project implementation, the final design of specific initiatives will continue to include key stakeholders and to ensure their inputs are considered in decision- making. During project implementation there will also be ongoing participation and inclusion of all stakeholders in activities that may impact them, both positively and negatively. The project will implement the National Biosecurity Communication Strategy and Action Plan that will specifically target the development of support among key stakeholders and the public for effective biosecurity.
Inadequate mechanisms for institutional coordination in the management of IAS and LMOs	M	Regular coordination meetings for relevant ministries and agencies will be held, defining clear procedures and responsibilities for all the key stakeholders identified. Institutional capacity building will be placed on a high priority level throughout the planned project activities. The steering committee and the information sharing activities will be used to consciously support coordination and management of biosecurity. Where feasible, concerted efforts will be put in place to develop guidance and easy to read materials to support the coordination mechanism. Entry points will also be created for key non-governmental stakeholders including private sector, NGOs, farmers and women groups to be represented in the steering committees as part of the coordination mechanism
Slow and bureaucratic policy, administrative and regulatory responses to Biosecurity issues	High	Cooperation between government structures, institutions and special awareness programs for targeted and relevant authorities will be organized at the inception of the project, with follow ups to strengthen the political support for project implementation. Efforts will be made to ensure biosecurity is placed on a higher level in the agenda of governments and national assemblies. Designated Stakeholder institutions will be strengthened to do continuous outreach, lobby and network as a means of getting political leverage.

Low institutional capacity to manage handling of LMOs and management of IAS	Medium	Capacity building activities, coupled with strengthening of existing facilities, will equip designated regulatory agencies to effectively execute their mandate. A high priority will be placed on building a critical mass of resource persons through the Trainer of Trainers approach, mentoring and training in ?soft skills? as focal points who will contribute to the enhancement of public awareness through intensification of the contribution of national experts in this process. Through the planned initiatives efforts will also be made to get ?buy-in? by the different stakeholders in the management of biological resources in Ethiopia through coordination of similar interventions, lobbying and periodic briefs.
Insufficient community mobilization and involvement in the project constrain implementation of activities.	Low	Community groups will be contacted early in the PPG process to elicit their interest and cooperation. There is a long and successful tradition of community participation in biodiversity conservation activities in Ethiopia. An example can be seen within the Water Hyacinth Project, whereby, the Watershed Task Group (WTG) in collaboration with EPA, has actively engaged community participation in the management of water hyacinth in Lake Tana area and has organized several trainings on the control, removal and disposal of water hyacinth. Community participation will be maximized by securing Free, Prior Informed Consent (FPIC) from community groups, the involvement of local communities in restoration-related activities as volunteers and paid staff and the development of local management committees in pilot studies as appropriate.
Liberalized trade will increase the risk of IAS introductions.	Medium	The project will help strengthen the institutional biosecurity framework so that the pressures resulting from increased imports can be effectively managed. Key sector ministries including the Ministry of trade and other regulatory officials will be trained on the use of the tools developed for risk analysis and decision making.
Lack of transparency in the intentional introductions of LMOs will jeopardize effective risk-based management	Medium	The project will establish a transparent mechanism for science-based risk assessment of LMOs; and training for detection and enforcement as well as project-led communication activities to minimize illegal introduction and propagation of LMOs.

Climate change impacts, public perception towards handling of LMOs and management of IAS	Low	Potential use and import of LMOs may increase under increased temperature and other climate change related results due to tolerance to abiotic stresses. Invasive Alien Species may thrive due to adaptation to climate related stresses. Ethiopia frequently experiences extreme events like droughts and floods, in addition to rainfall variability and increasing temperature which contribute to adverse impacts to livelihoods. Primary environmental problems are soil erosion, deforestation, recurrent droughts, desertification, land degradation, and loss of biodiversity and wildlife.[1] Food security will be affected by land and infrastructure degradation due to erosion/landslides, an increase in livestock and crop diseases due to temperature increase, direct crop failure due to floods and heavy rains. Water availability will be affected by possible periods of drought and invasiveness of introduced or alien species in water bodies. Due to the effects on food security and food production, potential use and import of LMOs that are better adapted (or perceived to be) or tolerant may increase. During PPG, the potential of climate change scenarios on Ethiopia?s response will be integrated into capacity building interventions and into the design of strategic action plans and policies to ensure that such changes to public attitude to and queries related to uptake of Biosecurity considerations are anticipated and proactively managed. Safeguard measures to be by 30.07mm (-256.09mm to 367.41mm). This may result in an increased frequency of extreme events such as floods as well as droughts especially in the northern regions of Ethiopia. As a consequence, to climate change, loss of pasture lands, reduced access to water supplies, degradation of water quality, scarcity of water resources for livestock, crop loss/failure, loss of marine habitat, increased ranges of vector-borne diseases and increased risk from waterborne diseases may prevail in these regions. Faced with these challenges, the public may potentially import and use LMOs (for ex. GM Cotton) that are better adapted (or perceived to be tolerant) to abiotic stress. The potential of climate change scenarios on the countries? response will be integrated into capacity building activities. Furthermore, strategies will be put in place to anticipate and proactively manage such changes in public perception of LMOs under circumstances of climate change.
Disease Outbreak (Covid- 19)	Medium	Statistics published by the WHO, as at 10 December 2021, there have been 107,549 confirmed cases of COVID-19 with 1,823 deaths, reported to WHO. As of 5 December 2021, a total of 970,440 vaccine doses have been administered.12 Ethiopia was the most affected country in the Central African region. The first case was declared on the 6th of March 2020 and ever since then, many measures have been taken by Ethiopia government with the aim of reducing the transmission of this virus. Compared to other countries, a complete lockdown has not been observed, because the pandemic found a weak economy, tortured by the various crisis in its North regions with Boko haram and South-West and North- west regions with separatists? group. The country could not afford a complete break of its economic activities.13

		COVID-19 pandemic found a weak economy due to the different internal crises that the country is facing. Companies located in the southwest and northwest regions have been paralyzed by political issues. Both regions account for 16.3% of Ethiopia GDP (Mbadi, 2019)[14]. Among them, the greatest employer of the country in terms of the number of employees: CDC, where all activities have been stopped since then. The UNDP forecasted that because Ethiopia relies a lot on the importation, worldwide lockdowns will create a shortage in inputs, in the same way, it may create a slowdown of economic activities. The COVI-19 pandemic has had significant devastating effects on the country?s economic activities with some companies feeling these effects. In a survey made by GICAM (2020) from the 13th to 21st April 2020, in a sample of 100 enterprises, 92% admitted the pandemic is adversely affecting their turnover [15]. Globally, 44% of companies declared that the purchases have been affected. Most impacted are manufacturing companies with 56%. Tomatoes and chicken sectors have faced a severe crisis. Tomatoes crisis is firstly due to closed borders of countries like Equatorial Guinea and Gabon which greatly import tomatoes from Ethiopia. Prices dropped to 80% and placed several producers in a very difficult position. With the devastating effect of COVID-19 on the economy of the countries affected, governments are focusing public resources on rebuilding the economies of countries. Ethiopia is not an exception. The risk is only partly under project control. The importance of having a strong national biosecurity framework in place and foster financial commitment from key sectorial stakeholder institutions cannot be overemphasized.

12 https://covid19.who.int/region/afro/country/cm
13 https://mpra.ub.uni-muenchen.de/102245/1/MPRA_paper_102245.pdf

The project is envisaged to have low social and environmental risks as per the attached Safeguards Risk Identification Form approved by the UNEP Safeguards team. However, as a safeguard measure, project will undertake extensive stakeholder engagement with local farmers, indigenous people and local communities and the private sector to ensure there is rapid response, alerting and adaptation in case risks including climate risks come up. In addition, the project will be guided in addressing climate risks through mitigation interventions as per the national policy and strategy 2013 of disaster risk management of the country. The climate related risk will be addressed using Ethiopia?s Climate Resilient and Green Economy strategy 2011 experiences gained in the area of Climate mitigation and adaptation.

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

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11 https://climateknowledgeportal.worldbank.org/sites/default/files/2020-06/15463-WB_Ethiopia%20Country%20Profile-WEB_v2.pdf

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.

Institutional Arrangement and Coordination

The project will be implemented over a period of four years (a total of 48 months). The project will be implemented following UNEP/GEF guidance on externally executed projects, according to the Project Cooperation Agreement to be signed between UNEP and the Government of Ethiopia. The project will be coordinated and led by a Senior Project technical officer and admin support will be obtained from EPA. The Project Implementation arrangement and management consists of the following organs:

i). National Project Steering Committee(NPSC)

The National Project Steering Committee(NPSC) is responsible for making by consensus, management and decisions when guidance is required by the Project Coordinator, including recommendation for implementing partner approval of project plans and revisions. In order to ensure ultimate accountability, Project Steering Committee decisions should be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective standard competition.

The Project Steering Committee is comprised of the representatives of the following ministries and institutions:

1. Ethiopian Environmental Protection Authority ? Chair
2. Ministry of Finance-Member
3. Ministry of Foreign Affairs- member
4. Ministry of Agriculture-Member
5. Ministry of Water and Energy-Member
6. Ministry of Trade and Regional Integration
7. Ministry of Health-Member
8. Minisrty of Irrigation and Lowland-Member
9. Ministry of Women and Social Affairs-Member
10. Ministry of Transport and Logistics ? member
11. Ethiopia Institute of Agricultural Research-Member
12. Ethiopia Biodiversity Institute ? member
13. Ethiopian Customs Commison- member
14. Ethiopia Wildlife Conservation Authority-member
15. Biosafety and IAS Regulatory Directorate Focal Point-member
16. Project Technical Officer - non voting member (Member/Secretary)
17. United Nations Environment Programme (UNEP)

Other relevant members can be invited at the decision of the NPSC on an as-needed basis, but taking due regard that the NPSC remains sufficiently lean to be operationally effective. The final list of PSC members will be completed at the onset of project operations and presented during the project inception workshop by taking into account the envisaged role of different parties in the PSC. The National Project Coordinator will participate as a non-voting member/Secretary in the NPSC meetings and will also be responsible for compiling a summary report of the discussions and conclusions of each meeting. The Project Steering Committee will meet after the inception workshop and once per quarter i.e., four times per year. Attendance of the Steering Committee meetings will be monitored, and attendance rates of the delegated people is expected to be no less than 75%.

ii). Project management:

The primary responsibility for day-to-day project implementation and regular monitoring rests with the National Project Coordinator. The Project coordinator will develop annual work plans based on the multi-year work plan, including annual targets at the output level to ensure the efficient implementation of the project. It will ensure that the standard implementation of the project, M&E requirements are fulfilled to the

highest quality. The Project Coordinator shall inform UNEP about any delays or difficulties as they arise during implementation, including the implementation of the M&E plan, so that the appropriate support and corrective measures can be adopted. The Project Coordinator will also ensure that all project stakeholders and concerned support staffs maintain a high level of transparency, responsibility and accountability in monitoring and reporting project results.

