THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

MINISTRY OF AGRICULTURE (MoA)

Ethiopia Emergency Locust Response Project (EELRP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

FOR

ADDITIONAL FINANCE

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Acronyms

ADLI	Agriculture Development Led Industrialization
APE	Agriculture Policy of Ethiopia
BOA	Bureau of Agriculture
BoARD	Bureau of Agriculture and Rural Development
CRGE	Climate Resilient Green Economy
CSA	Central statistical Agency
CSE	Conservation Strategy of Ethiopia
DA	Development Agent
DLCIMPDD	Desert Locust Control and Impact Management Project Design Document
EA	Environmental Assessment
EELRP	Ethiopia Emergency Locust Response Project
EFCCC	Environment, Forest and Climate Change Commission
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
EPO	Environmental Protection Organ
E-S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRC	Environmental and Social Risk Classification
ESS	Environmental and Social Standard
FAO	Food and Agriculture Organization
FDRE	Federal Democratic Republic of Ethiopia
GBV	Gender Based Violence
GIIP	Good International Industry Practice
GOE	Government of Ethiopia
GTP	The Growth and Transformation Plan
ILO	International Labour Organization
IPMP	Integrated Pest Management Plan
LMP	Labor Management Procedure
MOA	Ministry of Agriculture
MoANR	Ministry of Agriculture and Natural Resources
MoLSA	Ministry of Labor and Social Affairs
NGOs	Non-Governmental Organization
NR	Natural Resources
OHS	Occupational health and safety
PAD	Project Appraisal Document
PIC	Prior Informed Consent
PIFU	Project Implementation Focal Unit
PIM	Program Implementation Manual
PIU	Project Implementation Unit
PPE	Personal protective Equipment
PSNP	Productive Safety Net Program
REPO	Regional Environmental Protection Organ
SA	Social Assessment

SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SEUs	Sectoral Environmental Units
SNNP	Southern Nations, Nationalities and People
SSAHUTLC	Sub-Saharan African Historically Underserved Traditional Local Communities
ToR	Terms of Reference
ToT	Training of Trainers
UNCEDAW	United Nations Convention on the Elimination of all forms of Discrimination Against Women
USD	United States Dollars
WAO	The Woreda Agriculture Office
WARDOW	Woreda Agriculture and Rural Development Office
WB	The World Bank
WEPO	Woreda Environmental Protection Organ

Table of Contents

Executive Summary

Introduction and Background

The Desert locust (*Schistocerca gregaria*) is one of the dangerous transboundary pests that cause/pose severe threat to the livelihoods of farmers and pastoralist communities of Ethiopia and other neighbouring countries such as Kenya, Somalia, Eritrea, Sudan, Djibouti and Yemen. Locusts multiply and rapidly migrate and spread within countries and across countries being aided by weather conditions. Desert locust is polyphagous and can cause serious damage to various crops, pasture and forests.

Thus, in order to combat the currently occurring locust infestation in the Ethiopia Emergency Locust Response Project (EELRP) is currently designed, and the ESMF is prepared to incorporate the environmental and social risks, impacts and management of EELRP.

Methodology of the ESMF preparation: A thorough review of the, environmental and social management National/Regional policies, proclamations, regulations, guidelines; The World Bank (WB) Environmental and Social Standards (ESS); FAO and WHO guidelines; international conventions; and other relevant documents including the draft Project Appraisal Document (PAD) prepared for EELRP, the Desert Locust Control and Impact Management Project Design Document (DLCIMPDD), Environmental and Social Commitment Plan (ESCP), Security Management Plan, PIM is undertaken. In addition, consultations with key Federal stakeholders were conducted.

Project Description

The main objective of the project is to urgently devise, deploy and implement integrated, comprehensive and coordinated desert locust control program, enhance and protect the livelihood of farmers and pastoralists from locust control attack while ensuring food security of millions of farming and pastoralist communities in the most affected geography and rehabilitating pastureland affected by desert locust.

Components of the EELRP

There are four main components in this project comprising of Survey, Surveillance and effective early management of the outbreak, pastureland rehabilitation of pastoralist area to mitigate the impact caused by the Desert Locust, strengthening of the plant health system in the country to improve early warning system and project management component. A description of each standardized components is provided as follows:

Component 1: Locust monitoring and control. The Ethiopia project will adopt a two-pronged approach for locust monitoring and control under this component: (a) direct support to improving surveillance and assessment of locusts' situation, habitat conditions and geographic exposure to deploy expert teams and drones for the collection of data at strategic locations, reporting occurrences and possible occurrences of outbreaks, and assessing geographic exposure to locusts. Support to community-based monitoring and forecasting in both pastoralist and farming communities prone to locust breeding and invasion will also be provided including training of scouts and sensitization campaigns for community/village leaders. And well as targeted aerial and ground spraying to reduce locust populations and prevent their spread to new areas through targeted ground and aerial control operations.

Component 2: Livelihood protection and restoration. It is estimated that 531,000 households will be directly affected by the locust crisis in Ethiopia, facing near-complete loss of crop production and some loss to livestock. The project will provide a seed-fertilizer-pesticide package to selected farmers to ensure planting in the upcoming cropping season and, in pastoralist areas, fodder to guard against further livestock losses and thus loss of their main productive assets. Additionally, the project will provide fodder seed to affected communities to rehabilitate pastures in rangeland areas depleted by the desert locust

invasion. The locust response project will not involve cash transfers. The project will not reach all affected communities, but it is expected that similar interventions by the FAO and the GoE will allow a comprehensive coverage. The GoE will also trigger emergency food security mechanisms such as the emergency food appeal and contingency funding under PSNP IV that will complement the project's livelihood support initiatives with cash transfers to cover emergency food needs and to protect against distress sales of assets. The project will focus on short term measures as longer-term rangeland rehabilitation and pasture improvement efforts are already under way through World Bank-IFAD financed LLRP. Both PSNP IV and LLRP have prepared, consulted up on and disclosed environmental and social risk management instruments.

Component 3: Strengthening Early Warning Systems and Preparedness. Under this component, the project would assist the Ethiopia MoA in establishing an integrated system for locust detection, occurrence projection, early warning and systematic data analysis and comprehension. Through acquisition of state-of-the-art data collection and dissemination tools and improving data collection methods, building analytical capacity for understanding data, assessment of current strengths and weaknesses in locust occurrence projection and early warning systems and development of a roadmap on how best to develop the systems based on international best practice, capacity building for federal and regional experts using both national and international experts, technical assistance through appointing senior plant protection experts to work with regional desert locust control units. After the idea of establishing a disaster early warning, monitoring, and preparedness system was proposed and initiated, the decision was made for EELRP staff, in collaboration with the Plant Protection Directorate of the Ministry to carry out the needs assessment document that explores the various aspects of the proposed investments, such as their strategic importance, objectives, financial needs and the spatial distributions to be identified near to breeding sites or entrance locations to be explored and/or studied and presented to its review and approval. The needs assessment report was completed and submitted to the management of the Ministry of Agriculture, which was soon approved by the same for further steps. The approved needs assessment document was given back to ELERP PIU at the ministry which in turn submitted the same to the World Bank during the second mission for evaluation. The World Bank, which a key stakeholder and donor of the EELRP project that has been owned and implemented by the Ministry appreciated the idea of base establishment in areas closer to desert locust breeding sites as a measure to strengthens early warning and disaster preparedness capacity. The three strategic bases establishment and construction process has been agreed to be realized step by step in accordance with what is specified in section 2.2. and was decided this issue to be handled under the additional financing for the Desert Locust prevention and control project decided to be included in the plan of 2022-2026. The MOA is made responsible to identify the three construction sites, secure land for construction and make sure such processes to be carried out as per the WB procedures that minimizes and/or to be free from environmental and social risks and/or hazards.

Component 4: Project Management. Under this component, financing will be provided for project management activities including (a) the hiring of a pest management expert; and (b) operating costs for monitoring (particularly related to financial management and safeguards), technical backstopping at different levels; and (c) communication and information exchange. Regarding the latter, an effort will be made to enhance communications about desert locusts and their negative impact on affected communities as well as to disseminate information generated by the early warning systems. Details of communication activities are provided in the PIM.

Stockholder consultation

During ESRM Tools upgrading, stakeholder consultations were held based on key informant interviews (KII). The stakeholders were consulted through in-person meetings and virtually (phone calls) while using predefined interview questions or discussion points. A total of 12 informants were interviewed during the consultation process. The stakeholders that participated in the interview comprise PIU, MoA, and

Regional Plant & Crop protection directorate in Amhara, Afar, SNNP, Oromia, Somali, Harari, Benshangul-Gumuz, Gambella, and Tigray regions and Dire Dawa Administration. This interview enables us to solicit the stakeholder's assessments of the parent program implementation and their concern and interest in the AF.

The main points that were reflected by the stakeholder include the importance of improving vulnerable people's access to project opportunities and benefits, creating awareness of the project opportunity offered to vulnerable people, and extending the reach of the project benefit to vulnerable people in all locust-affected areas. Despite the urgency of the locust emergency response effort, a rapid informed decision procedure needs to be considered to mitigate the discontent of beneficiaries and mistargeting of critical interventions (locust control and livelihood protection) due to inadequate consultations. In line with this, it was also added stakeholder engagement to be held based on timely and relevant aiming at inclusiveness and building trust, particularly in the targeting process. As a concern, the stakeholder raised capacity limitation, lack of safeguard specialists, deterioration of pesticide stores, lack of nonpest management options, and resource conflict among pastoralist community due to locust impact. etc.

Environmental and Social Management Requirements

This ESMF gives due attention to environmental and social impacts or risks associated with activities of Components 1, 2, and 3.

The selection, planning, design and implementation of the activities under EELRP have to be consistent with the relevant national environmental and social management requirements as well as the World Bank **Environmental and Social Framework (ESF)** applicable to the project and international conventions. In each case, national, regional, woreda and local institutions to be involved in screening, reviewing and approving subprojects; and will carry out their respective roles and responsibilities. The responsibilities may include identification, screening, conducting environmental and social impact assessment (ESIA), and reviewing the ESIA report for ensuring compliance to obligatory requirements under laws and regulations, and issuing approvals for subproject implementation.

The EELRP risk classification is high given that significant adverse environmental and social impacts are expected to occur due to implementation of the project. The following World Bank Environmental and Social Standards are applicable to the EELRP: **ESS1.** Assessment and Management of Environmental and Social Risks and Impacts, **ESS2** Labor and Working Conditions, **ESS 3**: Resource Efficiency and Pollution Prevention and Management, **ESS4:** Community Health and Safety, **ESS 6:** Biodiversity Conservation and Sustainable Management of living Natural Resources, **ESS7.** Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (SSAHUTLC), and **ESS10**-Stakeholder Engagement and Information Disclosure.

The potential positive impacts of EELRP include; Combating the damage created by the widespread desert locust in Ethiopia, protect fragile livelihoods from locust infestation and subsequently enhance the food security of communities through livelihood support in the project area, provision of opportunities to reclaim human capital and asset losses due to the dessert locust, support vulnerable households to gain access to livelihoods support, feed/fodder distribution and essential agricultural inputs for building livelihoods, restocking of livestock, rehabilitating rangelands.

Potential negative Impact and risks of EELRP: include risks to the environment and to humans (social risks)

- **Risks to the environment:** pollution of ecologically sensitive habitats such as wetlands, national parks and water bodies, loss of biodiversity, air pollution through dust emissions, pollution due to unused and obsolete pesticide, and empty pesticide containers among others.
- **Social Risks:** Risks to community and workers' health and safety**,** GBV incident particularly worker deployed in conflict areas, involuntary resettlement including physical and economic displacement during land acquisition for the base centers construction, risk of targeting bias and/or error including risks of exclusion of vulnerable people and underserved groups
- **Risks to animal health and** greenhouse gas emissions and climate change risks.

Potential mitigation measures of EELRP include but not limited to the following:

- Identifying and mapping out sensitive ecological and agronomical areas, establishing Strict Operational Procedures (SOP) and a judicious choice of pesticides (i.e., biopesticides could be used in/near potentially sensitive areas).
- Implement Integrated Pest Management (IPM) technique and reduce reliance on synthetic chemical pesticides. (Use both synthetic chemical pesticides and biopesticides.
- Use alternative pest control methods (physical, mechanical, and biochemical
- Develop a mechanism/ design a system for safe disposal of unused and obsolete pesticide, and empty pesticide containers and never reuse. Ensure the safe disposal of empty containers, tank washings and surplus pesticides.
- Introduce improved, climate-resilient varieties that provide for higher yields and are resistant to pest/disease and other climate-related threats.
- Re-establish/restore pastureland by establishing nurseries throughout the affected area.
- Provide basic training and awareness for workers, regarding the use of appropriate preventive measures against HIV AIDS, and COVID-19.
- Provide the necessary protective equipment to all staff members.
- Implement social distancing during meetings with key informants.
- Minimize pesticide use and minimize health and environmental risk when pesticides are used.
- If there are no feasible alternatives to pesticides, select less toxic pesticides that will lead to the least human exposure before, during and after use.
- Reduce exposure time or the degree of exposure.
- Promote increased community awareness about the impacts of the locust swarms and the response efforts to support communities before, during and after the crisis.
- provide adequate training to workers on first aid issues and provide them with fully stocked First Aid Kit.
- Provide health and safety protection equipment (protective clothing and hard boots and hats, protection for eyes and ear mufflers) at all construction sites or during the spraying operations.
- Regular community interaction and awareness creation about the benefits, potential side effects of pesticide use on humans, agricultural crops, livestock and livestock feed, on water wells for humans and livestock, and the environment.
- Enhance their access to food and rehabilitate food production systems and livelihoods that have been damaged or destroyed by swarms.
- Arrange health monitoring as may be necessary for certain hazardous agrochemicals based on their frequency of use.
- Enforce any exclusion period after application-time during which humans, livestock, etc., must be kept away from the treated area;
- Enhance access to food and rehabilitate food production systems and livelihoods that have been damaged or destroyed by swarms**.**

- Provision of fodder to livestock holding households to replace impacted grazing land until restoration can be completed.
- Develop a workable monitoring and evaluation system during and post-campaign.
- Avoid involuntary displacement, and provide compensation and livelihood restoration to physically and economically displaced people Adopt differentiated mitigation measures and targeting mechanisms to avoid targeting bias and error.
- Ensure vulnerable people have access to project benefits. This included introducing beneficiary targeting criteria and procedures for each stage of the targeting exercise.
- Involve the community in the decision-making process of beneficiary targeting and input package selection.
- Implement the security management measures for workers appointed in a conflict area
- Implement the updated GBV Action Plan.