A Project Management Unit will be set up in EPA under Biosafety and IAS Department and will coordinate the execution of the project under the NPSC. The officer will be high-ranking expert and will be responsible to ensure cooperation, collaboration and efficient implemetation of the national biosafety and biosecurity frameworks. Biosafety and IAS Department will provide the overall guidance of the National Project operating activities on behalf of the National Project Steering Committee will carry out the day-to-day management of the project. The Department head will report to UNEP Ethiopian office and the NPSC.

iii). Project Execution Partners:

The Execution Partners consists of the above organizations and are responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Execution 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 by and generated by the project supports national systems.

The Regional taskforces will facilitate and implement those project activities at project site with active engagement of community beneficiaries. The members of regional taskforce in each Region will be identified during inception phase.

iv). UNEP: The GEF Implementation Agency

UNEP will support to the national project coordinator, the Project Management Unit and the BS and IAS Regulatory Directorate as needed, including through annual supervisory missions. The annual supervision missions will take place according to the schedule outlined in the annual work plans. Supervision mission reports will be circulated to the project management and Project steering committee within one month of the mission. UNEP will initiate and organize key GEF M & E activities including the annual GEF PIR, update of the Core Indicator worksheet, the independent mid-term review and the terminal evaluation in line with its GEF Implementation Agency responsibilities. UNEP will also ensure that the standard UNEP and GEF M&E requirements are adhered to the highest quality.

The UNEP Country Liaison office in collaboration with the UNEP-GEF Task Management team will provide liaison support as an//d when required.

Roles and responsibilities of the project?s governance mechanism:

S/N	Organization/ Institution	Related Duties & Influence on IAS & LMO Domains	Institutional Role	Localization & Contact Details
GOVERNMENT MINISTRIES/ Institutions				
1.	**Environmental Protection Authority**	? EPA charged with the duty to protect the environment in Ethiopia. ? EPA is Responsible for the approval of all importation requests for LMOs and the setting of conditions for import and the issuing of certification for export. ? Hosts the Office of focal point for the Cartagena Protocol ? Responsible for the assessment of the environmental impacts of potential LMO introductions to Ethiopia.	? EPA is Project Coordination Unit. - will coordinate with relevant national ministries, Institutions and other organizations. ? Taking the lead in policy, regulatory and institutional planning processes, notably in the lobbying team for the passing into law of the text of an overarching biosecurity act and its accompanying supplementary text of application. ? Ensure the mainstreaming of biosecurity concerns into all land restoration projects and initiatives. ? Provide relevant data on the implementation	**www.epa.gov.et** **tel 2511111704038**

			of The Restoration Initiative-Challenge under the Biodiversity, Climate change and Land degradation focal areas. ? Representation and coordination of Biosecurity Steering and Technical Advisory Committees ? Implementation of risk-based management to LMO transfer, handling and use. ? Ensure that biosecurity considerations are integrated into Climate Change adaptation and mitigation activities to minimize biological invasions-related risks. ? Incorporation of the issue of biological invasions in environmental planning. ? Establishment of expertise particularly in the area of biosafety all through the project implementation period. ? Prepare the National	

			Biosecurity Communication Strategy and Action Plan. ? Follow up and report on biosecurity mainstreaming into the tertiary education sector. ? Ascertain gender equality and equity during all the implementation process of the project as specified in the project?s gender action plan.	
2.	**House of Peoples Representative (Standing Committee of Agriculture, Pastoralist and Environmental Protection Affairs)**	? The House of Peoples Representatives is one of the two legislative bodies in the Federal Democratic Republic of Ethiopia ? It has the power to approve and ratify legislations (policies, proclamations, etc.) and control and follow-up the performances of the executive wing and judiciaries. ? It has different standing committees	? The committee is responsible for following-up on environmental issues involving biological introductions including LMOs and IAS.	

		which are responsible for follow-up of specific sectors.		
3.	**Ministry of Agriculture (MoA)**	? MoA, responsible for preparing and implementing Government policy in agriculture and rural development. ? Responsible for the majority of activities that concern plant-related biosecurity in Ethiopia and plays a significant role in land management for agriculture and ecosystem services. ? Ensures the preparation and follow-up of regulations in the agricultural sector. ? Ensures plant protection through prevention of entry of pests and diseases. ? Undertakes seed testing, supports the development of IPM and the introduction of biological control agents, the development and monitoring	? MoA, will continue to take the lead in activities concerning the implementation of risk-based management of the imported and exported plants and plant products. ? It will ascertain the incorporation of risk-based decision-making processes in pest management and will provide expertise particularly in the area of plant protection. ? Involved in policy, regulatory and institutional planning process ? Is a member of the Biosecurity Technical Advisory Committee ? Incorporation of risk-based decision-making processes in pest management systems ? Intensification of training of relevant MOA personnel in risk-based biosecurity	Website: http://www.moa.gov.et/ (link is external) Email: Eyasu.Abraha@moa.gov.e (link sends e-mail) Phone number: 251-116460746 **Location** Ethiopia See map: Google Maps (link is external) ET Postal address: P.O. Box 62347 -

		of regulations and standards, and crisis management in agriculture. ? Responsible for the training of agriculture personnel. ? Promotes sustainable agricultural development. ? Prepares and implements land-use policy. ? Direct and coordinate the implementation of the Food Security Programme. ? Supervising farmers and farmer associations. ? Promotes the development of sustainable pastoral development. ? Encourages and assists the provision of agricultural extension services to pastoralists. ? Conducts quarantine controls on animals and animal products brought into or	decision making processes. ? Mmanagemen t of the introduction of diseases with animal and animal products will be undertaken by the Animal Health section of MoA ? Operates zoo-sanitary control in accordance with the principles outlined in the WTO/SPS Agreement and by the standards developed. ? Supervise sanitary control in maritime and river fishing, and ensure safety of food of animal and fishery origin ? Ensure the incorporation of risk-based decision-making processes in the management of biological invasions in pastoral systems. ? Assist in the incorporation of the issue of biological invasions into decisions relating to vector management, and will provide expertise particularly in the	

		taken out of the country. ? Takes the necessary measures to prevent outbreaks of animal disease. ? Training and technical supervision in breeding. ? Studies and research for the renewal of fish and fish resources. ? In charge of the Society for the Development and Exploitation of Animal Productions,	area of animal health and management of zoonotic diseases ? Representation of MoA in policy, regulatory and institutional planning process ? Incorporation of the issue of biological invasions into animal import and export decision-making ? Provision of expertise in the area of animal health	
4.	**Ministry of Education (MoE)**	? MoE, oversees the execution of all higher education in Ethiopia. ? It is responsible for the content and quality of tertiary education	? MoE will provide expertise on tertiary curriculum development, assist the project in incorporating biosecurity into relevant tertiary education courses.	Phone: +251-11-155-3133 Email: info@moe.gov.et

		including courses of relevance to biosecurity as taught at universities in Ethiopia.	? Provide expertise on training and capacity building during the project execution. ? They will also provide laboratory services at the designated laboratories at the selected University ? To provide LMO Detection and PCR/ELIZA based methodologies to support detection of LMOs and IAS as applicable.	
5.	**Ministry of Innovation and Technology (MINT)**	? MINT oversees all state-funded research institutions in Ethiopia. ? It is responsible for directing research to ensure that it conforms to the demands of the country?s development planning. ? **MINT,** oversees the work of related to biosecurity through its agricultural research and extension activities.	? **MINT,** will provide expertise on the development and implementation of research related to biosecurity they will also provide experts to support the development of technical manuals and guidelines on risk analysis, detection and monitoring using biosecurity measures.	

6.	**Ministry of Health (**MoH**)**	? MoH is responsible for the maintenance of all public health services in Ethiopia. ? Management of biological invasions with human health legislation e.g., disease vectors.	? Key stakeholder for activities concerned with biosecurity relating to the management of disease vectors ? Representation of MoH on Project Advisory Committee ? Representation of MoH in policy, regulatory and institutional planning process ? Representation of MoH on Biosecurity Technical Advisory Committees as appropriate ? Incorporation of the issue of biological invasions into decisions relating to vector management ? Training of relevant personnel in risk-based biosecurity decision making processes ? Provision of expertise particularly in the area disease vector management.	Tel contact: +25115518031 **Website: www.moh.gov.et**
7.	**Ministry of Industry (MoI)**	? MoI is responsible for the local transformation of agricultural	? It has several departments of relevance to biosecurity such as the Department	Website: www.ethiopia.gov.et/English/MOTI/Pages/Home .

		and forestry products in conjunction with Ministry of Forestry and Wildlife, etc., and ? promotion and management of quality of products meant for the local market and for export in conjunction with the relevant administrations	of Quality Development which also harbors the focal point for the Codex Alimentarius. In this regard, ? MoI will be in charge of creating norms and standards for LMO management in Ethiopia during the project implementation and in the operationalization of the national biosecurity system.	E-mail(s): moi@moi.gov.et.
8.	**Ministry of Trade and Regional Integration (MoTRI)**	? **MoTRI** is responsible for promoting and defending the quality of products for local/foreign markets and monitoring the application of importation standards in conjunction with relevant administrations.	? The ministry will assist in development of biosecurity and monitoring standards as it relates to trade and movement of products during project execution.	**Telephone: +2511151536**
9.	**Ministry of Plan and Development (MoPD)**	? MoPD is responsible for land use planning at the national level, public investments and the control and evaluation of development programs. ? MoPD has a strong mandate and is able to	? MoPD can allocate co-finance funds for the implementation of the project. ? They can coordinate with other ministries to pool resources and ensure effective implementation	**Email-ethiopdc@gmail.com**

		carry out activities that require inter-ministerial collaboration. ? Approval of imports and exports.	? Examine the policies developed and ensure they align with national development plans, ? Work closely with other government agencies, stakeholders and partners to ensure policies are effectively implemented. ? MoPD can provide the necessary support to EPA in aspects of coordination to ensure the successful implementation of the Project by other ministerial departments.	
10.	? **Ministry of Women?s and Social Affairs** **(MoWSA)**	? Responsible for the promotion and protection of the rights of women and children and to improve their living conditions as well as gender equality in all spheres of life in Ethiopia. It is the responsibility of MoWSA ? Responsible for the coordinating the implementation of social policies, programs and	? Facilitate access to quality healthcare, education, and other basic social services for women and children, ? Protecting women and children from gender-based violence, discrimination, and abuse. They will be useful in components of the project that relates to creating awareness, training, and advocacy.	Website: www.mowcy.gov.et/en/ E-mail(s): info@mowca.gov.et Phone: +251115528394, +251115525455

		activities aimed at improving the living conditions of vulnerable groups ? Ensures the promotion and protection of the rights of vulnerable populations in Ethiopia	? Strengthening public- private partnerships and collaboration with civil society organizations, development partners, and other stakeholders in addressing biosecurity related concerns amongst the vulnerable populations.	
11.	**Ethiopian Customs Commission (ECC)**	? Due to strategic positioning at the borders, the Customs Administration provides assistance to certain administrations by ensuring compliance with the texts they prepare or initiate- Biosecurity inclusive. ? It is responsible for the development, implementation and monitoring of specific legislation.	? Provide useful data on surveillance of land, sea and air borders, control of the movement and handling of goods in the national territory; ? Application of environmental policies related to biosecurity at the entry points.	Tel: *+251 116 67 54 58* ; +251 115 57 88 51 ; Fax: +251 116 62 98 19 ; Email:hocrecordopr@gmail.com. ecc.gov.et http://ecc.gov.et *? web ? ec*
12.	**Ethiopian Wildlife Conservation Authority (EWCA)**	? Responsible for the establishment and management of a protected areas system (Sanctuaries,	? Member of the Project Advisory Committee. ? Involved in the policy, regulatory and	Telephone +251 (11) 5 51 43 89 / +251 (11) 5 54 68 05 Mobile: +251 91 031 43 51 Fax