Summary of Impact/Risk Description and Proposed Mitigation Measures

Components-Subprojects/Key activities	**Potential Environmental Impacts**	**Mitigation Measures**
Component 1	• Loss of ecologically sensitive habitats • Contamination of local water sources and agronomically sensitive areas • Loss of biodiversity • Soil erosion and pollution, • Degradation of the rangelands: excessive application of pesticides can contaminate soil and kills other non-target organisms which are beneficial for enriching the soil nutrient content. • Air pollution through dust emissions, • Accidental Pesticide spills during storage and transportation and excessive use • Disposal of obsolete pesticides, and empty pesticide containers disposal • Generation of solid waste, • Accumulation of obsolete stocks. • Greenhouse gas emissions and Climate change	• Identifying and mapping out sensitive ecological and agronomical areas, establishing Strict Operational Procedures (SOP) and a judicious choice of pesticides (i.e. Biopesticides could be used in/near potentially sensitive areas). • Map out the various sensitive areas and make overlays with previous (or newly expected) locust infestations. • Establishing buffer zone free of spraying for each type of sensitive areas such as (1) National Park with 1km buffer zone (2) Ponds, lakes and rivers with 500-meter buffer zone (3) Churches like Lalibela, Gishen, with 1km buffer zone (4) Beehives and Agronomical Important Farm areas with 500-meter buffer zone • Implement Integrated Pest Management (IPM) technique and reduce reliance on synthetic chemical pesticides. (Use both synthetic chemical pesticides and Biopesticides). • Apply Integrated Pest Management Plan document of the EELRP • Use alternative pest control methods (physical, mechanical, and biochemical) • Recommended Classification of Pesticides for Ethiopia is Malathion which is WHO Class III and slightly hazardous. • Develop a mechanism/ design a system for safe disposal of unused and obsolete pesticide, and empty pesticide containers and never reuse. Ensure the safe disposal of empty containers, tank washings and surplus pesticides

		• Provide training on OHS, emergency response measures and IPM for control staff including drivers, store keepers, driver assistance, pesticide refilling personnel, Hand-held motorized sprayer workers, vehicles mounted sprayer workers, flagman, etc
Component 2	• Loss of ecologically sensitive habitats • Loss of biodiversity as a result misuse of agricultural inputs such as pesticides and fertilizer • Surface water pollution as a result of misuse of agricultural inputs such as pesticide and fertilizers, • Air pollution through dust emissions • Pollution due to unused and obsolete pesticide, and empty pesticide containers • Generation of Solid waste as a result of agrochemical wastes/ (i.e. packaging containers) • Soil erosion, farm input & grant may lead to opening up new areas for cultivation • Introduction of alien and invasive species as a result of efforts made for restoration of degraded rangeland with seeding of pastures and appropriate livestock fodder	• All mitigation measures proposed for Environmental risks/impacts of Component 1 will be applicable for Component 2 as required
Component 3	• Solid waste generation during the construction and operation of the base-centers • An accidental spill of pesticide and groundwater contamination during the operation phase of the base centers • Empty chemical containers and obsolete/unused pesticide accumulation during the operation stage of the base centers • Occupational health and safety risks during pesticide handling, transportation, and spraying	• Prepare site-specific ESIA and ESMP for each base center and implement the mitigation measures accordingly • Incorporate environmental risk management-specific standard and ESCP provisions in the contractual agreement entered between the MoA and contractor • Monitor and report the implementation of ESMP and contract provisions

Potential social impact and mitigation measure

Components-Subprojects/Key activities	**Potential Social Impacts**	**Mitigation Measures**
Component 1	• Inadequate prior information for communities in target areas about the impacts of pesticide use on locust infestation management. • Low capacity at woreda and kebele levels and coordination gaps between	• Carry out awareness-raising and provide relevant and timely information to local communities on pesticide treatment schedules and potential negative impacts. • Provide public awareness and inform the local population about safety precautions using

	sector offices including technical capacity limitation on the part of implementing offices. • Lack of occupational health and safety of the Labor force and neighbouring communities' exposure to health and safety, especially exposure to pesticide and COVID-19 pandemic	different approaches (local radio, TV, leaflet with local language, public presentation) and prepare contextualized communication strategy. • Inhabitants in the treatment areas should be informed of the operation beforehand and warned not to come close to it. • Control teams should always make sure that no ecologically and agronomically sensitive areas, person and livestock are present in the area to be sprayed. • The projects LMP which provides mitigation and monitoring related to worker risks and impacts. • During spraying, control staff who will not directly involved in the application will verify that bystanders remain at a safe distance. • The staff will make sure withholding periods are respected after locust control treatments through intensive sensation. • Training for staffs to strengthen on desert locust monitoring and control capabilities in the handling and application of insecticides and important ways to reduce health and environmental risks. • Follow and implement the project Labor Management Procedures and • In all activities of the project, prevention of COVID-19 should be mainstreamed and the necessary protective equipment should be provided to all staffs. Besides, social distancing should be implemented during meetings. • All sanitary material helpful for washing and disinfection should be availed. Stringent guideline of WB should also be used.
Component 2	• Inadequate awareness about the nature, amount and use of fertilizers and pesticides by the community. • There might be targeting error in the process of providing seeds-fertilizer and pesticides and also pasture seeds and fodder. • Lack of information on the potential project's livelihoods support and compensation for out of control damages and unintentional overuse/misuse (beyond buffer zone damages) on livestock, crops, fodder or humans. • Risk of involving one clan that is more dominant over others during targeting process mainly among lowland communities in relation to	• Monitor changing livelihood dynamics with view to retargeting to include those that may fall into food insecurity; • The MOA has to ensure the involvement of the community in a participatory, consultative and transparent manner to select the appropriate beneficiaries who deserve for it • Inform and define compensation mechanism for unintended overuse/misuse (beyond buffer zone damages) of pesticides on livestock, crops, fodder or humans. • Ensure awareness around importance of targeting women for livelihoods support activities Broaden the representation of community members on targeting committees with greater emphasis on the participation of women; • Awareness creation among the men that the

	the provision of seeds-fertilizer-pesticides, as a result targeting errors might happen during pasture/crop seeds and temporary fodder/forage provision for the desert locust affected communities. This means locust impacted individuals or eligible beneficiaries might be excluded • Increase instances of domestic violence between women and men or husband and wives in relation to livelihoods support or interventions at household level by the project in which men or husbands may not properly use the crop/pasture seeds/pesticides/fertilizers in combating the outbreak of locust. Similarly, in the pastoral and agro-pastoral community, it is common practice that men tend to grab resources or properties from women by force to meet their individual needs. As a result, the supports might not be used for eligible households that are affected by the outbreak of the locust infestation. • Increase instances of domestic violence between women and men or husband and wives in relation to livelihoods support or interventions at household level by the project. In the pastoral and agro-pastoral community, it is common practice that men tend to grab resources or properties from women by force to meet their individual needs. • Elite capture and/or different interest groups including traditional authority structures in influencing community's prioritization and manipulation of support provided; lack of transparency during selection of the beneficiaries for the financial and technical assistance and the exclusion of certain groups and individuals from project benefits in particular vulnerable people and the historically disadvantages regions of Ethiopia	women are using the support for the whole family and elders or traditional leaders should provide awareness for the community to avoid violence against women There should be controlling mechanism of the elite capture. In this respect, beneficiaries should be realistically selected in consultation with representatives of the community • Create awareness among traditional authority structures and undertake information campaign to ensure the purpose and principles of EELRP are understood, including targeting procedures and design targeting structures with careful consideration to the balance between formal and informal traditional authority structures and inclusive project target • Transparent reporting on project interventions • Affirmative action should be given for vulnerable people and for the historically disadvantages regions of Ethiopia. A rapid information dissemination campaign should be designed and disseminated to fit the local context and requirements, including through local radio in appropriate languages. • Communities should be sensitized on the techniques and timing of spraying, the chemicals used, its impacts on human health, crops and livestock, and risk mitigation instructions appropriate to the specific spraying. • All community engagements, including consultations, should be developed to minimize the risk of introducing disease– particularly COVID19 into remote communities. • The GRM developed for the project should be implemented in a proper way. The trainings can cover an array of topics that include technical themes, project management, monitoring and evaluation for implementer at different levels including the woreda and kebele level implementers of the project. Create linkages among institutions, sectors, programs, and projects at all levels. • Addressing gender dimensions of the operation including gender-based violence (GBV). • The project has prepared GBV Action Plan which will be implemented and defined the potential project GBV issues thus during implementation, measures should be taken in accordance with the project GBV action plan. • The project implementing teams will regularly access and manage the risks of SEA/H and

		other forms of GBV extending from project activities, including key infrastructure elements as well as the receipt of cash-for-work schemes by women and other vulnerable groups and sexual exploitation and abuse risks such as sexual favours for registration or release of funds. • The PIU will engage a GBV specialist dedicated to support oversight and management of these risks. • Monitoring of the management of GBV risks will be an integral part of the project activities. • The project will also ensure regular consultation and engagement with women and women's groups throughout the project to ensure equitable inclusion in project activities and to monitor potential risks that may emerge over the life of the project. • Strengthening of the Woreda Bureaus of Women and Children Affairs as first contact points for GBV cases • These sections of the community should be given special attention during the project implementation. • They should be benefited from the project a certain percent • The project needs to include a conflict sensitivity assessment checklist in the ESMF and also consider sensitivity of local conflict dynamics and implement in a way to avoid escalating local tensions as the works cover IDP and refugee areas. • The community and the local government should put in place appropriate mechanism including meaningful consultation and full participation of the beneficiary communities during planning, design and implementation phases of the project. • Attempt should be made to resolve conflicts using the traditional way and if this fails to resolve the conflict, government institutions will intervene to settle these conflicts. • The project should consider the livelihoods and political vulnerability in this areas and craft communication messages in accordance with the local context. • The MOA and the PIU should alert the Bank any incidents related to security, conflict and potential sensitivities towards conflict in the project areas. • Assist discussions between community representatives of clan leaders, *Kebele* chairpersons and elders to support peaceful inter-clan and inter-ethnic as well as cross-

		border relations by supporting regular forums and workshops that promote inter-ethnic dialogue.
Component 3	• Land acquisition and risk of involuntary displacement and access restriction to the use of property • Physical and economic displacement of people due to land acquisition for base centres construction • Risk of human remains or archaeological damage during land clearing, excavation, and construction • Risk of cultural and physical heritage damage • Community health and safety risk due to labor influx for construction wok • Worker health and safety risk	• Prepare site-specific ESIA, ESMP, and RAP before land acquisition and construction of the base centre • Provide the necessary compensation for affected people and restore their livelihood as specified by the RAP • Ensure the implementation of social risk/impact management measures that would be proposed by the ESIA and ESMP • As much as possible avoid involuntary land acquisition • Ensure facilitation of meaningful consultation with affected people and vulnerable people • Incorporate social risk management-specific standard and the relevant ESCP provisions in the contractual agreement entered between the MoA and contractor Map cultural and physical heritage and intangible heritages to avoid damages as a result of land clearing, excavation, and construction activities. • If any human remains or archaeological remains (e.g., fossils, bones, artifacts etc.) are disturbed, exposed or uncovered during excavations, all work shall stop immediately. The incidence needs to be immediately informed and reported to the authority for Research and Conservation of Cultural Heritage (ARCCH) for an appropriate course of action. • Assist and follow up with the contractor to prepare an OHS management plan and ensure the implementation of the proposed Occupation Health and Safety risk measures accordingly • Ensure all labor and working conditions requirements are met as per the LMP

ESMF Procedures for Subproject Preparation, Approval, Implementation and Reporting

The processes, procedures and institutional arrangements for addressing adverse environmental and social concerns when identifying, preparing, approving and implementing activities of EELRP are defined in generic steps in this ESMF. When demand-driven subprojects/Activities such as pesticide spraying are identified and prepared at Kebele level by the communities or groups, these subprojects/activities will be screened at Kebele level by the DAs and KDCs against environmental and social screening checklists prepared for this purpose. Similarly, these subprojects will be screened, ESA (ESMP/ESIA) prepared, reviewed, and approved at Woreda and regional levels.

Quarter and annual report should be prepared at woreda, regional and federal levels using the institutional arrangements, and the roles and responsibilities identified for the implementation of the ESMF. Regular annual reviews on the implementation of the ESMF for the subprojects are to be carried out by an independent local consultant that is not otherwise involved in the implementation of the project.

Capacity Building, Training, and Technical Assistance

The environmental sustainability of EELRP target areas is highly and unavoidably dependent on the capacity of communities, Woreda, Zonal, Regional and Federal implementing units (PIU) to carry out the associated design, planning, approval and implementation of subprojects and the ESMF. Ministry of Agriculture (MOA), Regional and Woreda Environmental Protection Authorities/ Offices have an overall key responsibility of ensuring that the project complies with Ethiopian environmental and social laws, and the World Bank ESF and make sure that the project complies with this ESMF.

The PIUs at Woreda level except Woreda EPO and most of regional level implementing agencies do not have staff directly trained and dedicated for environmental management purposes within these institutions. In many institutions, staffs have been retained for core activities. As a result, the environmental and social issue is handled by staff members not adequately familiar with it. In some cases, environment personnel are present but level of training and technical capacity on environmental and social principles and tools of management is not sufficient.

Accordingly, for effective implementation of the ESMF and related safeguard instruments', strengthening of the existing structure has paramount importance. In line with this ESMF has specified the required manpower from federal up to woreda level where the proposed project intervene areas. The following are committed manpower specified by the ESCP and other proposed manpower at all level.

- Hire, as a consultant, pest management specialist, who lead the Desert Locust survey and control operation (Under project),
- Hire at least one Environmental and social safeguards officer working as Environmental and Social Safeguard Specialist,
- Hire a monitoring and evaluation officer,
- Hire an information technology officer,
- Hire a communications and knowledge management officer,
- At Regional level officially appoint safeguard specialists from BoAs and/or Bureau of Pastoral community developments (trained or to be trained) and allocate operational budget, and
- At Woreda level officially appoint safeguard specialists from Agricultural offices and/or Pastoral development offices (trained or to be trained) and allocate operational budget.

Furthermore, for the successful implementation of the ESMF during the EELRP implementation period, sufficient understanding of the mechanisms for implementing the ESMF will be required by the various stakeholders at different level (especially at woreda and kebele level). Hence capacity building trainings and awareness creation should be provided. The focuses of the trainings include among others: national and the World Bank environmental and social legal, policy and administrative requirements; stakeholder mapping and engagement, specific requirements on the ESMF, ESIA, IPMP, SA, and other social development related plans such as security management plan (SMP). Training for farmers, pastoralists, scouts, experts and officials at different levels on locust infestation control management, and others using the FAO Desert Locust Control Training Manuals, Community awareness (including clan and religious leaders) raising trainings on community health, safety, and the impact of pesticide spraying before, during and after the operation. Specific aspects of environmental and social assessment, train workers on ESMF, ESIA, ESMP, etc, Training operation workers on occupational health and safety requirements of the project, and training workers on GBV, SA, LMP and grievance redress mechanism.