		Reserves, Parks, Human Heritage Sites and Sacred Sites) making provision for the conservation and protection of Wildlife. ? Provide conservation and protection to threatened and endangered species by using different conservation methods. ? Responsible for the management of invasive species that threaten protected areas (Sanctuaries, Reserves, Parks, Human Heritage Sites and Sacred Sites). ? Key stakeholder for activities concerned with biosecurity relating to wildlife conservation.	institutional planning process. ? Implementation of the conservation of wildlife Initiative-integration in support of Challenges of Biodiversity, Climate change and other focal areas. ? Member of the constituted Biosecurity Technical Advisory Committees. ? Ensures the incorporation of the issue of biological invasions into decisions relating to national parks, sanctuary, and reserves. ? Training of relevant EWCA personnel in risk-based biosecurity decision making processes ? Provision of expertise particularly in the area of Wildlife pests.	+251 (11) 5 54 68 04 Email: kumewak@yahoo.com
13.	**Ethiopian Institute Agricultural Research (EIAR)**	EIAR has responsibilities that align to IAS management through its mandate to formulate	? Provides identification and control of weed plant species found in Ethiopia and records their distribution?	Website: www.eiar.gov.et/index.php/en Email(s):eiar@eiar.gov.et Phone: +251116454441 P.O. Box: 2003 Addis Abeba

		agricultural research strategies and undertake or cause the undertaking of agricultural research activities based on the Agricultural Research Policy and Strategy. Moreover, EIAR undertakes plant protection and weed management research in Ethiopia and had an experience in undertaking research on IAS and assists the drafting of policies, laws/ regulations and strategies for control of IAS. Its role as the National Implementing Action for GEF Project has considerably strengthened EIAR?s IAS-related capacity. Through its Biotechnology directorate, the Institute undertake confined and contained laboratory research on LMOs too.	? Conservation of plant specimens which serve as reference collection for researchers and scientists doing research on plant species in Ethiopia thereby promoting food security and productivity research. ? Provides training opportunities to students and professionals on plant taxonomy, biodiversity and conservation.	
14.	**Local Communities**	local communities can play a	●local communities play	All regions and city administration

		crucial role in the Ethiopia biosecurity project by providing their traditional knowledge and practices related to biodiversity and ecosystem management. These communities presumably have a deep understanding of their local ecosystems and can contribute to the development of biosecurity protocols suited to their particular ecosystems. They can also be very effective in educating and raising awareness amongst other community members to promote sustainable management practices Local communities are responsible for various activities related to not only control and prevention of IAS existing in their localities but also in control of the re-emergence and restoration of	traditional knowledge and practices related to biodiversity and ecosystem management ●They can also be very effective in educating and raising awareness amongst other community members to promote sustainable management practices.	

		areas cleared from the IAS.		

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.

Consistency with National Priorities. Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ? /no ?). If yes, which ones and how:

The project will support Ethiopia 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 Bio Strategy Action Plan (NBSAP) x
- CBD National Report x
- Cartagena Protocol National Reportx
- Nagoya Protocol National Report
- UNFCCC National Communications (NC)
- UNFCCC Biennial Update Report (BUR)
- UNFCCC National Determined Contribution
- UNFCCC Technology Needs Assessment
- UNCCD Reporting
- ASGM National Action Plan (ASGM NAP)
- Minamata Initial Assessment (MIA)
- Stockholm National Implementation Plan (NIP)
- Stockholm National Implementation Plan Update

- National Adaptation Programme of Action Update
- Others X ? National biosafety frameworks

National Biodiversity Strategy and Action Plans and National Biosafety Reports

The proposed project is consistent with the Ethiopian National Biodiversity Strategy and Action Plan v2 especially as it relates to Target 2 on ?review and update of existing biodiversity laws and regulations to meet set mandates in relation to sustainable use of biodiversity?, Target 6 on ?management of Invasive Alien species through reduction of coverage area, employment of new and innovative tools and technologies to assist in the management of direct drivers and threats to habitat loss? and Target 16 on ?development and use of coordinated and consolidated approaches in management and sharing of Biodiversity Information to support decision making?.

National Biosafety Reports

Ethiopia?s Third and Fourth National Reports identifies gaps in capacity building to support the implementation of the Cartagena Protocols on Biosafety. Key areas of intervention include thematic issues on Risk Assessment and Risk Management, Handling, Transport and Identification of LMOs, Socio-economic considerations, strengthened policy and regulatory frameworks on LMOs, actions on Liability and Redress, transit and contained use of LMOs and resource mobilization for Biosafety. The proposed project is envisaged to provide key interventions and tools to address some of the gaps identified as a direct response to the status of implementation of the Cartagena Protocol on Biosafety. The proposed National Biodiversity Information System will be a national hub for knowledge exchange and information sharing on decisions and tools to support the different stakeholders in the national biosecurity response measures.

The National Biosafety Frameworks

The NBF includes biotechnology/biosafety policy, legal, administrative and technical instruments developed to ensure an adequate level of protection in the field of the safe transfer, handling and use of LMOs resulting from modern biotechnology, that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health. The implementation of the National Biosafety Frameworks is in line with the National Biodiversity Strategy and Action plans (NBSAPs).

The implementation of the NBF in the Ethiopia is in line with the National Biotechnology Policy, the Biosafety Proclamation and related six Directives and Target 2 of the National Biodiversity Strategy and Action Plan (NBSAP). The planned risk analysis-based approach relates to a targeted attempt to implement measures to respond to the Environmental Impact Proclamation through biosecurity interventions to support management decisions on IAS and LMOs. The proposed implementation project is focused on capacity building to update the national biosafety framework and also address identified and national specific issues as a follow up to the GEF project on ?removing barriers to the management of IAS in Africa? focusing on risk analysis, coordinated and cross sectoral approaches in the monitoring, testing, emergency responses, public engagement and decision making on the management of IAS and the handling of LMOs as different but related in thematic issues of management. The proposed project is also consistent in that it is providing resources including Botanical files and crop biology of plants of global environmental importance to support decisions on biodiversity including biological monitoring of new and novel species[1].

Regional Biotechnology and Biosafety Activities

At the regional level, the project is also in line with the COMESA Biotechnology and Biosafety Implementation Plan which seeks to develop regional harmonized approaches and scientific tools to support the implementation of National Biosafety Frameworks and decision making. The COMESA Regional Biotechnology and Biosafety Policy Implementation Plan is designed to translate the COMESA Policy on Biotechnology and Biosafety into an effective, region-wide implementation program. The overall goal of the plan is to support the Member States to realize their aspirations of becoming active participants in the global biotechnology enterprise through commercial planting of GM crops, trade in products of GM technology and involvement in dealings with emergency food aid with GM content. The plan will involve the enhancing of awareness and outreach activities in a continuous and progressive manner. A regional biosafety risk assessment mechanism is also envisaged in the plan. This will rely on the establishment and efficient functioning of a COMESA Biotechnology and Biosafety Panel of Experts and a COMESA Biosafety Risk Assessment and Management Desk. The plan will also see to the capacity building for biosafety regulation and biotechnology research and product development/ testing at Member States level. In addition, the project will build on the training capacity in biosafety and expertise gained through support by ABNE/NEPAD on Biosafety in confined field trials, Risk Assessment and Risk Management.

The project is well aligned with the African Union Biosafety Strategy and the Model law on Biosafety.

See; www.cbd.int

[1] https://www.ebi.gov.et/

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 with 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 Ethiopia, 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, etc. 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.

The project will identify, analyze, document, and share biosecurity information and lessons learnt, and disseminate results from the project beyond the project intervention zone through a number of existing information sharing networks, including online based forums, newsletters, national biodiversity Information Center and the Central Portals of the Clearing House Mechanism of the SCBD. The project will establish a knowledge management hub and work on its sustainability beyond the project lifespan. Identification and analyzing lessons learnt will be an ongoing process. Deliverables will be shared quarterly as applicable or at least twice a year. Publications and thematic reports will be developed and disseminated in the participating countries at regional level.

The project shall use the UNEP reporting format for categorizing, documenting and sharing lessons learnt. In every annual review and planning meeting, information sharing will be promoted. To enable effective management of information, an Information Hub will be established during the project implementation period. The project will lobby for building of information management tasks into existing regional institutions/ structures e.g. the EAC, COMESA, ABNE/NEPAD, IUCN or any other such institution. This will promote continuity beyond the project lifespan. In addition, relevant information will be posted on all Biodiversity Clearing House portals at national and regional levels, and the CBD BCH portal.

The project will have access and contribute stories and news to the UNEP Biosafety website https://www.unenvironment.org/explore-topics/biosafety which is a forum set up to enable projects access information, publication, events and knowledge materials on Biosafety among the project partners.

At the national level, the knowledge management will help to build and maintain supportive and useful knowledge, attitudes, skills and practices via a number of workshops and trainings with participation of various stakeholders, including governmental sector, media, parliament, researchers, academia, farmers, women, the youth and local and Indigenous Communities. Manuals and guidelines will be developed and published and made available for all the relevant stakeholders. The national BCH and CHM websites will be updated periodically with new /relevant information and made accessible via the internet, mobile telephone, social media - Facebook, Twitter and YouTube. Communication sites will be used to disseminate information. Special publications, brochures, leaflets, posters, calendars on best practices on biosafety, etc. will be provided and disseminated through the relevant actors and stakeholders. On-line forums and webinars to discuss and share information will be used to facilitate inter-country and sub-regional communication and networking.