The total amount budget required, for the implementation of the EELRP's ESMF related with capacity building, OHS, PPE procurement, community awareness creation, and sensitization, worker health and environmental impact assessment, monitoring and auditing of both the environmental and social management, is USD 2,112,959 (For the detail see Table 10). **N.B:** For the capacity building and other safeguards implementation such as IPMP, the Project PIM and the IPMP have earmarked necessary budget. Therefore, apart from this ESMF proposed budget, such budget should be considered for the implementation of the Project's Environmental and Social management requirements.

1. Introduction

1.1. General Background of the Project

The Desert Locust, *Schistocerca gregaria* (Forskål 1775) represents a major threat to agriculture within a very large area extending from the Atlantic Ocean and North Africa to the Middle East and Southwest Asia. This locust lives in desert and semi-desert areas. It is a much dreaded insect due to the important damage it can inflict on agro sylvo-pastoral production during invasion periods and the resulting socio-economic and environmental disturbances. One of its main characteristics is that it has a highly developed migratory capacity over long distances, making the problem one of international scope.

From time to time, outbreaks, upsurges and invasions develop throughout the world Desert Locust prone areas linked to periods of favourable rainfall. They are interrupted by recession periods during which the solitary populations of the Desert Locust are only present in very small numbers and distributed over a restricted area referred to as the recession area, mainly desert and far from cultivated lands. A total area estimated being covered by Desert Locus invasion is about 16 million km² which is particularly concerns for the Saharan zones. On the contrary, during invasions, the gregarious populations can occupy a much larger area including 65 countries in Africa, the Middle-East and Southwest Asia, covering a territory of 29 million km², extensively cultivated and populated by more than one billion people.

Similarly, Ethiopia is one of the frontline countries of Desert Locust invasion in large and also recession with certain areas suitable for locust breeding and gregarization in eastern Africa. The lowland areas of, Eastern, South Eastern, Northern, North Western, North Eastern, Southern and South western zones of Ethiopia occupy key areas of locust development. The GoE in collaboration with relevant development partners and mobilizing the local community and resources has made relentless efforts to control the pest and prevent or minimize its damages. Intensive surveillance, monitoring and ground and aerial control operations were carried out in different parts of the country. However currently (in April 2020), the Desert Locust situation is becoming worst and very serious in Ethiopia.

The GoE (Ministry of Agriculture), recognizing the damage being caused by this existing and predicted desert locust invasion severity, has requested financial assistance from the World Bank for Desert Locust Emergency Response. Accordingly, the Project called Ethiopia Emergency Locust Response Project (EELRP) has been prepared in response to the prevalence of locust emergency in the different regions of the country.

The proposed project areas demonstrate considerable diversity in terms of water resources and landscape, from lowland, midland and highlands and livelihoods from agricultural, agro-pastoral and pastoral. The locust infestation spraying, and subsequent livelihoods support will be implemented in historically underserved remote areas, some affected by conflict whose livelihoods are fragile and may further become vulnerable due to the locust infestation. The surveillance assessment and prediction of next generation locust infestation areas of Somali region (Gode up to Moyale), Oromia region (woredas bordering Somali region such as Bale, Borena, Guji), SNNP including lowlands of South Omo and Konso experienced conflict since 2018 and hosts substantial number of people in internal displacement.

In line with this the GoE has been preparing the environmental and social management instruments and general frameworks, aiming sustainable development, as per the World Bank Environmental and Social Frame requirements. One of the instruments that have been required is ensuring the preparation and implementation of ESMF for the EELRP which addresses all environmental and social impacts/risks emanated from the project activities. And also specifies some special plans such as an Integrated Pest Management Plan (IPMP) which will be an integral part of the overall Environmental and Social Framework (ESMF) of the proposed project.

1.2. Objectives and Scope of the ESMF

1.2.1. The objectives of the ESMF

- Establish clear procedures and methodologies for integrating environmental and social issues in planning, review, approval and implementation of EELRP Subprojects/Activities.
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to implementation of interventions included in the EELRP.
- Strengthen environmental, social, health and safety performance, labor and working conditions;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- Establish the budget required to implement the ESMF and;
- Provide practical information resources for implementing the ESMF.

In addition, the key areas of the social concerns are addressed in

a complementary and standalone Social Assessment Report which was reviewed, cleared and disclosed in country and at the World Bank External Website. Similarly, standalone LMP, SEP, GBV Action Plan, SMP, RF and IP/SSAHUTLC Planning Frameworks which are separate risk management instruments prepared for this Project, which should be implemented alongside this ESMF.

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1.2.2. Scope of the ESMF

The scope of this ESMF is limited to ensure that adverse environmental and social risks and impacts of sub projects implemented under the EELRP are avoided or appropriately mitigated and compensated during the implementation period 20-May-2020 to 31 Dec, 2026.

This ESMF has mainly addressed and focused on impacts emanated from activities of Component 1, 2, and 3

1.3. Methodology of the ESMF preparation

Taking into account COVID 19 pandemic existing situation all over the world, for this task no field work has been conducted for site observation and stakeholder consultation. However, in order to get stakeholder concerns and to make effective assessment of base line data, various methods such as reviewing of documents, virtual communication and data generation from Woreda to Federal level using information datasheet (Annex 9, Annex 10 and Annex 11) has been undertaken.

A. Review of relevant regulatory, policy and technical documents

The following, some among others, documents pertinent to this task were reviewed:

- The Ethiopian environmental policies and regulations,
- Proposed EELRP documents
- Integrated pest management tools and manuals developed by the Ethiopian MoA, in collaboration with the UN Food and Agriculture Organization (FAO),
- The World Bank's ESF,
- The WBG EHS Guideline and other applicable policies,
- Technical documents related with IPMP, and
- Other related ESMFs.

B. Stakeholders Consultation
Stakeholders consultation was carried out using various techniques including using information gathering checklists (Annex 9, Annex 10 and Annex 11). Accordingly, main issues raised during consultation meetings were summarized and addressed in this document and draft IPMP document.

C. Baseline assessment
The baseline assessment, using information datasheets attached in this document as annex (Annex 9, Annex 10 and Annex 11) has been compiled, analysed and has been part of the overall study and preparation of this ESMF document. For this purpose, sampled but representative (in terms of agro ecology and farming practice including pastoral community) woredas in each project Regions were selected and assessed using information data sheet and secondary data (Literatures and Project Documents). The following issues among others which are pertinent with the development of IPMP have been addressed and incorporated in this ESMF preparation:

- Existing and anticipated pest problems,
- Assessment of physical and bio-physical environment (climate, topography at the sub-project site(s), geology, hydrogeology, surface water, soils, erosion sensitivity, flora, fauna, including the identification of any protected or endangered species),
- Land use at the project site(s) and in its (their) vicinity, and
- Human environment: description of neighbouring communities (population size, population structure and demography, socio-political organization, livelihoods, access to public services).

D. Institutional capacity and Implementation assessment
An assessment on institutional capacity related with IPMP was also carried out. Some among others are the following.

- Identifying the implementation team,
- Assessing institutional strengthening and implementation arrangements, and accordingly
- identified gaps / capacity limitations and come up with possible recommendations,
- Workers training plans and policies, along with estimated budget has been developed,
- General awareness creation and training plan for relevant community members or other relevant actors has been developed.

2. Description of the Project

2.1. Project Objectives and Scope

The main objective of the EELRP is to urgently deploy and implement integrated, comprehensive and coordinated desert locust control program, enhance and protect the livelihood of farmers and pastoralists from locust control attack while ensuring food security of millions of farming and pastoralist communities in the most affected geography and rehabilitating pastureland affected by desert locust. Furthermore, this project will strengthen the plant health system by improving the surveillance, prediction and information dissemination system on current and future locust movement and potential occurrence.

Project Scope: The scope of the project is limited to urgently deploy desert locust attack control system, support pastoralist and farmers in affected geography in all regions including pastureland rehabilitation and strengthening the plant health system of the country.

2.2. Project Components and Result Framework

2.2.1. Project Components

There are four main components in this project comprising of Survey, Surveillance and effective early management of the outbreak, pastureland rehabilitation of pastoralist area to mitigate the impact caused

by the Desert Locust, strengthening of the plant health system in the country to improve early warning system and project management component. A description of each standardized components is provided as follows:

Component 1: Locust monitoring and control. The Ethiopia project will adopt a two-pronged approach for locust monitoring and control under this component: (a) direct support to improving surveillance and assessment of locusts' situation, habitat conditions and geographic exposure to deploy expert teams and drones for the collection of data at strategic locations, reporting occurrences and possible occurrences of outbreaks, and assessing geographic exposure to locusts. Support to community-based monitoring and forecasting in both pastoralist and farming communities prone to locust breeding and invasion will also be provided including training of scouts and sensitization campaigns for community/village leaders. And well as targeted aerial and ground spraying to reduce locust populations and prevent their spread to new areas through targeted ground and aerial control operations.

Component 2: Livelihood protection and restoration. It is estimated that 531,000 households will be directly affected by the locust crisis in Ethiopia, facing near-complete loss of crop production and some loss to livestock. The project will provide a seed-fertilizer-pesticide package to selected farmers to ensure planting in the upcoming cropping season and, in pastoralist areas, fodder to guard against further livestock losses and thus loss of their main productive assets. Additionally, the project will provide fodder seed to affected communities to rehabilitate pastures in rangeland areas depleted by the desert locust invasion. The locust response project will not involve cash transfers. The project will not reach all affected communities, but it is expected that similar interventions by the FAO and the GoE will allow a comprehensive coverage. For instance, the implementation of desert locust-induced activities of the additional finance will be difficult in Tigray regional state as a result of the conflict situation. The particular case in point will be the implementation arrangement of activities under Component 2 of the project in the 26 districts of the Tigray region. The suggested implementation arrangement devised by the key project stakeholders stated that the Ministry of Finance (MOF) has confirmed its selection of the United Nations Office of Project Services (UNOPS) and the United Nations International Children's Emergency Fund (UNICEF) as its approved third-party implementation agencies (TPIAs).

(a) The ministry acknowledged that given ERLP activities in the TPIA area will be focused on the distribution of farmer kits and emergency fodder seeds, and fertilizer to those affected by the desert locust, it will work with UNOPS, which as it is better suited for those activities;

(b) UNOPS may subcontract the Food and Agriculture Organization of the United Nations for technical assistance (provision of agronomic advice) with the clearance of Government of Ethiopia.

c) Following the practices agreed under the project agreements, the output agreement will be for 24 months, with an annual review and option to discontinue or extend.

d) The contract will use the standard World Bank output agreement and signing the output agreement will be an effectiveness condition.

The GoE will also trigger emergency food security mechanisms such as the emergency food appeal and contingency funding under PSNP IV that will complement the project's livelihood support initiatives with cash transfers to cover emergency food needs and to protect against distress sales of assets. The project will focus on short term measures as longer-term rangeland rehabilitation and pasture improvement efforts are already under way through World Bank-IFAD financed LLRP. Both PSNP IV and LLRP have prepared, consulted up on and disclosed environmental and social risk management instruments.

Component 3: Strengthening Early Warning Systems and Preparedness. Under this component, the project would assist the Ethiopian MoA in establishing an integrated system for locust detection, occurrence projection, early warning and systematic data analysis and comprehension. Through acquisition of state-of-the-art data collection, analysis and dissemination tools and improving data collection methods, building analytical capacity for understanding data, assessment of current strengths and weaknesses in locust occurrence projection and early warning systems and development of a roadmap on how best to develop the systems based on international best practices, capacity building for federal and regional experts using both national and international experts, technical assistance through appointing senior plant protection experts to work with regional desert locust control units. To strengthen the national capacity for monitoring, early warning and disaster preparedness capacity of the MOA, three strategic regional bases will be established in areas closer to desert locust breeding and entrance sites from neighbouring countries. The proposed regional bases will be established in Kombolcha to serve the north-eastern parts of the country (Eastern Amhara, Southern Tigray and Afar Regions); Dire Dawa to serve the Eastern part of the country (Eastern Oromia, Somali, Harari and Dire dawa City Administration) and Arbaminch to provide services to the southern breeding areas of the country (Southern Oromia, and Southern NNPR locust invasion areas).

1) **Initiation of the Idea of Constructing Three Strategic Regional Disaster Prevention and Early Warning Bases**

   - The initial needs assessment study document for the establishment and strengthening of the three locust monitoring, early warning and management system bases in areas closer to the breeding sites was conducted by EELRP staff in collaboration with the plant protection directorate of the Ministry of Agriculture, RBoA, DLCO-EA, FAO Ethiopia and The Ethiopian Agricultural Research Council Secretariat.
   - The document was submitted to the management. of the Ministry of Agriculture for review and approval
   - The approved needs assessment document was given back to the EELRP PIU at the ministry which in turn submitted the document to the World Bank during the second mission of evaluation.
   - The World Bank appreciated the idea of base establishment in areas closer to desert locust breeding sites to strengthen early warning and preparedness works.
   - After the need for three strategic bases establishment and construction was accepted by the key stakeholders, i.e., MOA and WB, it was decided to be included in the plan of additional financing concept note.

2) The Ethiopian Federal Ministry of Agriculture plans to request the regional bureaus of Agriculture and city administrations with official letters to acquire land for construction of the proposed three strategic bases. In line with this, regional bureaus of agriculture, after they received the request from MOA, they will in turn do the same. That is, the Kombolcha city administration land management office will be requested by the Amhara region bureau of Agriculture; Dire Dawa city administration land management office will be requested by Dire Dawa City Administration's Bureau of Agriculture; and Arbaminch city administration land management office will be requested by South Nations, Nationalities and People's Regional State Bureau of Agriculture.

3) If these offices would like to get further approval that the requested plots of land will be used for the stated bases, the MOA will request the WBG to write them a letter explaining a proportion of the AF budget that is being processed between the Ministry and the WB to be used for the construction of these bases

Environmental and Social Procedures to be adhered for the Construction of the three Early Warning Bases

1. **Securing the Land for base construction**: The ministry will be responsible to request, process, and secure three plots of land from the designated regions for the stated three base construction as per the ESS5 requirements and outlined in the RF,
2. The respective regional Bureaus and city administrations will provide official certificate to guarantee ownership of the land plots for the planned constructions,
3. The design of building and site plan has to be completed with a due consideration of the environmental and social as well as health and safety procedures, including safe waste management, and disposal procedure, such as minimizing environmental and community contamination hazards, health problems and safety and security facilities in place and so on,
4. Community consultations will be conducted by independent consultant and the minute will be produced and reported to the WB and relevant offices of the Ministry of Agriculture and other stakeholders
5. Any potential grievances and or complaints will be addressed or recorded in relation to community concerns, priorities, such as land use and possible future impacts or historical heritages or expectations,
6. Impacts related to land acquisition, property loss, restriction to resource use, and involuntary resettlement (if any) will be properly managed as per the projects Resettlement Framework (RF) and related Plan of the AF.
7. Environmental and Social Screening/Assessment for potential risks/impacts of the three land plots secured from the stated regions will be conducted by the independent consultant with approval from the World Bank prior to land possession,
8. Approval of the Environmental and Social Screening/Assessment report or Clearance will be issued by the respective city administrations' environment authority offices.
9. Mitigation of environmental and social measures will be carried out by the MOA. The MoA regularly & periodically updates the Bank about the progress of the mitigation measures by submitting implementation progress report for each base centre construction work's ESMP and ES commitments of the contractor. Based on the report the Bank accordingly provide technical assist and conduct due diligence to verify the implementation of such commitments through a joint site visit and implantation support mission.