Furthermore, outreach materials used by the participating countries will be shared and or developed, targeted at different stakeholders, including Extension workers, Parliamentarians, Media, Women, Youth and Local communities, among others, as will be identified in the stocktaking process under Component Substantial time and efforts will be devoted to ensuring involvement of the public in meeting the national obligations on Biosafety. The National Biosafety Frameworks will be extensively reviewed, and key entry points identified and used for training on public participation in the decision-making processes. Procedural manuals and tools including gender considerations will be translated into easy and user-friendly modules to assist the public on biosafety measures. The national BCH will be updated, and a website created to serve as both an information repository and platform for the public to follow and input into the national decision-making processes on biosafety. In addition, experiences in the mainstreaming of biosafety into educational curricula at various levels will be shared, lesson learnt will be incorporated by those countries that are yet to mainstream biosafety into national development processes.

In addition:

? the project will participate, as relevant and appropriate, in UNEP/GEF sponsored networks, organized for senior personnel working on projects that share common characteristics; and

? the project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned.

Learning and Knowledge Management:

The project will identify, analyze, document, and share biosecurity information and lessons learnt, and disseminate results from the project beyond the project intervention zone through several existing information sharing networks, including online based forums, newsletters, other printed materials, national biodiversity Information centre and the Central Portals of the Clearing House Mechanism of the SCBD. The

project will establish a knowledge management hub and work on its sustainability beyond the project lifespan. Identification and analysing lessons learnt will be an ongoing process. Deliverables will be shared quarterly as applicable or at least twice a year. Publications and thematic reports will be developed and disseminated in the participating countries and at regional level. The project shall use the UNEP reporting format for categorizing, documenting and sharing of lessons learnt. In every annual review and planning meeting; information sharing will be promoted. To enable effective management of information, an Information Hub will be established during the project implementation period. The project will lobby for building of information management tasks into existing regional institutions/ structures e.g. the EAC, COMESA, ABNE/NEPAD, IUCN or any other such institution. This will promote continuity beyond the project lifespan. In addition, relevant information will be posted on all Biodiversity Clearing House portals at national and regional levels, and the CBD BCH portal. UNEP has an existing platform through the library of its project management database ANUBIS (A New UNEP Biosafety Information System) for Biodiversity and Land Degradation projects and related initiatives to learn from each other, share experiences and expertise, and tools and methodologies to support biosafety 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, funded by the Biosafety Technical Fund, for the projects to physically meet at regional/sub regional levels to learn and share experiences on project management, including best practices and challenges, in addition to training on emerging issues in biosafety. The project will also have access to both the SCBD and UNEP YouTube channels to access media files and share materials for the benefit of the projects in the Biosafety Portfolio. Existing mechanisms and training will be offered for the project to assess and share information on the Biosafety Clearing House in line with obligations of Article 20 of the Cartagena Protocol on Biosafety and the ongoing BCH III Project. The project will have access and contribute stories and news to the UNEP Biosafety website https://www.unenvironment.org/explore-topics/biosafety which is a forum set up to enable projects access information, publication, events and knowledge materials on Biosafety among the project partners. At the national level, the knowledge management will help to build and maintain supportive and useful knowledge, attitudes, skills and practices via several workshops and trainings with participation of various stakeholders, including governmental sector, media, parliament, researchers, academia, farmers, women, the youth and local and Indigenous Communities. Manuals and guidelines will be developed and published and made available for all the relevant stakeholders. The national BCH and CHM websites will be updated periodically with new /relevant information and made accessible via the internet, mobile telephony, and social media - Facebook, Twitter and YouTube. Communication sites will be used to disseminate information. Special publications, brochures, leaflets, posters, calendars on best practices on biosafety, etc. will be provided and disseminated through the relevant actors and stakeholders. On-line forums and webinars to discuss and share information will be used to facilitate inter-country and sub-regional communication and networking. Furthermore, outreach materials used by the participating countries will be shared and or developed, targeted at different stakeholders, including Extension workers, Parliamentarians, Media, Women, Youth and Local communities, among others, as will be identified in the

stocktaking process under Component Substantial time and efforts will be devoted to ensuring involvement of the public in meeting the national obligations on Biosafety. The National Biosafety Frameworks will be extensively reviewed, and key entry points identified and used for training on public participation in the decision-making processes. Procedural manuals and tools including gender considerations will be translated into easy and user-friendly modules to assist the public on biosafety measures. The national BCH will be updated, and a website created to serve as both an information repository and platform for the public to follow and input into the national decision-making processes on biosafety. In addition, experiences in the mainstreaming of biosafety into educational curricula at various levels will be shared, lesson learnt will be incorporated by those countries that are yet to mainstream biosafety into national development processes. In addition: the project will participate, as relevant and appropriate, in UNEP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics; and the project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned

The proposed Knowledge Management interventions are summarized in a tabular format with budgetary allocation and timelines are provided. The CEO endorsement template and the Portal entry are updated with the new information in line with the review request.

Activities	**Budget**		**Timelines**														
			Year1/Quarter			**Y2/Quarter**				**Y3/Quarter**				**Y4/Quarter**			
			1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
	GEF Cost (USD)	**Co-finance In-kind (USD)**																
Update and strengthen implement the National biosecurity communication and awareness plan	10,000	22,046																

Establish a National Biosecurity Information System (NBIS) for LMOs & IAS and integrated participatory monitoring and enforcement system for risk-based management of LMOs and for prevention, control, monitoring and management of IAS based on agreed protocols and data base /Knowledge management portal in a web site dedicated for the project that link to relevant networks	20,000	44,091																
Develop communication and awareness strategy, prepare manuals and guidelines on risk-based monitoring, management and control of LMOs/IAS and to prepare, publish awareness raising materials and disseminate biosecurity information and communication tools	15,000	33,069																

Training on National Biosecurity Information System (NBIS) for LMO and IAS and database /Knowledge management portal	12,000	26,455																	
Conduct awareness raising program for key institutions and relevant stakeholders about biosecurity manuals, guidelines and operating procedures	10,000	22,046																	
Review, validate and implement the National Biosecurity Communication and Awareness-raising Plan	10,000	22,046																	
Sensitization on NBIS, Knowledge management portal and integrated participatory monitoring and enforcement system for risk-based management of LMOs/IAS to the stakeholders	15,000	33,069																	
Total	**92,000**	**202,822**																	

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The project results, corresponding indicators, mid-term and end-of-project targets in the project results framework will be monitored by the Project Management Unit annually, and will be reported in the GEF PIR every year. The implementation of the project will be reported periodically as per agreement with UNEP

through the Project Cooperation Agreement. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. Project risks, as outlined in the risk register, will be monitored quarterly. The Project?s monitoring and Evaluation (M&E) Work Plan and Budget is presented under **Annex J**.

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 finalisation 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.

Implementation of the M&E system will use standard UNEP approaches and procedures (see Monitoring and Evaluation Plan section for details), and will be based on the following groups of indicators:

? Output Indicators - will measure delivery of the project outputs (the project?s products and services) and monitor routine project progress on a monthly and quarterly basis. The PMU will collect information on the output indicators, which will be used in project reporting and to inform discussions at the PSC as well as the project quarterly and Annual Reports;

? Outcome Indicators will track progress towards project outcomes (e.g., capacity or behavioral changes happening due to the use of the project outputs by target groups of stakeholders). Similarly, PMU will be in charge of collecting information on outcome indicators, assisted by NGOs (MWF) and universities ? via graduate and postgraduate research. Project progress against outcome indicators will be reflected in the Annual, Mid-Term and Terminal Project Reports and Mid-Term and Terminal Evaluation Reports.

? Mid-Term Impact Indicators will demonstrate how the project outcomes contribute to mid-term project impacts (e.g., reduction of direct threats from IAS). Collecting information for the mid-term impact indicators might require consultants and will happen generally at the project mid-term and completion. PMU will report this information in the GEF Tracking Tool, Mid-Term and Terminal Evaluation Reports and the Project Terminal Report.

? Long-Term Impact Indicators or GEBs will measure project contribution to the ultimate impacts (safeguarding globally significant biodiversity in vulnerable ecosystems through the prevention, control, and management of Invasive Alien Species). Since the project can only partially achieve the long-term impacts during its lifetime (3 years), the indicators will measure the extent to which the project has contributed to the impacts. Full realization of the impacts is likely to happen several years after the project is over. The M&E systems of partner institutions will therefore mainstream project M&E, to ensure that monitoring of impacts and sustainability continues after the GEF project ends. PMU will however collect information on impacts and sustainability, with the involvement of the project partners and consultants, and report it in the GEF Core Indicator Worksheet, Mid-Term and Terminal Evaluation Reports, as well as the final project report.

? Gender Indicators will assess impact of the project activities on gender equality and involvement of women in IAS management. PMU will collect information on these indicators, which it will report in the framework of the Gender Mainstreaming Strategy.

The M&E system and regular analysis of M&E data will allow the project: to identify the most effective project strategies, to check project assumptions (hypotheses) and risks, to prepare management response to changing political, economic, and ecological environment; to learn from successful and unsuccessful project experiences, to incorporate learning in the project planning and adaptive management, and to share experience among GEF and other projects in CEE and the world. Lessons learned through the project cycle will be reflected in the Annual Project Reports (available online on the portal cited above) to ensure that the project uses the most effective strategies to deliver project outputs and achieve project outcomes in the changing environment.

The project will support the publication and dissemination of several knowledge products. This will support synthesis and sharing of best practices and lessons generated by the project. It will also help establish a community of practice on comprehensive IAS/LMOs management in Ethiopia and facilitate regular sharing of information. The project will publish at least four best practices and case study reports systematizing project experiences, best practices and lessons learned in electronic formats that will be shared through mailing lists, partner?s websites, social media, and through integration into stakeholder forums and training sessions as relevant. The reports will be on themes such as: i) international best practices in IAS/LMOs prevention, quarantine, surveillance and rapid response, and relevance for Ethiopia; ii) impacts and interaction of IAS with livelihoods in Ethiopia, including any gender-related differences in perceptions of 86impacts; iii) project lessons learned; iv) methodologies applied, the difficulties encountered, as well as the projects successes and on-ground impacts. All project knowledge products will be shared with the multi-stakeholder dialogue platforms, nationally, regionally, and globally, using available mechanisms. This will help ensure access of the wider stakeholder community to the experiences, challenges, and successes of the project. Indicative list of GEF-funded activities under this output include:

? Building a community of practice of relevant stakeholders around IAS/LMPs management, including to bring together the lessons learned through the project;

? Identifying and documenting lessons learned and best practices in preventing, controlling and eradicating IAS;

? Dissemination of lessons learned through online fora and integration into stakeholder forums, training events and outreach programme;

? Participation in regional and global events to help facilitate sharing of lessons learned and experiences in biosecurity and IAS/LMOs control and management.