Construction Procedures and Environmental Considerations as per LMP, GBV/SEA/SH, OHS and so on standards and tools

The Ministry of Agriculture procurement directorate, in collaboration with the EELRP procurement specialist, will prepare bid documents in consultation with the World Bank Group procurement unit,

1. After approval or endorsement is secured by the WB the bid document will be processed according to ***World Bank Goods, Work and Other Procurement Guidelines,***
2. Environmental and Social Management Plan for the three construction sites will be attached and be part of the bid document (as an environmental and social clauses),

3. The bid will be announced for potential bidders with possible advertisement alternatives, like the the homepage of the MOA, newspaper (Ethiopian herald or Ethiopian Reporter, etc.,), EBC, etc., for applicants to buy the document from MOA and prepare their own bill of quantity and lodge their application package to the ministry
4. The Winner/Winners will be selected and the construction agreement will be signed between MOA and the winner contractor
5. MOA will have its own supervising engineer who would be technically in charge of the construction process and monitoring its quality,
6. The contractor will take the responsibility to construct the three bases as per environmental and social provisions of the contract as well as the approved design and agreed upon quality parameters,
7. The contractors, as per the various provisions that will be comprised in the contract agreement will employ labor as per the Labor law of the GoE. He/she shall not employ children under 18 years of age,
8. He or she is responsible to provide safety and protection devices and facilities to workers
9. He/she will be responsible to prevent any environmental disturbances, or take actions to properly manage and dispose of solid and liquid waste and prevent environmental contamination or impacts or risks
10. Preventing and controlling or minimizing potential labor risks that may be resulted from the construction of the three Locust bases, such as failure from fully complying with ensuring occupational health and safety (OHS)procedures and likely workplace accidents/injuries, including lack/inappropriate use of personal protective equipment (PPE), dust, fumes, and accidents of all sort; excessive hours of work will be managed by the contractor
11. Community Health and Safety issues, including the prevention of community exposure to communicable diseases, such as COVID-19, HIV/AIDS, STDs that may arise from the interaction of construction workers with local communities need to be taken care of by the contractor,
12. Protection of Gender Based Violence/Sexual Exploitation and Abuse/Sexual Harassment (GBV/SEA/SH) or taking measures to prevent the latter on construction workers, including sexual harassment in the workplace, as denoted in the GBV/SEA/SH Action Plan of EELRP's AF in relation to contacts between project/construction workers, such as workers employed by contractor and members of the affected local communities as a result of a possible labor influx need to be overseen by the PIU/RBoA and woreda focal persons in collaboration with the contractor,
13. The contractor in cooperation with EELRP's project staff or PIU of the MOA will be responsible to avoid, minimize or properly manage potential or inappropriate treatment or harassment of construction workers, related to gender, age, disability, ethnicity, or religion; potential exclusion or preferences with respect to recruitment, hiring, termination of employment, working conditions, or terms of employment shall be made on the basis of personal characteristics unrelated to work requirements shall be ensured by the project and the contractor as no discrimination is acceptable as per the Ethiopian Labor Law and ESS2.
14. The contractor shall ensure the support to and equal opportunities for women and men, with emphasis on equal criteria for selection, remuneration, and equal application of those criteria thereof.

15. If injuries occurred on the worker during engaging in construction work, the contractor is duly responsible to compensate the injured worker as required by the national labour law,

Component 4: Project Management. Under this component, financing will be provided for project management activities including (a) the hiring of a pest management expert; and, (b) operating costs for monitoring (particularly related to financial management and safeguards), technical backstopping at different levels; and (c) communication and information exchange. Regarding the latter, a particular effort will be made to enhance communications about desert locusts and their negative impact on affected communities as well as to disseminate information generated by the early warning systems. Details of communication activities are provided in the PIM.

2.2.2. Project Framework

The expected outcome under this project is to reduce the vulnerability of farmers, agro-pastoralists and pastoralist to limit desert control infestations by supporting control strategies for prevention, monitoring early warning, reaction and mitigation at the national level and strengthening the plant health system. The following are major key intended result areas of this project.

- Emergency locust-control measures are improved (cost effective, timely), and undertaken in environmental and social safe and sustainable manner;
- Locust Control operations implemented according to plan and FAO guidance and FAO's guidelines;
- Pesticide management meets international safety regulations;
- Livelihood of people affected by locust infestation addressed;
- Percentage of beneficiaries receiving inputs from project to restore livelihood increased;
- Hectare of pastureland rehabilitated by the project increased;
- Desert locust prediction and mitigation mechanism established by end of project (Country level data storage, data analytics, data interpretation capability built).

2.3. Program/Project Target Areas and Beneficiaries

2.3.1. Project Target Areas

In general, the EELRP will be working in the PSNP implementing regions specifically in locust infested areas of Afar, Eastern Amhara, South eastern and eastern Oromia, Somali, southern districts of Southern Nations, Nationalities and Peoples (SNNP), Southern Tigray, and Dire Dawa City Administration. In total, 294[1] woredas are invaded by the desert locust at varying degrees of infestation scope of impact.

The project will be implemented in the 294 woredas affected by the locust infestation and new areas to be identified as the locust management and control advances. The new areas will be defined as the migratory routes and infestation areas are informed by Ministry of Agriculture (MOA) surveillance and response team. The proposed project areas demonstrate considerable diversity in terms of livelihoods and landscape, from lowland, midland and highlands, and livelihoods from agricultural, agro-pastoral and pastoral.

The project implementation front line regions by now are Afar, Somali, Amhara, Oromia, SNNPR, Tigray, Dire Dawa administration. However as migratory routes and infestation areas of Harari, Gambella, Sidama, South west Ethiopia and Benishangul gumuz Regions will be covered as deemed

[1] The total number of target woredas during the parent project has been 294. This number was clearly espoused in EELRP's Project Implementation Manual (annex-2, Pp. 55. The same number of woredas continues to be the total no of target woredas during the additional finance project period of 2022-2026. The number of EELRP's target woredas was mistakenly be understood as it was 153. The latter, however, was come to the fore while the ministry was asked about the total number of woredas to be covered in the assessments as the basis to the EELRP project.

necessary. The project is planned to be implemented in Desert Locust breeding and invasion districts in all regions in Ethiopia.

According to the forecast made and communicated by FAO Head Quarter Desert Locust Information Service a total of 300 districts/woredas would be attacked by desert locust infestation. Overall coverage of the Desert Locust invasion cannot be limited at this stage and the breeding and invasion regions, zones and districts could be increased if urgent control measures have been undertaken (see Figure 1 below).

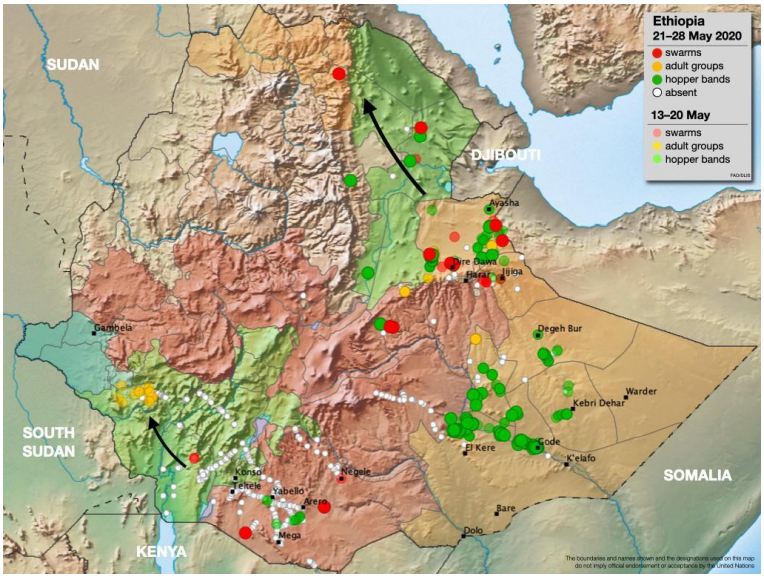

Figure 1. Desert Locust swarm and hopers presence and absence survey, distribution areas in Ethiopia (May 21, 2020)

i. Desert Locust Breeding areas and Seasons

In Ethiopia there are three Desert Locust breeding areas, these are the following:
Spring breeding season takes place from March-May and covers Somali region Siti, Fafen, Cherer zones, Dire Dawa, Eastern and south eastern Oromia East and West Harerghe zones, East Bale zone Somali region border districts and Afar region, East Amahara Worababu, Habru and Kobo districts.

Summer breeding season takes place from June –September and occurs in Afar, East and North West Amhara, South east and North West Tigray, east and north east Somali region districts, Dire Dawa and East Oromia region.

Winter breeding season takes place from October – February and usually occurs in South eastern Somali region Dolo, Cherer, Koray, Shebele, Afider, Negob, Genale and Dawa zones, South east and South Oromia and SNNPR southern and central zones.

A total of 300 districts are under the projection according to the forecast given by FAO Desert Locust Information Service in the Head Quarter of FAO. Overall coverage of the Desert Locust invasion cannot be limited at this stage. However key and hot spot regions, zones and districts for breeding and invasion of Desert locust vis-à-vis lifecycle and breeding seasons have been identified (see annex 1).

ii. Aerial Bases, Clusters and Sub-clusters areas functional coordinating units

In the country where the Desert Locust infestation is very high and areas have been covered in this project are characterized in different Clusters depending on their locations and type of spraying activities. Accordingly, the campaign team has been established in 7 Areal Bases in various part of the country which are centred to cover all spraying operation. Moreover 10 Major Clusters and respectively 37 Sub clusters have been established in various parts of the Regions, respective zones and woredas. In these

units major Desert Locust surveillance, control and decisions will be made, and also pre spraying activities such as calibration of spraying instruments and pesticide selection and pesticide measuring and formulation for spraying activities will be carried on in this units as appropriate.

iii. Pesticide Store areas

Chemical stores are found in various part of the country. At centre (national Store) a store with capacity handling more than 400,000lt; in East Dire Dawa with the capacity handling 100,000 lt; In Samara 100,000lt capacity; 100,000 lt in Jigjiga; 50,000 lt capacity in Hawassa; 100,000 lt capacity in Bishoftu; 100,000 lt in Kombolcha; 100,000 lt in Bahir Dar; and Mekele 100,000 lt capacity are found and there are also medium storage in all zones in the country. However as one of the key informants indicated about the stores situations, some of these pesticide stores are not good enough. Hence renovation of these stores has been required.

2.3.2. Project Beneficiaries

As it is mentioned above, the EELRP project target area covers desert locust infested regions and Dire Dawa City administration.. The damage of locust Estimate shows over 2.4 million hectares of crop and pastureland will be affected by desert locust. Under Phase 1 of the project 80% of crop and pastureland will be controlled and 78,000-hectare support will be provided to households to cover seed, fertilizer and agrochemical expense and 81,000 hectares of pastureland will be re-habilitated by providing seed support to affected community. In Phase 2 of the project, 202,000 hectares of pastureland will be rehabilitated while locust control activity will continue. The number of beneficiaries is estimated to be 230,000 household in both phase 1 and Phase 2.

The EELRP beneficiary: By component, the beneficiary profile will necessarily vary. For example, the direct beneficiaries from Component 1 swarm control activities would be quite vast. It will benefit those who use resources threatened by the locusts for income generation—e.g., farmers, pastoralists/herders who use the pastures and rangelands for their livestock, as well as users of common pasture and forest areas, and those who rely on agriculture and livestock production for their jobs (i.e., traders, transport, etc.). The Project will track the number of people trained in locust surveillance and identification and insecticide application. In addition, beneficiaries of component 2 and the livelihood targeting criteria and process are discussed as follows.

The beneficiaries of component 2 will be tracked according to the support they receive (e.g., cash transfer, cash for work, farmer "packets", animal fodder and/or fodder seed, etc.). Special attention will be given to ensure that women, female-headed households and minority/vulnerable groups have access to the Program. Eligibility criteria and targeting approaches will be described in the operational manuals. The safety net program that already exists in the MOA can provide cash transfers to the EELRP.

Livelihoods Targeting/ beneficiary selection criteria

The livelihood support package is developed for desert locust affected community members who have lost their crop and pasture due to the desert locust outbreak. Community targeting is a method of selecting project beneficiaries by the community based on their own local knowledge on the level of impact due to desert Locust infestation on each member of their community and overall socio-economic characteristics of each of the community members. The relevant criteria set by PSNP and in ELERP as well as the local community and select the specific households who are eligible for the livelihood protection and restoration component of the project and selection will be made using the food security committee. The targeting under the livelihood's component shall follow the needs and vulnerability emphasizing geographic and human dimensions to prioritize target areas and groups for interventions.

As it is stated in the design of the project, the support of livelihood protection and restoration component 2 focuses on packages provision of seed–fertilizer-pesticides to crop land and rehabilitation of pastureland

through provision of seed & renting bailers for collection as well as provision of temporary forage/fodder for short term pasture improvement. From this, it is relevant to separately put eligible and not eligible beneficiaries in the table below:

Eligible beneficiaries of the project	Ineligible beneficiaries of the project
○ Farmers who lost their crop produce due to the locust outbreak and infestation. ○ Pastoralist households who lost their pastureland, and livestock, ○ Households who lost their honeybees, ▪ Women headed households whose crop or pasture affected by desert locust ▪ Vulnerable group in the affected community are directly or indirectly affected because of crop or pasture loss ➢ Displace people hosted in the community also should be considered ➢ Disabled or physically challenged people ➢ Orphans as well as children under family whose age under 12 ➢ Pregnant and lactating women ➢ Elderly no matter without any consideration of crop or livestock grazing land ownership ➢ Households who have no farm or pasture land in the village, but make a living by selling their labor (destitute families whose livelihoods is indirectly affected by the locust invasion). This group shall be addressed by the village/kebele disaster committee ▪ Contract farm owners whose crop or pasture affected by desert locust	▪ Part of the community (part of the village) whose crop or pasture not affected by desert locust ▪ Households who came from the non-affected villages ▪ Government employee at village level who have monthly income ▪ Those for whom trading is the primary income ▪ Any village dweller not selected as a beneficiary of the project by the village committee

Apart from those eligible beneficiaries of the project, Government Seed Enterprises, Agricultural Cooperative Unions and/or Private Producing Enterprises will be indirectly benefited through market opportunities to supply of seeds and agricultural inputs. For the eligible beneficiaries while targeting, the following prioritization criteria can be used.

a. Woredas and Kebeles Prioritization Criteria

1. The intervention woredas should be severely affected by the Desert Locust invasion and confirmed by the damage assessment team composed of the federal Ministry of Agriculture, Disaster risk management commission, FAO, Regional state Agriculture bureau, Zonal and District level offices.
2. The affected woredas will be updated regularly by consulting the available documentations and evidence (e.g., assessments conducted for *meher* cropping will be used for the first targeting).
3. Further rapid assessments are recommended for the targeted areas in order to inform the needs for response and consultation with regional authorities for the selection of woredas and kebeles.
4. Woredas with the highest levels of food insecurity, famine-risk and vulnerable to sliding into food insecurity without food production and livelihood support.

b. Household Beneficiary Prioritization

1. The selection process will be done through community consultation via beneficiary selection committee comprised of;
   a) Chairman and one representative of the kebele,
   b) Agriculture officer (DAs)
   c) Youth representative,
   d) Women representative,
   e) Chairperson of community level courts in consultation with the woreda administrations.
   f) Elderly
   g) Health extension worker
   h) School director
2. The crop or pasture lands of the beneficiaries should be directly and significantly affected by Desert Locust and it depends on the maturity level of the crops and pasture
3. Consider vulnerability criteria for households facing acute food insecurity and malnutrition (including malnourished children, pregnant women and nursing mothers); and
4. Loss of their productive assets as a result of the Desert Locust outbreak;
5. Female headed households, households with children under five (5) and households with disability or chronically ill members and areas with gaps in emergency relief and livelihood recovery responses should be prioritized. In this context, support will be given through PSNP and other food security support program. At early stage of the project, discussion was carried out to include budget in food security (PSNP) and MoF also allowed the MOA to show such budget on the annual plan.
6. The household may or might not be member of the community and owner of the land damaged by Desert locust. But the most important issue is damage caused by desert locust on their crop or pasture evaluated by the village community to classify as eligible beneficiary.
7. An appeal/complaint mechanism will be established to investigate matters of selection fairness at different level staring from kebele.
8. Grievance redress committee should be established at villages and districts.

Key Stages in households Targeting Cycle

- At the woreda level, the woreda FSTF or equivalent committee will identify kebeles and communities affected by the current Desert Locust Infestation. The committee further organizes and facilitates community meeting at kebele and discuss about the impact of the Desert Locust in the kebele and the list of sub-kebeles (community) affected and explain about the proposed Desert Locust Control and Impact Management Project to support affected households and community.
- Explain the role of community on the selection process of eligible households for this project support.
- Facilitate the discussion to set locally relevant criteria.
- If it is in PSNP kebele, strengthen the community food security task force and in non-PSNP kebeles establish the committee for actual household selection.
- In order to address most affected households, the selected households should be listed from the most affected to least affected.

Based on the above criteria and stages, the following activities are listed for action:

- Conduct assessment of the number of households and area of crop and pasture lands affected by the desert locust.
- Selection of beneficiary households based on the severity level at kebele and woreda level.
- Estimate the amount of seed (by type) and fertilizer required based on the identified land area and crop type by MoA.
- Procure the required number of Seeds and fertilizers made by region food security taskforce.

- Distribute Seeds and fertilizers to the affected farmers by regional agriculture bureau and zone/woreda agriculture offices.
- Monitoring the distribution, cultivation of crop lands by all level of the agriculture office.
- Estimate the amount of forage/fodder seed required based on the identified land area and crop type by MoA.
- Procure and distribute forage/fodder seed/cuttings made by region food security taskforce and agriculture or livestock office.
- Technical support and monitoring of communal land cultivation by all level agriculture or livestock office.
- Harvesting and distribution of fodder for the community by committee of the community pasture-land and monitored by food security task forces at kebele/woreda level.
- Conduct seasonal crop and pasture (food security) assessment for *belg*, *meher* and dry-time cultivated crop and pasture.
- In PSNP targeted woredas, special attention will be given to minority/vulnerable groups such as women, female-headed households and physically challenged.

3. Environmental and Social Context and Baseline Conditions of the Project Area

3.1. Environmental and social baseline of EELRP Project intervention areas

This section describes the environmental and social baseline on the basis of the particular target regions. The Desert Locust Response Project is implemented in wide-ranging agro-ecological and administrative regions and Woredas characterized by varied socio-economic and cultural, biological environment and Physical environment. The Desert Response Project will be implemented in 153 districts invaded hot spots in six regions and one city administration including Afar region, Somali region, Dire Dawa City Administration council, Southern Tigray, Eastern Amhara, South eastern Oromia, and southern districts of SNNP region.

A. Tigray Regional state

Topography

Tigray Regional State accounts for a total land area of 53,000 km^2. Altitudes range from 550 meters which is the Tekeze gorge up to 3,935 meters above sea level which is Kisad Gudo. Topography of the region is characterised by chain of mountain ranging from 3,250-3,500 meters, cliffs, ledges, and precipice.

Climatic condition

The region is situated in6 ecological zones namely desert, kola, woina dega, dega and wurch. The mean annual rainfall for the region ranges from 600 mm in the north-eastern part to 1,600 mm in the woredas lying in the western part. Temperature ranges between 160C and 200 C in the eastern and central highland part while in the lowlands of the western zones it is 380C to 400C

Geology and Soil

Regarding the geology of the Tigray region it is characterised by low grade metamorphic, Palaeozoic, and Mesozoic rocks. It includes tertiary volcanic, quaternary deposit and acidic or basic/ultra-basic intrusion. The region is reach in mineral resources which include gold, copper, iron, ore, zinc, lead, and nickel. It is

also famous for its non-metallic minerals including Asbestos, silicon, kaolin, graphite, gypsum gemstone, marble, granite slate, limestone and dolomite.

Vegetation/Forest and wildlife (flora and fauna)

The Tigrai region is home for Kafeta Shiraro National park, Dess`aa National priority forest area. The major vegetation in the region includes woodland and savannah, junipers woodlands, acacia woodlands and savannah. The major plant species include acacia trees mixed with savannah; juniper trees mixed with savannah and mixed deciduous woodland. It also has grazing grass land, scattered bushes and scrub and dense forest covered land. There are also a number of wildlife and birds mainly Lake Ashenege.

Land use/Land cover

Regarding land use of, in Benishangul region bout 77.4% of the total land is covered with bushes and shrubs lands, 11.4% forest land, about 3.2 % cultivable land, and 2.3.% grazing land and about 2.3%.

Water resources

The region has water resources Tekeze River, Mereb Basin, Afar Basin and Angereb valley, Mai Tell River and Mai Hitsatsa River. There are also small rivers namely such as Guba, Worii, Berber, Arqoa and Terter. Lake Ashenge also found in the region.

Demographic and socio-economic

Socio-demographic

According to the 2017, CSA censes the population of the region is estimated to 5,247,005. The density in Tigray Region in this time was 116 persons /square kilometre. Other ethnic groups in Tigray consist of Amhara (1.63%), Irob (0.71%), Afar (0.29%), Agaw (0.19%), Oromo (0.17%) and a Nilo-Saharan-speaking Kunama (0.07%). In the region, 95.6% of the population are Orthodox Christians, 4% Muslims, 0.4% Catholics and 0.10% Protestants. The staple crops in western lowlands of Tigray are sorghum, maize, teff, barley and wheat. Tigray is home to typical Ethiopia's grain species, notably different varieties of wheat and barley adapted to shorter or longer rainy seasons. Regarding health system, in the region there are 716 health posts, 212 health centres and 34 hospitals.

B. Afar Regional State

Topography

The Afar region is home of the Danakil Desert and Erte Ale, an active Volcano. It is the lowest off all Ethiopian lowlands. Afar elevation ranges from 1500m above sea level to 126m below sea level. Its topography slopes downward west to east into the Afar Triangle, a geological depression caused by the junction of three divergent plates (part of the Great Rift Valley). The Afar Triangle is boarder with the by the Ethiopian plateau and escarpment West; to the north –east by the Danakil block; to the south by the Somalia plateau and escarpment and the south east by the Ali-Sabieh block.

Climatic condition

The climatic condition of Afar region is mostly hot, desert type and partially dry. The entire region gets about 150-850mm of rainfall per year and the majority the rainfall is in the southern and western part of the region. The average temperature year-round anywhere from 32-43°Cand ranges from 25°C up to 52 °C.

Geology and Soil

The Afar Depression, a plate tectonic triple junction is found in the Afar Regional State. The continuous process of volcanism results in the occurrence of major minerals including potash, sulfur, slat, bentonite and gypsum. There are twelve soil types available in the region of which 49% soil type are sandy and rocky.

Vegetation/Forest and wildlife (flora and fauna)

In the Afar Depression biome which is characterized by the desert scrubland the vegetation is mostly confined to drought-resistant plants small trees belonging to the species of the dragon tree such as shrubs and grasses. Afar is home to peculiar wildlife including African wild ass, Grevy`s zebra, soemmering`s gazelle, beisa, wild fox, wild cat, cheetah in the region`s national park. It also has birds which include o0strich, the endemic Archer`s lark (*Hetermirafra archeri*), secretary bird, Arabian and kori bustards, Abyssinian roller and crested francolin in theMille-Sardo Wildlife Reserve in southern part of the

Land use/Land cover

Land use of the region 7% of the region is suitable for agriculture (crop production), 22.4% of the total could be developed for agricultural activity. However, only 1.2% of the total areas suitable are utilized. About 25.7% of the total land is used for grazing whereas about 70.9% of the total area of the region is denuded and devoid of vegetation.

Water resources

The Awash River, Mille and Logia which are tributaries of the Awash River traverse the region. Abbe Bil, Afambo and Adebel lakes connected to the last section of the Awash River are found in the region.

Socio-demographic

Land in Afar is divided into sultanates, which are further divided into tribe and clan territories (Getahun, 2004). Afar national Regional State covers 94,760 km^2. Based on the 2017 projection by the CSA Ethiopia, the Afar regional state has a population of 1,812,002. About 346,000 of population are urban inhabitants and 1,466,000 were pastoralist. As per the 2007 CSA of Ethiopia census 95.3% of the populations are Muslim. The region has dry land with limited agricultural potential, other than the Awash River valley. The main source of livelihood for an estimated 92 percent of the Afar population is rural pastoralism, herding cattle, and sheep goat and camel and agro-pastoralist. The region has 325 health post, 105 health posts and 6 hospitals.

C. Amhara Regional State

Topography

The region's topography setup has a much diversified nature. Lowland, midland and highland plains, mountains, rugged lands, undulating landforms, chains of plateaus are common land features in the region. Amhara national Regional State covers 161,828.4 km2. There are highlands (above 2,300 meters above sea level) accounts for 20%, semi-highlands (1,500 to 2,300 meters above sea level) accounting for 44% and lowlands (below 1,5000 meters above sea level) making up 28%. The region topography embraces plains, gorges, plateaus, hills and mountains. The altitude ranges from low of 500 meters to high of 4,620 meters found at the peak of Rash Dashen.

Climatic condition

The region has climatic zone ranging from hot dry tropical (800-1830m above sea level), sub-tropical (1830-2440m above sea level), temperate (2440-3000m above sea level), and alpine (over 3000m above sea level. Highlands above an altitude of 1500m above sea level experiences relatively cool temperature conditions in contrast to the lowlands. Regarding temperature tropical zone which is known as kola get average temperature of 27 C and 510mm rainfall per annum. Whereas the Sub-tropical (Woina Dega) has average temperature of 22C and annual rainfall ranging 510mm-1530mm. The cool zone (Dega) has 16 C and annual rainfall ranging between 1530mm-2000mm. Furthermore, the region has four seasons; kiremit (summer), Belg (Automn), Bega (winter), Tsedey (spring).

Geology and Soil

The Precambrian rocks, cenozoic rocks and Mesozoic rock cover most part of the Amhara Region. In the region the six major soil unit include Arthic Acrisda, Rendizinas, phaeozems, luvisols, Vertisols, Nitisols, Leptosols, Gelysolsl and Fluvisols. The state of Amhara has mineral resources such as coal, shell, limestone, blignite, gypsum, gemstone, silicon, sulfur and bentonite. Hot spring and mineral water also exists.

Vegetation/Forest and wildlife (flora and fauna)

Kolla, tropical zone is the zones of desert and thorn shrub vegetation, flora include the tamarid giant sycamore, acacia, myrtle and zizygium, euphorbia. Also crops include cotton, tobacco, dura, and sugar cane. Woina dega, sub-tropical zone is warm and moderate. Average temperature is 22 °C. This is zone where most cereals are grown, including soft grains, barely, teff, maize. Dega is cold. This is adopted for raising livestock and sustainable growing barley and wheat, teff, beans, flax, tempreture fruits. Trees include the wild olive (*Olea chrysophylla*), juniper (Juniperus procera), kosso tree (Hegenia abyssinica). Regarding wildlife walia ibex, Semien fox, Gelada-baboon, Grey Dulker, Klipspringer, Hyenas and Crocodile are among the twenty –one species of which three are endemic are found in Semen mountain national park. Wild fowls, Francolins, Cranes, Ibises, and Stocks are among the birds that exist in the ANRS.

Water resources

Amhara`s biggest rivers include inter alia, ABay Belese, tekeze, Angereb, Athbara, Mile, kessem and Jema. It also has Tana Lake, Ardibo and Logo.

Demographic and socio-economic

According to the 2007, CSA census Amhara national Regional State covers 154,708.96 km2. Regarding ethnic distribution about 91.4% of the region is inhabited by sematic language speaking group of Amhara followed by Agaw and Oromo ethnic group. The dominant language family is the semitic followed Afro-Asiatic language communities, including the Agaw/Awi, Oromo, Agaw/Kamyr and Argobba. In terms of religion, orthodox Christian followers are 82.5% and about 17.2% are Muslim followed by protestant religion followers. The region is one of the major teff producing areas in the country, in addition barely, wheat, oil seeds, sorghum, maize, oats, beans and peas are the major crops produced in Amhara region. Cash crops such as cotton, seism, sunflower, and sugarcane grow in the vast tract of the regions lowlands.

D. Oromia Regional state

Topography

The Oromia region covers an area of 353,690 km^2 and has topography characterized by high and rugged mountain range, undulating plateau, and panoramic gorges and deep incised river valleys and rolling plains. The highest point of the region which is second in the country is mount Batu with 4607 meters. The lowlands area with the altitude of (500-1500meteres above sea level), whereas semi-highland within the altitudinal range of (1500-2300 meters above sea level) and highlands areas (2300-3000 MASL).

Climatic condition

The climatic condition of the region is characterised by dry, tropical rainy and temperate rainy climate. It differs from the southeast lowland to central and north western highland. The East and southern part of the regions dominated by arid climate while the central and north western parts are more temperate climate. The temperature is affected by the altitude ,hence ; the mean annual temperature ranges 20C-25 C in the lowlands area with the altitude of (500-1500meteres above sea level) , whereas semi-highland within the altitudinal range of (1500-2300 meters above sea level) gets mean annual temperature of 20C-25C and highlands areas (2300-3000 MASL) have mean annual temperature range of 10C-15c. Regarding the Rainfall the region gets RF ranging as low as 200mm in the southeast to 200mm in the north western part of the region. This target area of the Desert locust Response project of Southern Eastern Oromia receives lower annual rainfall and lowland.