Budget: Contractual services for M&E plans and consultancy fees for mid-term and terminal evaluation (M&E) includes preparing best practice and case study reports/establishing a community of practice on IAS/LMOs management in Ethiopia.

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, consider the potential impacts and outcomes for different groups within society, and in particular men, women and youth. The project Gender Mainstreaming Strategy includes 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. The monitoring and evaluation plan is costed and placed as **Annex J** while the Terms of Reference (ToRs) of key personnel is placed as **Annex S.**

The costed M & E plan is summarized in the table below:

Type of M&E activity	**Responsible Parties**	**Budget from GEF in $**	**Budget co-finance $**	**Time Frame**
Inception workshop and Report (M & E Part: Plan review, consultation and elaboration including M&E of Gender, ESS Strategies, Stakeholder Engagement Plans	EPA, Biosecurity Mandates Institutions, & Respective sectors	20,000	44,091	Within 2 months of project start-up

Type of M&E activity	Responsible Parties	Budget from GEF in $	Budget co-finance $	Time Frame
Update and finalise Project M & E Plans (30 days @$500 p/d) after Inception	M & E Directorate, EPA, Task team of local Experts	15,000	23,897	Within the first four months of project start up
Disseminate Project Benefit Monitoring and Evaluation plans and organize best practices and lessons learnt meetings (20 days @$500/days	EPA (Biosafety and IAS Dep?t and Project officer), Communications Directorate (EPA), Consultants	10,000+	66,137	Once a year minimum
Site visits to monitor to capture data including gender related results for analysis, adaptive management actions and reporting	M & E Directorate, EPA, Technical Experts and Regional Taskforces	+20,8000,	33,069	As appropriate
PIR Reporting, M & E of Core Indicators and Project Results Framework, Monitoring of ESS, and management plans, Publication of Best practices and lessons learnt	EPA,	19,200	42,240	Annual
Mid Term Review/Evaluation	UNEP	20,000	44,091	At mid-point of project implementation
Terminal Evaluation	UNEP	35,000	55,114	Within 6 months of end of project implementation
	Total	**140,0000,**	**308,639**	

The monitoring and evaluation plan is costed and placed as **Annex J** while the Terms of Reference (ToRs) of key personnel is placed as **Annex S.**

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.6).*

Table 6. 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 for 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 country, 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 Ethiopia, including native/endemic species and natural ecosystems at vulnerable wetland 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 Ethiopia. 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 GoE is seeking GEF support to develop improved IAS/LMOs management systems that protect Ethiopia?s	The GEF increment will strengthen IAS/LMOs management at entry and distribution points, and high priority conservation areas, throughout Ethiopia. This will produce benefits of 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). Ethiopia also has numerous crop cultivars that represent a resource of great 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 Ethiopia to implement the NBSAP, 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,

		globally 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 Ethiopia, to establish clearly agreed priorities for IAS/LMOs management interventions. This project represents critical support at a crucial time as Ethiopia 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 Ethiopia 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 residents at selected PA sites, who will be provided	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 (PAs), all of which are responsible for various pathways and processes that contribute to the introduction and spread of IAS into Ethiopia 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 Ethiopia?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

		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 action sites, including residents as well as fishermen and tourism operators, will be integral to the development and implementation of Local 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.

Identified Issues

Risk	Level	Management strategy
Biosecurity measures lack broad based support leading to poor compliance.	L	A high degree of collaboration among different stakeholders is necessary, so it is important to develop a participatory framework for project development and implementation. The participatory framework will help develop structures to maximize intra- and inter-sectoral collaboration (Project Steering Committee and technical committee composed of Inter-ministerial Teams). These structures will be built to maximize collaboration among the component lead agencies. The roles delegated to other entities will be formalized through applicable agreements (e.g., MoUs) with EPA using clear ToRs that will be developed during the commencement of the project. During project implementation, the final design of specific initiatives will continue to include key stakeholders and to ensure their inputs are considered in decision- making. During project implementation there will also be ongoing participation and inclusion of all stakeholders in activities that may impact them, both positively and negatively. The project will implement the National Biosecurity Communication Strategy and Action Plan that will specifically target the development of support among key stakeholders and the public for effective biosecurity.
Inadequate mechanisms for institutional coordination in the management of IAS and LMOs	M	Regular coordination meetings for relevant ministries and agencies will be held, defining clear procedures and responsibilities for all the key stakeholders identified. Institutional capacity building will be placed on a high priority level throughout the planned project activities. The steering committee and the information sharing activities will be used to consciously support coordination and management of biosecurity. Where feasible, concerted efforts will be put in place to develop guidance and easy to read materials to support the coordination mechanism. Entry points will also be created for key non-governmental stakeholders including private sector, NGOs, farmers and women groups to be represented in the steering committees as part of the coordination mechanism
Slow and bureaucratic policy, administrative and regulatory responses to Biosecurity issues	High	Cooperation between government structures, institutions and special awareness programs for targeted and relevant authorities will be organized at the inception of the project, with follow ups to strengthen the political support for project implementation. Efforts will be made to ensure biosecurity is placed on a higher level in the agenda of governments and national assemblies. Designated Stakeholder institutions will be strengthened to do continuous outreach, lobby and network as a means of getting political leverage.
Low institutional capacity to manage handling of LMOs and management of IAS	Medium	Capacity building activities, coupled with strengthening of existing facilities, will equip designated regulatory agencies to effectively execute their mandate. A high priority will be placed on building a critical mass of resource persons through the Trainer of Trainers approach, mentoring and training in ?soft skills? as focal points who will contribute to the enhancement of public awareness through intensification of the contribution of national experts in this process. Through the planned initiatives efforts will also be made to get ?buy-in? by the different stakeholders in the management of biological resources in Ethiopia through coordination of similar interventions, lobbying and periodic briefs.

Insufficient community mobilization and involvement in the project constrain implementation of activities.	Low	Community groups will be contacted early in the PPG process to elicit their interest and cooperation. There is a long and successful tradition of community participation in biodiversity conservation activities in Ethiopia. An example can be seen within the Water Hyacinth Project, whereby, the Watershed Task Group (WTG) in collaboration with EPA, has actively engaged community participation in the management of water hyacinth in Lake Tana area and has organized several trainings on the control, removal and disposal of water hyacinth. Community participation will be maximized by securing Free, Prior Informed Consent (FPIC) from community groups, the involvement of local communities in restoration-related activities as volunteers and paid staff and the development of local management committees in pilot studies as appropriate.
Liberalized trade will increase the risk of IAS introductions.	Medium	The project will help strengthen the institutional biosecurity framework so that the pressures resulting from increased imports can be effectively managed. Key sector ministries including the Ministry of trade and other regulatory officials will be trained on the use of the tools developed for risk analysis and decision making.
Lack of transparency in the intentional introductions of LMOs will jeopardize effective risk-based management	Medium	The project will establish a transparent mechanism for science-based risk assessment of LMOs; and training for detection and enforcement as well as project-led communication activities to minimize illegal introduction and propagation of LMOs.

Climate change impacts, public perception towards handling of LMOs and management of IAS	Low	Potential use and import of LMOs may increase under increased temperature and other climate change related results due to tolerance to abiotic stresses. Invasive Alien Species may thrive due to adaptation to climate related stresses. Ethiopia frequently experiences extreme events like droughts and floods, in addition to rainfall variability and increasing temperature which contribute to adverse impacts to livelihoods. Primary environmental problems are soil erosion, deforestation, recurrent droughts, desertification, land degradation, and loss of biodiversity and wildlife.[1] Food security will be affected by land and infrastructure degradation due to erosion/landslides, an increase in livestock and crop diseases due to temperature increase, direct crop failure due to floods and heavy rains. Water availability will be affected by possible periods of drought and invasiveness of introduced or alien species in water bodies. Due to the effects on food security and food production, potential use and import of LMOs that are better adapted (or perceived to be) or tolerant may increase. During PPG, the potential of climate change scenarios on Ethiopia?s response will be integrated into capacity building interventions and into the design of strategic action plans and policies to ensure that such changes to public attitude to and queries related to uptake of Biosecurity considerations are anticipated and proactively managed. Safeguard measures to be by 30.07mm (-256.09mm to 367.41mm). This may result in an increased frequency of extreme events such as floods as well as droughts especially in the northern regions of Ethiopia. As a consequence, to climate change, loss of pasture lands, reduced access to water supplies, degradation of water quality, scarcity of water resources for livestock, crop loss/failure, loss of marine habitat, increased ranges of vector-borne diseases and increased risk from waterborne diseases may prevail in these regions. Faced with these challenges, the public may potentially import and use LMOs (for ex. GM Cotton) that are better adapted (or perceived to be tolerant) to abiotic stress. The potential of climate change scenarios on the countries? response will be integrated into capacity building activities. Furthermore, strategies will be put in place to anticipate and proactively manage such changes in public perception of LMOs under circumstances of climate change.
Disease Outbreak (Covid- 19)	Medium	Statistics published by the WHO, as at 10 December 2021, there have been 107,549 confirmed cases of COVID-19 with 1,823 deaths, reported to WHO. As of 5 December 2021, a total of 970,440 vaccine doses have been administered.12 Ethiopia was the most affected country in the Central African region. The first case was declared on the 6th of March 2020 and ever since then, many measures have been taken by Ethiopia government with the aim of reducing the transmission of this virus. Compared to other countries, a complete lockdown has not been observed, because the pandemic found a weak economy, tortured by the various crisis in its North regions with Boko haram and South-West and North- west regions with separatists? group. The country could not afford a complete break of its economic activities.13

		COVID-19 pandemic found a weak economy due to the different internal crises that the country is facing. Companies located in the southwest and northwest regions have been paralyzed by political issues. Both regions account for 16.3% of Ethiopia GDP (Mbadi, 2019)[14]. Among them, the greatest employer of the country in terms of the number of employees: CDC, where all activities have been stopped since then. The UNDP forecasted that because Ethiopia relies a lot on the importation, worldwide lockdowns will create a shortage in inputs, in the same way, it may create a slowdown of economic activities. The COVI-19 pandemic has had significant devastating effects on the country?s economic activities with some companies feeling these effects. In a survey made by GICAM (2020) from the 13th to 21st April 2020, in a sample of 100 enterprises, 92% admitted the pandemic is adversely affecting their turnover [15]. Globally, 44% of companies declared that the purchases have been affected. Most impacted are manufacturing companies with 56%. Tomatoes and chicken sectors have faced a severe crisis. Tomatoes crisis is firstly due to closed borders of countries like Equatorial Guinea and Gabon which greatly import tomatoes from Ethiopia. Prices dropped to 80% and placed several producers in a very difficult position. With the devastating effect of COVID-19 on the economy of the countries affected, governments are focusing public resources on rebuilding the economies of countries. Ethiopia is not an exception. The risk is only partly under project control. The importance of having a strong national biosecurity framework in place and foster financial commitment from key sectorial stakeholder institutions cannot be overemphasized.