Geology and Soil

The region consists of the rocks of the four main geological eras of Precambrian, the Palaeozoic, Mesozoic and Cainozoic. Besides, the region is within the range of The Great Rift Valley of the East Africa making it tectonically unstable. The major types of soil in the region include Luvisols, Fluvisols, Andosols with varied agricultural value.

Vegetation/Forest and wildlife (flora and fauna)

To begin with, the region is endowed with diverse flora and fauna. The Oromia region covered with dense forests in the central, south western and western area. In the southern and south-eastern where the deserts Locust Response project target area are covered with spare vegetation, bushes and scrubs. The vegetation types in the region include coniferous forest, broad leaved forest, woodland and savannah, grass land, riverine forest and wetlands. It is home for the country's national parks such as Awash National Park, Bale Mountain National Park, Abijatta -Shala Lakes National Park, Dati Wolel National park, Arsi Mountain, Yabelo National Park. And Wildlife Sanctuaries such as Babible Elephant Sanctuary, Senkele Swayne`s Hartebeest Sanctuary. It also includes Lepis Forest Community conservation area. Besides it has also wildlife Rescue centres, controlled hunting areas.

It hosts endemic wild animals including Red Fox, and Minilik bushback in Bale Mountain National park and the likes of loryx, kudu, Caracal, Aardavark, Colobus Monkey, Green monekeys, Baboons, Leopards, Leopards, Klipspringer, Hippo, Seemering`s, Gazelle, Grevey`s Zebra and Cheetah. The region is the home for around 800 bird and 100 wild animal species. Given the region has huge water resource it is also home for fish and other aquatic life.

Water resources

The region has rich water Resources Rivers, rift valley and crater lakes and ground water. Among the main revers which flows to the different region of the country Awash, Gibe, Wabe Shebele, Dabus, Guder, and Didessa. Rift valley and crater lakes like, Ziway Langano, Abijata, Shala Bishoftu, Kuriftu, Hora-kilole, and Hora-arsedi

Demographic and socio-economic

As per 2017, CSA forecast the population of Oromia region is about 35,467,001. The dominant majority (90%) of region`s population live in the rural part of the region and its main source livelihood is Agriculture. The rural residents of this region account 89.5% of the total population. Over 90% of the people of Oromia live in the rural area, and agriculture has remained the source of livelihood for the overwhelming majority of the people. Regarding health system, the Oromia regional state has 6559 health posts, 1699 health centers and 33 hospitals.

E. Somalia Regional state

Topography
Somali Regional State accounts for a total land area of 250,000 km2. The Altitudes range from 900 meters up to 1,000 meters above sea level. Topography of the region is characterised by the dominant majority 80% is flat and 7% mountainous.

Climatic condition

Resulting from the altitude of the region about 80% of the total area kola (lowland), 5% dega and 15% of the area is temperate or woyna dega. The maximum temperature of the region ranges 32-40 C in the lowlands. Whereas the woyna dega areas or temperature range within 20-28 C. regarding the rainfall of the region gets mean annual rainfall range 300-500mm.
Vegetation/Forest and wildlife (flora and fauna)

The Somali region is the home for the Geralle National Par, Babille Elephant Sanctuary, Dembel and Shenile Meto controlled hunting areas.

Water resources

The region has water resources Wabeshebele, Genale and Weybe Rivers.

Demographic and socio-economic

As per the 2017, CSA population forecast the total population of the region is estimated to be 5,748,998. The region has 1139 health posts, 195 health centers and 9 hospitals. The majority of the population of the region earn their livelihood through animal rearing. However, they also engage in production of crops mainly sorghum and maize. The region has about 15.2 million domestic animals of which 53% or 8 million are sheep, followed by goat making up about 20% and 15% of camel. Somali Region is the largest of Ethiopia's pastoral regions, with a population of about four million people (Devereux, 2006). Most are pastoralists, though there are some agro-pastoralists and pure farmers, and about 14% are urbanised.

F. SNNP Regional State

Topography
Covers an area of 111,000 km^2, which accounts for 10% of the total land area of the country, It is located in the southern and south-western parts of the country. The region shares common borders with Sudan in the west, Kenya in the south, Gambella region in the northwest and Oromia region in the east and north. The region has diverse ecology. Lowlands account for 56 % of the total land area, and accommodate all the pastoral and agro-pastoral communities of the region.

Climatic condition

About 56 % of the total areas of the Region are found below 1,500 meters elevation, which is categorized largely as hottest low land ("Kolla"). The rest 44% is found in the temperate climatic zone. The mean annual rainfall ranges from 500 - 2,200 mm. Its intensity, duration and amount increases from South to Northeast and Northwest. The mean annual temperature is in general ranges from 15°C to 30°C.

Geology and Soil

The State is rich in natural resources. These include water, mineral, fauna and flora. Some of the minerals of the region include gold, coal, mineral water, clay, ditomite, scoria, limestone, mica, nickel, iron-ore, and asbestos. Some of the major tourist attraction sites of the Region are lakes like Awassa, Abaya and Chamo. Tropical forests such as Kaffecho, Shekecho and Omo best tourist destination sites in the country. The Nechsar, Mago and Omo national parks are also found in this region.

Vegetation/Forest and wildlife (flora and fauna)

There are 23 kinds of wild animals and 300 species of birds. Some of the wild animals found in this region are Elephant, Lion, Giraffe, Leopard, Zebra, Monkey, Lesser kudu, Water Buck, Crocodile, Rhinoceros, Warthogs, and Buffalo. Tropical forests such as Kaffecho, Shekecho and Omo best tourist destination sites in the country. The Nechsar, Mago and Omo national parks are also found in this region.

Water resources

Many perennial and seasonal rivers are found in this State. These include, Omo, Gojeb, Mago, Segen, Woito, Akobo, Dima, Wabi, Wolga, Bilate, and Genale River. Among the known Rift Valley lakes are Awassa, Abaya, Chamo, Chew Bahir and Rudolf. These rivers can be utilized to produce food crop and fish and for irrigation and hydroelectric development.

Demographic and socio-economic

According to 2017 estimation the population of the region is estimated about 19,170,007. Regarding health facilities in the region, there are 3874 health posts, 1123 health centers and 72 hospitals in the region.

There are about 45 ethnic groups in the Region. Sidamigna Gruagigna, Wolayitagna, Hadiyigna, Keffigna,and Kembatigna are widely spoken language in the region. Other languages such as Gamoigna, Malo, Goffa and Gedeo are also used for communication purposes. The working language of the state is Amharic. Coffee is the most important cash crop. Other major crops of the region include maize, teff, enset, potato, and wheat.

G. Dire Dawa City Administration

Topography

Dire Dawa is located at foothills of the mountains located in the southern part. The elevation of the dire Dawa city administration ranges 950-1250 meter above sea level.

Climatic condition

Dire Dawa has a hot semi-arid climate. The mean annual temperature of the city is 32.8 C, while its average minimum temperature is about 19.0 C. The aggregate average annual rainfall from the two rainy seasons the city experience is about 583 mm (CSA, 2007).

Geology and Soil

The Dire Dawa administration overlaid by limestone and sandstone deposit which started during Triassic period of Mesozoic era, and the Jurassi and cretaceous periods of the same era. The formation of sandstones and limestone`s has been deposits left over the crystal basement of the pre-camberian which are 600 million years old. The crystalline basement is fond exposed to the surface in most parts of the region and includes among others, granites, mica-schist, quartz, gabbros and diorites (Eylachew, 1998).

Vegetation/Forest and wildlife (flora and fauna)

Dire Dawa administration which is located in the eastern part of the country has dense acacia woodlan species occupying a total of area of at 1220 ha mainly found in Hurso, jeldessa, Gerba-Anano and Chiri-miti kebelles. However, the acacia woodland vegetation of the administration has been subjected to degradation due to charcoal production, livestock pressure, and recurrent drought. The Dire Dawa administration is have deloni Regia commonly known as flamboyant tree, flame tree, royal poiniciana, which is known as Dire Dawa Zaf. Dire Dawa is also home to bird species including Hooded Vilture, Tawny Eagle, Pied Crow, Think-billed Raven and Little Egrets.

Water resources

Dechatu River, whose bed can be crossed with foot during the dry season, is one of the main water resources with its tributary in the Western outskirt of the city which is Gorro River. According to the CSA, as of 2004, 90.76% of the total population had access to safe drinking water: 69.61% of rural and 99.48% of urban inhabitants having access.

Demographic and socio-economic

The city administration covers area 1,213 km2.According to 2015 CSA population projection the Dire Dawa city administration is about 440,000. The ethnic distribution of the city administration is 46% Oromia, 24% Somali, and 20% Amahara (CSA, 2007). A number of Ethiopian languages including Afan Oromoiffa, Amharic, and Somali, language are widely spoken. Regarding with the most believers I Dire Dawa is Islam with 70.85 and 25.71% are Ethiopia Orthodox. In Dire Dawa 13 health centres and 1 hospital are available.

3.2. Project Areas Agro-ecological Features

According to the Ministry of Agriculture Agro-ecological classification framing environmental parameters (temperature and moisture), Ethiopia has classified in to 18 major Agro-ecological zones. Accordingly, most of the Desert Locust breeding project Woredas are located and classified under these five Agro-ecological zones as follows.

- Hot to warm arid low land plains: (Shinile, Adigala, Aysha, Denbel, Jijiga, Gode, Kabridehar, Shilabo, Worder, Geladi, Berano in Somali region), Chifira, Ewa, Adaar, Mile, Afdera, Elidar, Erebit, Abiala, Kuri, Asayta, Afambo, Dufti, yalo, Gulina, Megale, Gewane, Gelealo, Duecha, Ambera, Awash districts in Afar)
- Hot to warm semi-arid low land plains: (Worababu, Habru, Kobo in Amhara region, Raya Azebo, Raya Alamata in Tigray region, Chineksan, babile, Dawe, Rayitu, Dubluk, Teletele, Yabelo,

Moyale, Mio, Dilo, Dhas, Guchi, Liben, Wachile, Gorodola, Madawolabu in Oromia region and Benatsemay, Hamer, Dasenech, Male, Ngangato Districts in SNNPR.

- Hot to warm sub-moist low land: (Adilieala, Semurobi in Afar, kewet, Efrata, Berehet, Minijarshenkora, Giletumuga, Arsumafurti, Bati , Harawe in Amhara, Doba, Meiso, Gorogutut, Kersa, Odabultu, Dello mana, Aranabuluki in Oromia region, Derashe, Ale, Segen zuria, Burji, Amamaro, Marata garda, Kamba, Ubadebretshay, Abaya, Humbo, Duguna Fango, Abaya Abala in SNNPR distiricts.
- Hot to warm sub-humid lowlands: West Guji Districts in Oromia region
- Hot to warm humid low land: Gambella districts

In all woredas covered under this project, as per the desert locust breeding and infestation, Aerial and/or Ground pesticide spraying activities will be carried out as appropriate. For effective Aerial spraying operation made at various levels, the campaign teams for surveillance and control of Desert Locust infestation have been clustered in various part of the project sites. Major pesticide stores are also prepared at various part of the country.

3.3. Ecological Feature and Land use of the project area

3.3.1. Ecological Feature of the project area

It has been well known that the country's Macro and microclimate condition are highly variable. Rainfall distribution of the country is seasonal. The major rain season is from June to September following by short rainy season that occurs between February and April. The mean annual rainfall ranges from 500mmto 2800mm. Similarly, mean annual temperatures range from below 10 to above 30^0C. Because of the combined effects of the above factors, the country is endowed with diverse ecosystem. As it has been mentioned above the pest prevention and control activities (including areal and ground spraying) may cover most part of the country's agricultural, agro-pastoral and pastoral lands.

Hence this ESMF has made the characterization of agroecological zones of the project sites as stated above in section 3.3.1., and special ecological areas that requires special attention during the whole lifecycle of this proposed project. Detailed agroecological, demography, topography and other features of the project area with respective project Regions and respective representative woredas have been addressed in detail in the Project's ESMF.

Some of areas having special future in Desert Locust breeding and invasion regions, zones and districts which will be highly considered in the implementation of the ESMF, have been identified before the commencement of the project. The most known areas of national parks and forests where non target areas of wild life conservation takes place are Adigala wild life park in Somali region between Biyo kobobe and Adigala; Awash National and Gewane parks in Afar region; Bale mountains national park extended to Delomana and Aranabuluki low lands, Arana tropical rain forest in Bale zone, and Adola forest in Oromia region; and Nechsar, Salamago and Cheberachuchura parks in SNNPR which are special feature areas where several times Desert Locust swarms invasion covered and chased out by the area community. According to FAO EHS (Environmental Health Standard) it is advised to use 1km as buffer zone to protect the national parks and tropical forests ecosystem. Furthermore, major water bodies located in the project areas were identified. Accordingly based on the nature and features, buffer zones for these special ecological features have been delineated, see Table 1.

Table 1. Summary of special ecological and agronomically sensitive areas and proposed buffer zone limit

S.N	Regions	Special features areas having risk of pesticide application	Planned means of risk reduction- No pesticide spraying Zone
1	Somali	Adigala wildlife park	1km buffer zone will be free
		Ponds used as source of drinking water for animals	500 meter buffer zone will be free
2	Oromia	Bale national park, Harana tropical rain forest	1km buffer zone
		Ponds and rivers	500 meters
3	SNNPR	Salam ago, Nechsar, Chabara churchra parks	1km
		Ponds, lakes and rivers	500 meters
4	Afar	Gewanene and Awash parks	1km
		Lake Abe, ponds	500 meters
5	Amhara	Churches lalibala, Gishen, Jawaha river valley in Efrata and Jile districts	1km
		Beehives around Bati, Dawe harawa, Kobo	500 meters
6	Tigray	Beehives in Raya	500 meters
7	Dire Dawa	Ponds and other water sources	1km

3.3.2. Land use pattern of the Project Area

Regarding the existing land use pattern and farming practices, in general, small scale subsistence farming and fragmented land holding, and communal pastureland is dominant in Ethiopia due mainly to various interrelated factors. Thus, conventional low-input and low-output agriculture production system has resulted in high rates of environmental land degradation.

4. Policy and Legal Context

4.1. Legal, Policy and Administrative Framework

This section describes and assesses the National policy; legislative and institutional issues; the World Bank Environmental and Social Framework and its applicable ESSs for this proposed project; and the international conventions that are most relevant to the implementation of the ESMF as required.

ESIA was recognized at the United Nations Conference on Environment and Development (UNCED) in 1992 where Principle 17 of the Rio Declaration states: “EIA as a national instrument shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.”

4.1.1. National Policies and Strategies

The 1995 Constitution of the Federal Democratic Republic of Ethiopia urges the proponent to present the ESIA of his/her project. The following administrative, legal and policy are worth mentioning to abide the implementation of the proposed project in line with their requirements.

The Constitution of the Federal Democratic Republic of Ethiopia (FDRE) (Proc. 1/1995)

The 1995 constitution of Ethiopia is the base for the formulation of policies and strategies relevant to social development, environment protection and economic growth, in Articles 43, 44 and 92 and articles 40, 41, 42, 89 and 90 which refer to environmental and social issues respectively.

It provides a basic framework for Environmental and Social Impact Assessment (ESIA) system. The concept of Sustainable Development, Environmental Rights, and Environmental Objectives are stipulated in the constitutional article 43, 44, and 92 respectively.

Article 43: The Right to Development

1. The Peoples of Ethiopia as a whole, and each Nation, Nationality and People in Ethiopia in particular have the right to improved living standards and to sustainable development.
2. Nationals have the right to participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community.
3. All international agreements and relations concluded, established or conducted by the State shall protect and ensure Ethiopia's right to sustainable development.
4. The basic aim of development activities shall be to enhance the capacity of citizens for development and to meet their basic needs.

Article 44: Environment Rights

1. All persons have the right to live in a clean and healthy environment.

2. All persons who have been displaced or whose livelihoods have been adversely affected as a result of State programs have the right to commensurate monetary or alternative means of compensation, including relocation with adequate state assistance.

Article 92: Environmental Objectives

- Government shall endeavour to ensure that all Ethiopians live in a clean and healthy environment.
- The design and implementation of programs and projects of development shall not damage or destroy the environment.
- People have the right to full consultation and to the expression of views in the planning and implementations of environmental policies and projects that affect them directly.
- Government and citizens shall have the duty to protect the environment.
- Furthermore, in Ethiopia, environmental management is grounded in a policy and legal framework that governs rights and obligations of citizens and enterprises.
- Article 42, sub-article 2 of the FDRE constitution recognized workers right for healthy and safe work environment.

The Agriculture Sector Policy and Strategy

The policy objectives are to substantially enhance the production and productivity of agricultural sector for improvement of the living conditions of the people, to conserve and rational utilization of natural resource for sustainable agricultural development, and the policy elements are on crop protection that focuses on non–migratory and migratory pests. The policy statements include importation and handing over of crop protection technologies that should be based on testing their effectiveness, spraying pesticides considered as effective control of Migratory pests, the need for the establishment of plant quarantine system to prevent intrusion of exotic pests or move out of the country and for development of pesticide registration and control system, to mention a few.

The Food Security Strategy (FSS) of 1996, Plan for Accelerated and Sustained Development to End Poverty (PASDEP) (2005-2010) that the government has targeted to increase assistance to marginalized areas or emerging regions of pastoral and agro-pastoral communities in the last decades and through the Growth and Transformation Plan (GTP) (2010/11-2014/15) and GTP-2. Disaster Risk Management (DRM) is also the National Policy and Strategy on Disaster Risk Management that was adopted by the Government of Ethiopia in July 2013. The new Policy amends the earlier National Policy on Disaster Prevention and Management (under implementation since 1993) and marks a paradigm shift in doing

business differently–moving away from a system focused on drought and emergency assistance to a comprehensive disaster risk management approach.

The National Social Protection Strategy of Ethiopia

Ethiopia has formulated National Social Protection policy in 2012 with a general objective to create an enabling environment in which citizens (including special need and other vulnerable segments) have equitable access to all social protection services that will enhance their growth and development. Ethiopia's social protection policy is a central public policy component for addressing poverty, vulnerability and inequality. The following are among the objectives of Social Protection Policy of Ethiopia:

1. Protect poor and vulnerable individuals, households, and communities from adverse effects of shocks and destitution;
2. Increase access to equitable and quality health, education and social welfare services to build human capital thus breaking the intergenerational transmission of poverty;
3. Guarantee a minimum level of employment for the long term unemployed and under-employed;
4. Enhance the social status and progressively realize the social and economic rights of the excluded and marginalized;

The strategy has designed instruments to reach long and short term objectives including conditional and unconditional social transfer, expansion of public works; providing technical support and financial services; mandatory social insurance and community based health insurance; establishment of social work system, services for people with disabilities, the elderly and mobility constrained persons; enhancing abuse and exploitation prevention communication, provide protective legal and policy environment, support for survivors of abuse and exploitation and drop in centers and hot lines.

The Development and Change Package (2007)

It envisions to build democratic society where women are equal participants and beneficiaries of economic, social and political life of the country. Widespread awareness creation of women to actively participate in the development process; organizing and associate women to address challenges they face; capacitate women to solve problems and fight demeaning perceptions & fight for their rights; facilitate linkages and support among created associations and organization; and enable women to benefit economically and socially.

The National Policy on Ethiopian Women (1993)

It underlines the need to establish equitable and gender sensitive public policies that empower women, especially in education and property rights, and engaging them in decision making. Improving healthy working conditions, ensuring access to basic services, protecting women from harmful traditional practices are among the emphasized key issues in the policy framework.

National Food and Nutrition Security Policy and Strategy (2019)

The goal of national food and nutrition policy is to attain optimal nutritional status at all stages of life and conditions to a level that is consistent with good health, quality of life and productivity. Its objectives are to improve the availability and accessibility of adequate food to all Ethiopians at all times, improve access to quality and equitable nutrition and health services to all Ethiopians at all, improve consumption and utilization of diversified and nutritious diet throughout the life cycle, improve the safety and quality of food throughout the value chain, reduce food and nutrient losses along the value chain, improve food and nutrition emergency risk management, preparedness and resilience systems, and improve food and nutrition literacy of all Ethiopians. It is overseen by a National Nutrition Coordinating Body that is

chaired by the Federal Ministry of Health (FMoH) and co-chaired by the Ministries of Agriculture (MoA) and Education (MoE).

The National Nutrition Program (NNP)

In order to combat the challenges of malnutrition in Ethiopia the Government embarked on the second National Nutrition Program (NNP II) in 2016, focusing on the first 1,000 days of life to eradicate chronic malnutrition by 2030. The principles for implementation of the program include breaking the lifecycle and intergenerational transmission of malnutrition; stepping up public health interventions; addressing chronic and recurrent food insecurity; and engaging a large number of stakeholders including but not limited to Ministries of Health; Agriculture and Natural Resources; Education; Livestock and Fisheries; Water, Irrigation and Electricity; Finance and Economic Cooperation; Labor and Social Affairs; Women and Children Affairs. The ministries have recognized that high malnutrition rate in Ethiopia is unacceptable and have stressed the need for strengthened collaboration to reduce the impact of malnutrition in the country.

As malnutrition remains to be the underlying cause of more than one in five child deaths in Ethiopia, the goal of the NNP II is to provide a framework for coordinated and integrated implementation of multisector nutrition interventions. The NNP II was developed taking into account past experiences and lessons learned from the implementation of the NNP I and integrating new initiatives from the second Growth and Transformation Plan (GTP II). The updated aims of the NNP II include reducing the prevalence of three crucial indicators for children under five: stunting from 40 per cent to 26 per cent; underweight from 25 per cent to 13 per cent and wasting from 9 per cent to 4.9 per cent. With the following five strategic objectives, the NNP II envisions Ethiopia free of malnutrition and diet-related non-communicable diseases by 2050:

- Improve the nutritional status of women (15-49 years) and adolescent girls (10 – 19 years)
- Improve the nutritional status of children from birth up to 10 years
- Improve the delivery of nutrition services for communicable and non-communicable/lifestyle related diseases
- Strengthen the implementation of nutrition-sensitive interventions across sectors
- Improve multi sector coordination and capacity to implement the national nutrition program

PSNP IV will support the NNP by integrating nutrition sensitive approaches throughout the new design and by designing specific linkages to ongoing health and nutrition interventions, which will help to maximize the positive and minimize any negative social impacts.

Climate Resilient Green Economy (CRGE): CRGE was launched in 2011 with the aim to build Ethiopia into a middle-income country by 2025 in a way that is both resilient to the negative impacts of climate change and does not result in a rise in greenhouse gas emissions. PSNPV contributes to climate resilience in two major ways: it strengthens household resilience to shocks by increasing food security and livelihoods; and it reduces carbon emissions and increasing carbon sequestration through public works.

The major ESIA policy and legal framework of Ethiopia are provided below:

The Environmental Policy of Ethiopia (FDRE, 1997)

- The Environmental Policy of Ethiopia (EPE) was issued in April 1997. The overall policy goal is to improve and enhance the health and quality of life of all Ethiopians and promote sustainable social and economic development through sound management and use of natural, human-made and cultural resources and their 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".

- The policy consists mainly of guiding principles and various sectoral and cross-sectoral policies for sustainable environmental management. The policy seeks to ensure the empowerment and participation of the people and their organizations at all levels in environmental management activities, raise public awareness and promote understanding of the essential linkage between environment and development. In addition to its guiding principles, the policy addresses sectoral and cross sectoral environmental issues. The policy emphasizes the early recognition of environmental issues in project planning at all levels of administration.

Biodiversity Conservation and Research Policy

- The biodiversity policy was approved in 1998 and it provides policy guidance towards the effective conservation, rational development and sustainable utilization of the country's biodiversity. The policy objectives accentuate public participation in biodiversity conservation, development and utilization, and also ensure that communities share from the benefit accrued from the utilization of the genetic resources and their traditional knowledge. The policy consists of comprehensive provisions on the conservation and sustainable utilization of biodiversity, and it underlines the requirements for implementers to adopt during planning and operational phase of projects and for those projects engaged in biological resource utilization to follow ESIA procedures.

Ethiopian Water Resources Management Policy (1999)

- The 1999 Water Resource Management Policy of Ethiopia gives due emphasis to the sustainable water supply. Water resources management and administration in the country should be based on Ethiopia's Water Resource Management Policy and the water resources laws of the country as indicated in Proclamation No. 197/2000.
- The overall goal of the policy is to enhance and promote all national efforts towards the efficient, equitable and optimum utilization of the available Water Resources of Ethiopia for significant socioeconomic development on sustainable basis. The policy aims to ensure access to water for everyone fairly and in a sustainable manner, protect water resources and sources, and promote cooperation for the management of river basins.
- The policy also sets an integrated intervention framework to implement community-based water supply, sanitation and hygiene. The policy indicates that water supply and maintenance operations need cost recovery and user contributions. The policy became operational following with the subsequent issuances of the Water Sector Strategy (2000), water sector development program (2002), Water and Sanitation Universal Access Plan, UAP (2005) and the Water, Sanitation and Hygiene (WASH) Memorandum of Understanding (2006).

Agriculture Policy of Ethiopia (APE)

- Agriculture Development Led Industrialization's (ADLI) core principle is that increased agricultural productivity is the engine for both agricultural and industrial growth i.e. green revolution technologies substantially improve the low productivity of traditional Ethiopian farming systems. It is aimed at transforming the country's economy into a well-developed and prospered one. This agricultural policy and strategies is based on the objective realities of the country and its prime objective is to accelerate agricultural production and productivity at all levels.
- The ADLI is reflected in the Rural Development Strategy (2001) which further stresses the role of increased agricultural production as the basis for the country's development. The strategy is driven by the quest for ensuring food security and enhancing rural employment opportunities. The Strategy is made up of eight building blocks; namely: Technology generation and dissemination; Food security, including resettlement and water harvesting; Agricultural extension and vocational training; Agricultural marketing (of inputs and outputs); Rural finance; Development of cooperatives; Rural transport; and Rural land administration and management.

- In most of the above building blocks, environmental and social considerations are included in an implicit manner. Explicit consideration is rather given to the need to sustain production through use of appropriate technologies, development of tailored extensions and trainings to agro-ecological zones, and sustainable land management and land use.

Sustainable Development and Poverty Reduction Strategy Program (SDPRP, 2002)

The Sustainable Development and Poverty Reduction Strategy Program [SDPRP], issued on July 2002, outlines the fundamental development objectives of the government of Ethiopia to build a free-market economic system that will enable the economy to develop rapidly, and the country to extricate itself from poverty and dependence on food aid, where the poor people are the main beneficiaries of the economic growth. The program recognizes the importance of environmental protection as a prerequisite for sustainable development and treats it as crosscutting issue.

Accordingly, it points out three priority areas for action: strengthening and expanding on-going efforts to address land degradation, deforestation, overgrazing, soil erosion, loss of soil fertility and the disruption of the hydrological cycle, by giving special attention to highly degraded, drought prone and food insecure areas; strengthening regulatory and institutional capacity; and strengthening the measures currently under implementation to preserve, develop, manage and sustainably use biodiversity resources deficit highland areas of the country. Accordingly, water harvesting, proper land utilization and environmental rehabilitation are identified as the top priority areas of intervention. These help to combat drought and famine, which are induced by negative environmental manifestations such as desertification and land degradation.

Occupational Health and Workplace Rights

Occupational health and workplace rights concerned with the safety, health, and welfare of people at work. In many common laws, employers or organizations have the duty to take reasonable care of the safety of their employees. The Ethiopian legal system has adopted employer's liability for employment safety since the promulgation of the 1960 Civil Code (Arts.2548-2559). Employers have the duty of ensuring the workplace safety both at prevention and at remedial stage. At the level of prevention, the employer's duty is bound to prevent preventable risks. For this purpose, it is required to provide safety equipment and train how and when to make use of them (Art.92 LP). The employee has also a corresponding duty at prevention level to make use of the protective tools at appropriate time and place (Art.93 LP). Employer's liability is not only limited to the stage of prevention but also required to cover the remedial costs if the injury is associated with the employment. At remedial stage the employer is required to take compensatory measures after the damage has sustained. In other words, once industrial accident or occupational disease is sustained, the employer is expected to cover cost of medication including the cost for any necessary prosthetic or orthopedic appliances.

Occupational health and workplace safety issues are under the authority of Ministry of Labor and Social Affairs (MoLSA). By proclamation № 4/1995, MoLSA is given the powers and duties to determine standards and measures for the safety and health of workers and follow up their implementation; collect, compile and disseminate information on safety and health of workers. Labor proclamation № 377/2003 provided elaborate articles on the necessary measure that employer should take to safeguard the health and safety of the workers. In particular, article 12 stipulates the obligations of an employer "to take all the necessary occupational safety and health measures and to abide by the standards and directives to be given by the appropriate authorities in respect of these measures". Article 92 of this proclamation also details the obligations of the employer as:

- Comply with the occupational health and safety requirements provided for in this Proclamation;

- Take appropriate steps to ensure that workers are properly instructed and notified concerning the hazards of their respective occupations and the precautions necessary to avoid accident and injury to health; ensure that directives are given and also assign safety officer; establish an occupational, safety and health committee of which the committee's establishment, shall be determined by a directive issued by the Minister;
- Provide workers with personal protective equipment, clothing and materials instruct them of their use;
- Register employment accident and occupational diseases and notify the labor inspection of same;
- Arrange; according to the nature of the work, at his own expenses for the medical examination of newly recruited workers and for those workers engaged in hazardous work, as may be necessary;
- Ensure that the workplace and premises do not cause danger to the health and safety of the workers;
- Take appropriate pre-executions to ensure that all the processes of work shall not be a source or cause of physical, chemical, biological, ergonomically and psychological hazards to the health and safety of the workers;
- Obey the directives issued by the appropriate authority in accordance with this Proclamation.