12 https://covid19.who.int/region/afro/country/cm
13 https://mpra.ub.uni-muenchen.de/102245/1/MPRA_paper_102245.pdf

The project is envisaged to have low social and environmental risks as per the attached Safeguards Risk Identification Form approved by the UNEP Safeguards team. However, as a safeguard measure, project will undertake extensive stakeholder engagement with local farmers, indigenous people and local communities and the private sector to ensure there is rapid response, alerting and adaptation in case risks including climate risks come up. In addition, the project will be guided in addressing climate risks through mitigation interventions as per the national policy and strategy 2013 of disaster risk management of the country. The climate related risk will be addressed using Ethiopia?s Climate Resilient and Green Economy strategy 2011 experiences gained in the area of Climate mitigation and adaptation.

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11 https://climateknowledgeportal.worldbank.org/sites/default/files/2020-06/15463-WB_Ethiopia%20Country%20Profile-WEB_v2.pdf

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex O_SRIF updated_CEO Endorsement	**CEO Endorsement ESS**	
SRIF-Ethiopia 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: Implementation of National Biosecurity Framework of Ethiopia						
Project Objective	**Objective level Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**UNEP MTS reference***

To develop, strengthen and implement a national biosecurity framework to detect, control and effectively manage introduced biological invasions/introductions in Ethiopia	A functional, broad-based, cross-sectoral biosecurity framework/system is in place by the end of this project: - Number of partner organizations having access to appropriate tools and methods for risk assessment, monitoring and management of IAS and LMOs - Level of mobilized public actions on the environmental risks of IAS and LMOs	1. The national systems for the management of biological introductions are at varying levels in terms of LMOs and invasive Alien Species. The current scenario depicts a fragmented approach with laws and institutional measures that need to operationalize. 2. Other on-going programmes by Government and, other initiatives address biosecurity issues in Ethiopia.	- By the **end of this project,** a coordinated institutional biosecurity framework is established, strengthened and IAS and LMOs are managed through a coordinated risk analysis approach - By **mid-project point,** at least 50% of project objectives are realized	- Copies of adopted policy & legal instruments are available in documentation centres around the country, e.g. Official Gazette, public libraries & stakeholder offices etc. - Monitoring and Evaluation (M&E) reports by Project Coordination Unit (PCU), Project Technical Advisers (PTA) & Project Advisory Committee (PAC) during and at end of project - Project Final Report by PCU - Terminal evaluation report by UN Environment	**1. Assumptions**: Government has: a) Financial resources to upscale/implement LMOs and IAS policies, b) Adequate human resource to upscale/implement LMO and IAS policies, c) Long term political will and commitment to upscale/implement LMO and IAS policies and regulations; and, d) there is continuing support from government & cooperation from partner agencies e) CSOs, private and the public are informed of IAS and LMO issues and take	**Nature Action** **Environmental Governance**

				Programme /GEF - National Report to the CBD/CPB by EPA - Online publications by CHM and BCH NFPs - Online web addresses/ with easily accessed links for public information	active engagement **2. Risks**: a) Government commitment limitations could still delay co-financing. b) Lack of integration & collaboration from ongoing initiatives could be a setback to project effectiveness and efficiency	
Component 1 ? Policy, Regulatory and Technical Frameworks on Biosecurity						
Project Outcome	**Outcome Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**MTS Expected Accomplishment**

Outcome 1 **Policy and Regulatory instruments on Biosecurity established.**	Number of policy and legal instruments established and adopted by the end of the project	There exist: ? The 896/2015 Biosafety Proclamation & its 2018 enabling directives & regulation ? Established directorate for Biosafety & IAS ? Ethiopian National IAS Management Strategy & Action Plan 2021-2030 ? Fragmented pieces of policy and legal instruments in at least 8 related sector ministries and agencies exist	- **By end of this project**, an effective biosecurity legislative, policy, regulatory, institutional and functional frameworks are in place. - By **mid-project point**, draft legislative and regulatory instruments are respectively adopted and/or prepared.	Copies of adopted strategy paper (a policy document) and legal instruments made available in documentation centres, e.g., Official Gazette and stakeholder offices etc., by the end of the project. - Project M&E reports by PCU, PTA & PAC - Project Final Report by PCU - Terminal Evaluation report by UNEP/GEF - National Report to CBD & CPB by EPA	**1. Assumption**: a). Partner organizations have access to appropriate tools and methods for risk assessment, monitoring and management of IAS and LMOs b). Upscale pilot risk-based Management Procedures in 8 identified land and aquatic biodiversity projects/ target areas - There are strong public relations efforts undertaken and public actions are mobilized on the environmental risks of IAS and LMOs	2(iii), 2(iv)

				- GEF Tracking tools - Online publications by CHM and BCH NFPs and SCBD; and, partner organizations - Online web addresses/ with easily accessed links for public information - Information in articles by researchers and/or academia	**2. Risks**: a). Lack of commitment from relevant stakeholders due to disparity in project or programme implementation periods b) GEF funding may run short due to rise in cost of living resulting from recent increase in prices of commodities and services in Ethiopia	
Component 2 ? Institutional Capacity Building for the Management and Control of IAS and the Implementation of the CPB						
Project Outcome	**Outcome Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**MTS Expected Accomplishment**

Outcome 2 **Fully operational institutional frameworks for the management of LMOs and IAS including an updated information system established**	1. operationalized those infrastructure and provided equipment 2. well trained human resources , taking into consideration gender balance, in the effective operation of new equipment and infrastructure 3. Number of new equipment and infrastructure for testing & detection of LMOs and IASs available at Control and Inspection offices of Environmental Protection Authority of Ethiopia and other relevant administrative departments and at all level including Regions and woredas	Laboratory chemicals, apparatus and reagents are under procurement process Control and Inspection services of Environmental Protection Authority of Ethiopia and other relevant departments have no appropriate working equipment, consequently their reports are based on hear-say and speculations.	1. E**nd of Projec**t target is: - incorporation of biosecurity measures into pathways for monitoring and management of biological introductions - Partnership agreements are signed, and being implemented 2.By **project mid-point** - at least 2 laboratories have infrastructure in place, and equipment purchased - at least 10 laboratory technicians, taking into consideration gender balance, are trained for effective utilization	1.Invoices and receipts will be verified at project office by auditors 2. M & E report by PCU, PTA, and PAC - MTR report by UNEP/GEF consultants - Activity reports by consultants/ PCU -Project Final report by PCU - Terminal Evaluation report by UNEP/GEF at end of project - National Reports to the CBD & CPB by EPA on due terms - GEF Tracking tools as required	**1.Assumptions:** - Continuing support from government and Cooperation from Partner agencies/ stakeholders Upscale pilot risk-based management procedures in 3 identified land and biodiversity projects. **Risks**: - Lack of government commitment on Co-financing due to organizational reshuffling	2(iii), 2(iv)

			of the acquired equipment and/or infrastructure			
Component 3 - A National Biosecurity Knowledge and Information Management System						
Project Outcome	**Outcome Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**MTS Expected Accomplishment**

Outcome 3 **A National biosecurity Knowledge Management System is established to inform effective IAS prevention, control, monitoring and management, in partnership with key stakeholders.**	1. Number of key agencies with strengthened capacity by the end of project. 2. Number of educational institutions with integrated biosecurity curricula in their educational system 3. 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 4. A National Biosecurity Knowledge Management System is in place to inform effective IAS prevention, control, monitoring and management, in partnership	Training has been given on biosafety and IAS to 1500 experts and regional agricultural and environmental officers. 50 journalists were trained on genetic engineering/ GM technology, gene editing, and IAS.	1. The end of project target is a strengthened institutional capacity for Ethiopia with the use of knowledge management and learning strategies for effective biosecurity 2. By project mid-point, all training materials are in place and learning strategies developed and adopted; and, - MTR carried out and recommendations being implemented. National Biosecurity Information System (NBIS), including a participatory monitoring network	- Project M & E reports by PCU, PTA & PAC; and, done throughout project execution/ implementation process - MTR report by UN Environment consultants - Project Final Report by PCU at end of project - Terminal Evaluation report by UNEP/GEF at end of project - National Reports to the CBD & CPB by EPA on due terms - GEF Tracking tools as required	**1. Assumptions:** a). Strong Public Relations efforts undertaken 2. Public actions mobilized on the environmental risks of IAS and LMOs Due attention and Budget is allocated for knowledge management system by all government offices and agencies	2(iii), 2(iv)

	with key stakeholders.		using citizen science and modern ICT is operationalized to monitor and inform risk-based management of species, pathways and ecosystems based on agreed protocols. The national biosecurity communication and awareness raising plan developed and implemented through sensitisation for key institutions (manuals, guidelines and operating procedures)			
COMPONENT 4 ? Project Monitoring and Evaluation (M&E)						
Project Outcome	**Outcome Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**MTS Expected Accomplishment**

Outcome 4 **Enhanced** **performance of the** **project and achieved** **planned results and target** **and ensured** **accountability through** **drawn lesson** **conducting timely** **progress assessment and** **evaluation**	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 documented and disseminated.	Environmental Protection Authority of Ethiopia will serve as the National Executing Agency of the project. Environmental Protection Authority has a nurtured experience to implement and manage such type of national multi-sectoral programme/project	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 documented and disseminated	Annual Project Audits Minutes of Project Committee meetings Project Technical advisers reports Mid-Term evaluation report Progress interim and closure narrative and financial reports GEF tracking tools as required.	**1.Assumption:** The market value of human and material resources remains the same as of date of GEF funding and co-financing. **Risks:** Already budgeted GEF funding and co-financing may depreciate in value due to price increase in market commodities and services	2(iii), 2(iv)
Project Outputs	**Output Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**PoW Output Reference Number**

Output 1.1 **Policy on biosecurity, strategy and Action Plans on IAS and LMOs developed**	Number of policies and strategies updated and in place at national and local level to improve IAS and LMOs management. Policy and Strategy established as part of the new NBSAP 2030 in line with the GBF	There exist: ? The 896/2015 amended Biosafety Proclamation & its 2018 enabling directives & regulation ? Ethiopian National IAS Management Strategy & Action Plan 2021-2030 Policy and legal instruments in different ministries, institutes.	? By the **end of this project,** biosecurity policy, updated Biosafety Proclamation with Directives on Biosecurity measures on IAS is established, ? By **mid-project** at least 50% of establishing Biosecurity Regulatory instruments, subsidiary legislations (Directives) and consolidated Biosecurity Policy is realized.	? Copies of adopted policy & strategy paper (a policy document) and made available in documentation centres, e.g., Official Gazette and stakeholder offices etc., by the end of the project. ? Project M&E reports by PCU, PTA & PAC	**1. Assumption**: a). Partner organizations have access to appropriate Policy and Strategy on IAS and LMOs b). Upscale pilot risk-based management procedures in 8 identified land and aquatic biodiversity projects/ target areas and where LMOs are introduced. - There are strong public relations efforts undertaken and public actions are mobilized on the environmental risks of IAS and LMOs	2B, 2C

					2. Risks: a). Lack of commitment from relevant stakeholders due to disparity in project or programme implementation periods b) GEF funding may run short due to rise in cost of living resulting from recent increase in prices of commodities and services in Ethiopia	

Output 1.2 **Measures to operationalize the Biosafety Proclamation through updated biosecurity directives focused on biosafety and biosecurity measures on IAS**	Operationalized Biosafety Proclamation through established Biosecurity policy and Strategy	Ethiopian Biosafety Proclamation, NIASMSAP on IAS NBSAP of EBI Draft Biotechnology	At the end of this project, Biosafety Proclamation through Biosecurity policy & Strategy measurements are operationalized	Reports and other documents that show Measurements have been taken to operationalize Biosafety Proclamation through Biosecurity policy & Strategy	**Assumption**: Stakeholders and other Partner organizations have access to use the Operationalized Biosafety Proclamation through established Biosecurity policy and Strategy **Risk** Lack of commitment from relevant stakeholders	2B, 2C

Output 2.1. **Coordinated, harmonized and functional administrative system for handling LMOs and IAS established**	Operational infrastructure and equipment provided, Level and number of human resources trained, taking into consideration gender balance, in the effective operation of new equipment and infrastructure	Established Biosafety and IAS Regulation Directorate, Established Biosafety level 2 laboratory with some equipment for detection, diagnostics and monitoring of LMO with EFD Other Biotech laboratories at EIAR & BETiN and Universities.	**End of Project target is: -** incorporation of biosecurity measures into pathways for monitoring and management of biological introductions, Partnership, agreements are signed with local communities, upgraded laboratories for detection, diagnostics and monitoring on LMOs and IASd, and being implemented **By project mid-point** ? one laboratory has full infrastructure in place, and equipment purchased ? at least 5 laboratory technicians, taking into consideration gender balance, are trained for effective utilization	1. Invoices and receipts will be verified at project office by auditors 2. M & E report by PCU, MTR report by UNEP/GEF technical advisor. - Activity reports by PCU -Project Final report by PCU - Terminal Evaluation report by UNEP/GEF at **end of project** - National Reports to the CBD & CPB by EPA on due terms - GEF Tracking tools as required	**Assumptions: -** Continuing support from government and Cooperation from Partner agencies **Risks**: -. Delays in the release of GEF budget and government Co-finance due to government budgetary limitations and/or bottle necks.	2B, 2C

			of the acquired equipment and/or infrastructure			
Output 2.2 **Identified laboratories to handle LMO and IAS detection upgraded**	National laboratory in LMO detection, diagnostics and monitoring with strengthened institutional capacities, recorded at the end of the project.	Established Biosafety and IAS Regulation Directorate, Established Biosafety level 2 laboratory with some equipment for detection, diagnostics and monitoring of LMO with EFD Other Biotech laboratories at EIAR & BETiN and Universities.	**By end of this project**, at least - At least 20 scientists, taking into consideration gender equity, trained in IAS & LMOs management ? 5 laboratory technicians, selected in accordance with gender equity, are trained to efficiently use new technologically up-to-date equipment. - **By mid-point** one (1) Laboratory has new equipment; and institutional strengthening in detection, diagnostics and monitoring of LMOs	Report on the training of: - At least 20 scientists, taking into consideration gender balance, in the prevention, control and management of biological invasions (IAS) - Laboratory technicians; including list of participants	**1. Assumptions**: GEF funding is enough to cover both equipment and human capacity enhancement **2. Risks: -** 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	2B, 2C

Output 2.3 **Operational manuals for ?handling including detection, risk assessment and management, emergency responses**	Prepared 4 operational manuals (pr epared 4 operational manuals?)	CBD, CPB, Biosafety proclamation, directives and NIASMSAP of IAS	By the end of the project 4 Operational manuals prepared on LMO/IAS detection, risk assessment and risk managemen t and emergency responses	Copies of prepared manuals	**Assumption s:** Stakeholder engagement and government support, willingness and commitment. Stakeholders and other partner organization have access to use the prepared manuals. 2. **Risks:-** 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	2B, 2C

Output 2.4 **Decision making systems for IAS and LMOs tested through selected pilot studies**	Updated decision-making system for IAS and LMOs with information from pilot studies	Decision making system for LMOs, and IAS exist	By end of this project: well-developed decision-making systems are drafted, validated and being Implemented.	Mid-term review report, UNEP/GEF, -Terminal Evaluation report by UNEP/GEF. -Project final Report by PCU. GEF Tracking tools as required	**Assumptions** Appropriate decision-making tools and resources are available for the decisions on LMOs and IAS **Risks** Lack of appropriate decision-making tools and resources for the decisions on LMOs and IAS could be an issues In the absence of approvals of LMOs for CFT, contained use and environmental release at the time of offer, the equipment and the enhanced human capacity may not be tested	2B, 2C

Output 2.5 **A capacity building and training strategy on biosecurity developed for identified stakeholders involved in the management of IAS and LMOs including Trainer of Trainers workshops for Port entry officials, Regulatory agency officials, Scientists, Policy makers, Civil society and importers/exporters**	Developed capacity building and training strategy on biosecurity Trained stakeholders on the management of IAS and LMOs Improved capacity of stakeholders/ institutions in IAS and LMOs management. Capacity developed on LMO detection, diagnostics and monitoring with strengthened institutional capacities, recorded at the end Of the project.	**There exist:** Trained biosafety officers and NBACs on Biosafety issues such as LMOs risk assessment and risk management Universities and Institutes involved on biotechnology issues	**By mid-point** Capacity building and training strategy on Biosecurity developed and institutional strengthening in detection, diagnostics and monitoring of LMOs. **By end of this project,** - At least **300** custom officers, biosafety officers, NBACs, policy makers, Civil Societies, researchers, importers/ exporters, Scientists taking in consideration gender equity, trained in IAS & LMOs management. 10 laboratory technicians, selected in accordance with gender equity,	Copies of the strategy M & E report by PCU, MTR by UNEP/GEF Report on the training of : - At least **300** key stakeholders taking into consideration gender balance, in the prevention, control and management of biological invasions (IAS) - Laboratory technicians; including list of participant	**Assumptions:** GEF funding is enough to cover for the preparation of the training strategy and for capacity enhancement **Risks:** - Key stakeholders may not be assign proper personnel - The value of GEF budgeted funds could depreciate in the wake of price increase on commodities and services	2B, 2C

			are trained to efficiently use new technologically up to date equipment			
Output 2.6 **Capacity building and guidelines development on emerging technologies (Synthetic Biology, Genome editing and new plant breeding techniques)**	Developed capacity on emerging technologies, Developed Guideline on emerging technologies Level and number of human resources trained, taking into consideration gender balance, in emerging technologies	Gene editing regulation guideline 896/2015 (amended) Biosafety Proclamation & its enabling directives & regulation Ethiopian National IAS Management Strategy & Action Plan 2021-2030 Science, Technology and Innovation Policy	**By mid-point** Capacity building on regulation of emerging technology improved and institutional strengthening in decision making, detection, and monitoring of LMOs. -Guidelines for emerging technologies developed and updated **By end of this project,** Guidelines for emerging technologies developed and implemented and capacity building created for key stakeholders, Biosafety officers and NBAC	Copies of the emerging technologies Guideline M & E report by PCU, MTR by UNEP/GEF **Report on the training of:** key stakeholders taking into consideration gender balance, in emerging technologies capacity building	**Assumptions:** GEF funding is enough to cover for the preparation of the training strategy and for capacity enhancement Stakeholders can have access to guidelines **Risks:** - Key stakeholders may not be assign proper personnel - The value of GEF budgeted funds could depreciate in the wake of price increase on commodities and services	2B, 2C

Output 2.7 **Updated inventory and map of IAS developed**	Developed map of IAS Prepared and Updated Inventory of IAS	Reports on IAS at federal and regional level	**By end of Project:** - National IAS Inventory and Map of IAS is in place.	Copies of MAP and inventory document	**Assumptions:** Stakeholders have access to use MAP and inventory document, and this will help for comprehensive management of IAS. **Risk:** Map may not include all required information Different challenges (financial, security, manpower) may exist for preparation of inventory at national level	2B, 2C

Output 3.1 **A National Biosecurity Information System (NBIS), including a participatory monitoring network using citizen science and modern ICT is operationalized to monitor and inform risk-based management of species, pathways and ecosystems based on agreed protocols**	Developed/ strengthened National Biosecurity Information System (NBIS). Number of agreed protocols allowing information exchange within the clearing house system: such that, the International Phytosanitary Portal, the CHM, national BCH and ABSCH hubs all connected to the established database can communicate with	BCH, CHM, ABS-CH was created for the exchange of Biosafety and Biodiversity information amongst Parties and stakeholders	**By end of project,** an operationalized and functioning National Biosecurity Information System (NBIS) is in place	Online address will be available on Environmental Protection Authority website - M & E reports by the PCU, GEF/UNEP - MTR report by UNEP/GEF - Terminal Evaluation report by UNEP/GEF -Project final Report by PCU.	**Assumptions:** -An understanding of cooperation on information exchange among the Key stakeholders working in the area is Possible. **Risks** Lack of commitments amongst key stakeholders Could be an issue.	2B, 2C

	each other on the platform that is operationalized to monitor and inform risk-based management of species, pathways And ecosystems.					

Output 3.2 **A national biosecurity communication and awareness raising plan developed and implemented through sensitization for key institutions (manuals, guidelines and operating procedures)**	Developed and Implemented national Biosecurity communication and awareness raising plan Number of organized communication and awareness raising activities reported -Number of communication and awareness raising tools produced and distributed Existence/presence of biosecurity information	A National Invasive Alien Species Management Strategy is in place	**At End of project** effective implementation of the National Biosecurity Communication and Awareness raising Plan Widespread visibility of biosecurity information is marked on commonly used articles, and, at public places such as bus stops, notice boards; and in stakeholder Offices; etc. The National Biosecurity Communication and Awareness raising Plan will be reviewed and implemented after the project Mid-point.	M & E reports by PCU, - Mid-term review report by GEF/UNEP, Terminal evaluation report by GEF/UNEP, - The Activity report by PCU -Project final report by PCU	**Assumptions:** GEF funds together with Government Co-financing are enough to ensure a nation-wide coverage in the communication and awareness raising activities Strong public Relations efforts undertaken Public actions Mobilized on the environmental risks of IAS and LMOs	2B, 2C

	marked in public on places including calendars, notice boards, bus-stops; and on common articles of daily use.					

Output 4.1. **A comprehensive project monitoring and evaluation (M&E) framework developed and implemented drawing on best practices and lessons learnt**	Developed and Implemented Comprehensive Project Monitoring and evaluation framework. Compiled Best Practice and Lessons Learned	A National Invasive Alien Species Management Strategy is in place	**At End of project:** Comprehensive Project Monitoring and evaluation framework will be in place. National biosafety platform will be established. Best practices and lessons learned will be documented.	Written records of consultation, M and E report documents, other official documentation Regular national biosafety platform meeting minutes and reports. Document with best practices and lessons learned.	**Assumptions:** M and E provides sufficient, coherence and common purpose to drive more effective planning, implementation and monitoring LMOs and IAS management. Willingness and capacity of institutions under the project to engage in collaboration through multi-stakeholder platforms Facilitate learning and ensure knowledge is shared and widely disseminated to support the scaling up and replication of project results.	2B, 2C

Output 4.2 **Mid-Term/ Terminal Evaluation**	Conduct Midterm/ Terminal evaluation	None	**At Mid/End of project:** Comprehensive midterm/terminal evaluation of the project will be conducted covering achievements and best practices and lessons learned.	Mid-term and Terminal Evaluation report		

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).

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

Provide detailed funding amount of the PPG activities financing status in the table below:

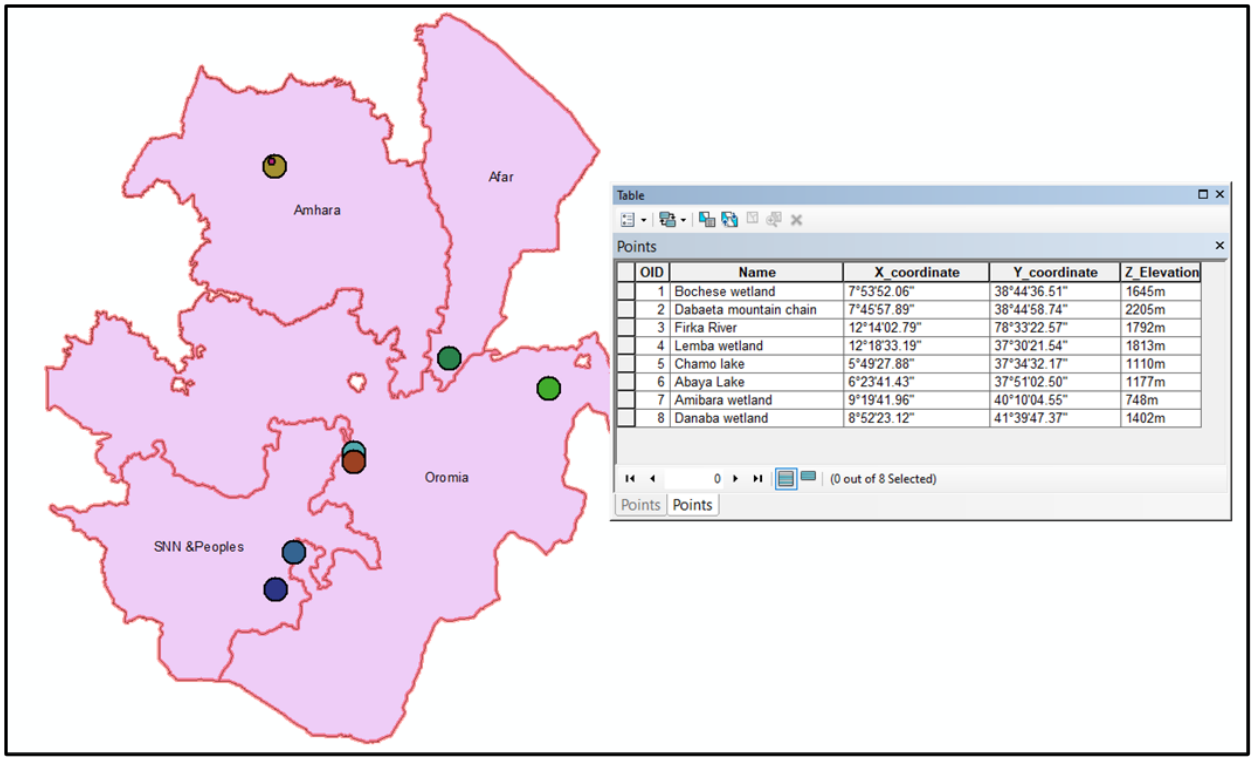
PPG Grant Approved at PIF: **50000**			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***
1202 Engagement of International Consultants	16,000	16,000	0
2101 Implementation of national activities	34,000	25,500	8,500
Total	50,000	41,500	8,500

ANNEX D: Project Map(s) and Coordinates

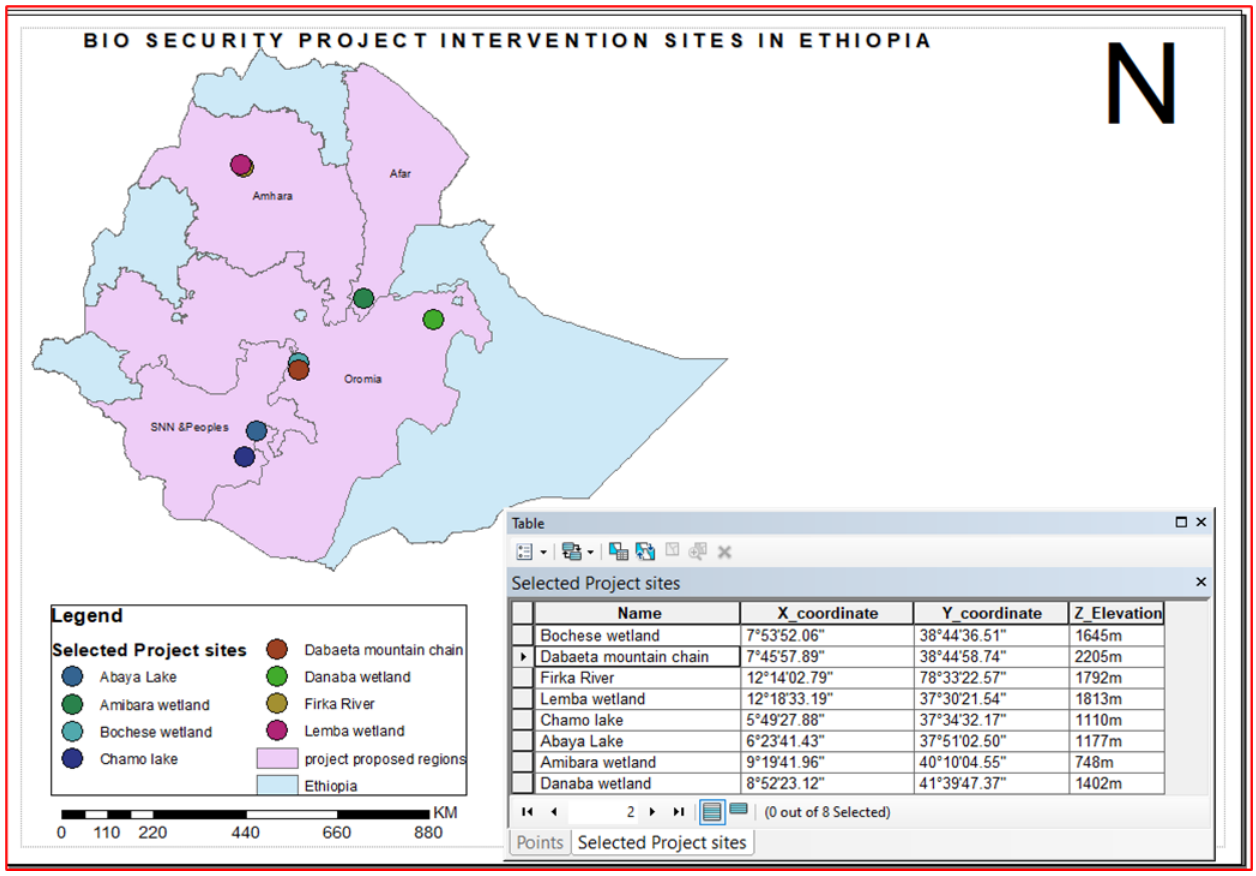
Please attach the geographical location of the project area, if possible.

So far there are no maps for IAS and confined and continued LMOs experiments were undertaken in different research centers and on the farmlands of the investors (especially for Cotton experiment done in 7 locations in the country). The GPS coordinates of Ethiopia are **9.1450? N and 40.4897? E.** Find below geo-referenced information and maps on project intervention areas with specific pilot sites indicated.

The project will be implemented at the national level (Ethiopia is located 3? and 14.8? latitude 33? and 48? longitude in the Eastern part of Africa (Horn of Africa) bordering Somalia, the Sudan, Djibouti, Kenya and Eritrea with a total border length of 5,311 km. It is the 10th largest country in Africa. The project is focused on the selected places where there are invasive alien species in four regions. From the four regions, eight selected sites are presented with their location coordinates as follows:



Source: - EIMD directorate 2021 GIS result



The sites on the country map

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
Bochese Wetland	**7.5352**	**38.4436**		

Location Name	Latitude	Longitude	Geo Name ID	Location & Activity Description
Daebata Mountain Chain	7.4557	38.4458		
Firka River	12.1402	38.3322		
Lembe Wetland	12.1833	37.3021		
Chamo Lake	5.4928	37.3432		
Abaya Lake	6.2341	37.5102		
Ambara Wetland	9.1941	40.1004		
Danaba Wetland	8.5223	41.3947		

ANNEX E: Project Budget Table

Please attach a project budget table.

ANNEX I-1: Indicative Project Budget (GEF Costs)

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).