4.1.2. Ethiopian Environmental Proclamations and Guidelines

Environnemental Protection Organes Establishment Proclamation, No. 295/2002

The proclamation was made to re-establish the federal Environmental Protection Authority (EPA), to establish Sectorial Environmental Units and Regional Environmental Protection Agencies. The authority is recently restructured as Environment, Forest and Climate Change Commission. The former EPA was established to formulate policies, strategies, laws and standards, which foster social and economic development in a manner that enhance the welfare of humans and the safety of the environment, sustainable development projects and to spearhead in ensuring the effectiveness of the process during their implementation.

The former *Environmental Protection Authority* (EPA) and currently, the Environment, Forest and Climate Change Commission among others has the powers and duties to:

- Coordinate measures to ensure that the environmental objectives provided under the Constitution and the basic principles set out in the environmental Policy of Ethiopia are realized;
- Prepare, review and update, or as necessary, cause the preparation of environmental policies strategies and laws in consultation with the competent agencies, other concerned organs and the public at large and upon approval, monitor and enforce their implementation;
- Liaise with competent agencies in the field of environmental protection and rehabilitation and support them in capacity development;
- Establish a system for environmental impact assessment of public and private projects, as well as social and economic development policies, strategies, laws, and programs; and
- Provide advice and support to regions regarding the management and protection of the environment.

Sectoral Environmental Units (SEUs)*:* Every competent agency (sectorial) is required by the Proclamation No. 295/2002 to establish or designate an environmental unit that shall be responsible for coordination and follow up so that the activities of the competent agency are in harmony with this Proclamation and with other environmental protection requirements. Accordingly, some sectorial agencies (e.g., Ministry of Agriculture) have now at least environmentalist to deal with environmental issues. Other ministries like Ministry of Mines, Ministry of Transport, Ministry of Housing and Construction, Ethiopian Road Authority, and others have environmental unit for the same purpose.

Regional States' Constitutions

Regional states have their own constitutions upholding the federal constitution in its entirety and constituting their regional particulars. All the regional state constitutions have addressed land and natural resources management and environmental protection. The regional states constitutions state that:

- The regional governments are entrusted to administer land and natural resources in the name of the people and deploy for the common benefit of the same;
- The regional governments and all citizens of the regions are responsible for the conservation of natural resources and the environment; and
- Concerned communities shall be given opportunity to express their opinions in the formulation and implementation of policies in relation to the environment.

Regional Environmental Protection Agencies (REPAs): The Proclamation No. 295/2002

The Proclamation decrees that each national regional state shall establish an independent regional environmental agency or designate an existing agency that shall, based on the Ethiopian Environmental Policy and Conservation Strategy and ensuring public participation in the decision-making process. REPAs are responsible for:

- Coordinating the formulation, implementation, review and revision of regional conservation strategies;
- Environmental monitoring, protection and regulation;
- Ensuring the implementation of federal environmental standards or, as may be appropriate, and issue and implement their own no less stringent standards; and
- Preparing reports on the respective state of the environment and sustainable development of their respective states and submits the same to the Authority.

The Environmental Impact Assessment Proclamation (Proc. № 299/2002)

As per the procedures in the proclamation, a proponent is required to undertake a timely environmental and impact assessment - EIA, assess the possible adverse impacts of the proposed project, and propose the means of mitigation, and shall submit the study report to the relevant body (Federal or regional EPA) for review and decision. It is also a requirement that EIA reports be prepared by an expert that meet the requirements specified under any directive issued by the Authority (regional/federal).

This proclamation has made EIA to be a mandatory legal prerequisite for the implementation of major development projects, programs and plans. It is a basic legal framework to harmonize and integrate environmental, economic, cultural, and other social considerations into a decision-making process in a manner that promotes sustainable development. Artticle3, sub-article 1 of this proclamation stipulates that no person shall commence implementation of a proposed project identified by directive as requiring EIA without first passing through environmental impact assessment process and obtaining authorization from the competent environmental agency. The proclamation obliges investment licensing institutions to get authorization from relevant environmental bodies prior to issuing investment permits or operation license to projects (Art. 3). It also requires such licensing institutions to suspend or cancel the permit or license they have issued for projects where the concerned environmental body suspends or cancels the authorization given for implementation of the project (Art. 12). The proclamation also allows for the imposition of a fine between fifty-thousand and one hundred thousand birr on any project owner who commences implementation of a project without obtaining authorization from environmental agencies or who makes false presentation in the environmental impact assessment study report (Art. 18).

Jurisdictions in the Proclamation: The regional environmental agency in each region shall be responsible for the evaluation and authorization or any environmental impact study report and the

monitoring of its implementation if the project is not subject to licensing, execution and supervision by a federal agency and if it is unlikely to produce trans-regional impact.

Environmental Pollution Control Proclamation (Proc. № 300/2002)

It is promulgated with a view to eliminate or, when not possible to mitigate pollution as an undesirable consequence of social and economic development activities. This proclamation is one of the basic legal documents, which need to be observed as corresponding to effective ESIA administration.

The aim of the proclamation is to control and manage possible causes of environmental pollution from hazardous substances, waste and any other forms of pollutants that pose serious environmental, social and health threats. The proclamation has important provisions on environmental standards, inspection procedures, offences and penalties, etc…. In its provision to control pollution, the proclamation states that, among others:

- No person shall pollute or cause any other person to pollute the environment by violating the relevant environmental standards,
- The Authority or the relevant Regional environmental agency may take an administrative or legal measure against a person who, in violation of law, releases any pollutant to the environment.

Solid Waste Management Proclamation, No. 513/2007
This proclamation aims to promote community participation to prevent adverse impacts and enhance benefits resulting from solid waste management. It provides for preparation of solid waste management action plans by urban local governments

The Definition of Powers and Duties of the Executive Organs of the FDRE, Proclamation № 916/2015

This proclamation mandated the Ministry of Environment, Forest, and Climate Change (MEFCC) to 'establish a system and follow up implementation for undertaking environmental impact assessment or strategic environmental assessment on social and economic development polices, strategies, laws, programs and project set by the government or Private' (Article 30, sub article 1/b). It also requires MEFCC to 'establish a system for evaluating and decision making, in accordance with the Environmental Impact Assessment Proclamation, the impacts of implementation of investment programs and projects on environment prior to approvals of their implementation by the concerned sectorial licensing organ or the concerned regional organ' (Article 30, sub-article 1/e).

Ethiopian Water Resources Management Proclamation, No. 197/2000

The proclamation is decreed to ensure that the water resources of the country are protected and utilized for the highest social and economic benefits of the people of Ethiopia, to follow up and supervise that they are duly conserved, ensure that harmful effects of water are prevented, and that the management of water resources is carried out properly. It proclaims that all water resources of the country are the common property of the Ethiopian people and the state. It has provisions on general principles of water use and management, inventory of water resources, professional engagement in water resource management and supply. Among other articles, the proclamation clearly indicates the requirements on water bank management and prevention of harmful effects on water resources in the articles 24 and 25 of the proclamation.

The supervising body (the Ministry Water, Irrigation and Energy), in collaboration and in consultation with the appropriate public body may:

- Delimit the boundaries of the banks of certain water bodies;

- Prohibit clearing and cutting trees or vegetation and construction of residential houses within the delimited banks of water bodies;
- The appropriate public bodies shall, before allowing or causing the founding of towns or villages, request the supervising body for technical advice in order to prevent or avoid damages, adverse impacts or accidents which may occur as a result of floods and other factors related to water.

Special Decree No, 20/1990 Council of State Special Decree to Provide for the Registration and Control of Pesticide

In the preamble it is stated that the purpose of the proclamation is to make it possible to minimize, to the extent reliable, the adverse effects that utilization of pesticides might cause to human beings, animals, plants and the environment. According to this proclamation, any substance, mixtures thereof or a living organism intended for use in preventing, destroying or controlling any pest; the following in particular is termed as "pesticide":

- Unwanted species of plants or animals causing harm during, or otherwise interfering with, the production, processing, storage, transport or marketing of food commodities, agricultural produces, wood and wood products or animal feedstuffs; insects or other pests in or on the bodies of animals and causing harm to their health.
- Vectors of human and animal disease: it also includes substances or mixtures thereof intended for use as a plant-growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit and substances applied to crops, either before or after harvest, to protect the commodity form deterioration during storage or transport.

The proclamation prohibits the following:

- The manufacture, import, sells or use of pesticide not registered in accordance with this special decree,
- The import, storage, transport or offer for sale of pesticides where not packed or labelled as provided in this special decree and directives issued hereunder.
- Authorization of registration is granted if the pesticide is used or handled according to the instructions contained in its proposed label, would constitute a risk to human beings, animals and the environment of such a minimal extent or degree as to be outweighed by the necessity or advantages of using it.

Pesticide Registration and Control Proclamation: Proclamation No. 674/2010

To minimize the adverse effect of pesticide, use on human beings, animals, plant and the environment, the country has enacted Pesticide Registration and Control Proclamation (No. 674/2010). The proclamation aims to regulate the manufacture, formulation, import, export, transport, storage, distribution, sale, use and disposal of pesticide. Before this proclamation was enacted, there was Pesticide Registration and Control decree. This Proclamation:

- Covers agricultural, household, public health, and industrial pesticides;
- Provides registration and control responsibilities to the Ministry of Agriculture;
- Seeks to promote safer pesticide handling and use in the country;
- Requires that all pesticides should be registered on the basis of demonstrated product effectiveness and safety for humans, non-target organisms and the environment;
- Prohibits importation of highly hazardous, severally restricted or banned pesticides (including most Organochlorines); and
- Obliges that all pesticides must display labels that meet specific Ministry of Agriculture label requirements.

Guidelines are produced and distributed to the grassroots level to help them monitor pesticide distribution, application, handling and storage. But there are enough data to compliment that the guidelines have not been reaching all the smallholder farmers who have been using pesticides. Other policies, proclamation and guidelines that address the safe use and management of pesticide and chemicals include the Agricultural Policy, the Environmental Pollution Control proclamation (No 300/2002), labor Proclamation (42/93), and Public Health Proclamation (200/2000) among others.

Expropriation of Landholdings for Public Purposes, Payments of Compensation, and Resettlement of Displaced People Proclamation no 1161/2019 and reg. no 472/2020

The FDRE House Peoples' Representatives has recently rectified Proclamation No.1161/2019 which deals with "Expropriation of Land for Public Purposes, Payments of Compensation and Resettlement of Displaced People", and replaced the previously active legislation on the matter i.e. Expropriation of Land and Compensation Proclamation No. 455/2005. The 1995 Constitution of Ethiopia under Articles 43 sub-article 1 & 2 has given the people the right to improved living standards and sustainable development as well as the right to be consulted with respect to policies and projects affecting their communities. The new proclamation specifies all stakeholders including vulnerable people and affected landholders to be consulted in a meaningful manner and the need for in placing GRM system. Other provision relevant to the AF includes but are not limited to

- Proclamation No. 1161/2019 gives entitlement for compensation only to those who have formal legal use rights over their land holdings (properties).
- The decision on expropriation for public purposes will be made by the appropriate Federal Authority, or a Regional, Addis Ababa, Dire Dawa City Administration cabinets based on an approved land use plan; master plan; or structural plan.
- The amount of compensation for a property on the land shall cover the cost of replacing the property anew." The Proclamation also notes that the minimum compensation payable to a housing unit may not, in any way, be less than the current cost of constructing a house per the standard.
- Compensation for payment of improvement to land shall be equal to the current value of the capital and labor expended on the land.
- For relocation of the property on the land, the cost of removing, transporting, and erecting, the property shall be paid as compensation.
- A certified private institution or individual consultant valuators shall evaluate the property situated on land to be expropriated based on a nationally approved valuation method. If not by the valuation committee established under the relevant public body.
- A household who is to be permanently displaced shall get an equivalent substitute land, one (1) year land holding income compensation shall be paid calculated by the current price which is equivalent to the highest annual income he generated in the last three (3) years preceding the expropriation of the land.
- For permanent land acquisition and in times equivalent substitute land is not available, the landholder shall be paid displacement compensation, which is equivalent to fifteen (15) times the highest annual income he/she generated during the last three (3) years preceding the expropriation of the land.
- In addition to cash compensation, according to the Proclamation, displaced people shall be compensated for the breakup of their social ties and the moral damage they suffer that resulted from the expropriation of their land.
- A household whose landholding has been temporarily expropriated shall be paid displacement compensation for lost income.

- Properties added after the expropriation notification is given to the landholder are not compensated;
- A resettlement package including livelihood restoration is provided to be facilitated for displaced people through credit service, training, and fulfilling social service infrastructure and facility

The new regulation No. 472/2020 repealed Council of Ministers Regulation on Payment of Compensation for Property Situated on Landholdings Expropriated for Public Purposes (Regulation No. 135/2007). This Regulation contains property valuation and compensation methods and formulae that should be used in calculating compensation for various properties. It also contains lump sum compensation to be paid for severed social relationships and moral damages, providing special support for vulnerable people, and consultation & GRM procedure.

Environmental and Social impact Assessment Guidelines and Directives

The former EPA has published series of environmental and social impact assessment guidelines for the different sectors outlining the key issues, principles, procedures and processes to be adopted and adhered to avoid and/or mitigate potentially negative environmental and social impacts during project planning, implementation and operation by government, public and private entities. Later these guidelines are revised and compiled into one comprehensive guideline, "***Environmental and Social Impact Assessments Guideline*** **September 2017".**

This guideline outlines the screening, review and approval process for development projects in Ethiopia and defines the criteria for undertaking an ESIA. According to this ESIA procedural guideline, projects are categorized into three schedules:

Schedule 1: Projects which may have adverse and significant environmental impacts thus requiring a full Environmental Impact Assessment.

Schedule 2: Projects whose type, scale or other relevant characteristics have potential to cause some significant environmental impacts but are not likely to warrant a full ESIA study
Schedule 3: Projects which would have no significant environmental and social impact and do not require an ESIA.

However, projects situated in an environmentally sensitive areas such as land prone to erosion; desertification; areas of historic or archaeological interest; important landscape; religiously important area, etc. will fall under Schedule I irrespective of the nature of the project.

Environmental Impact Assessment Guideline, May 2000

The guideline provides the policy and legislative framework, the general ESIA process and key sectoral environmental issues, standards and recommendations for environmental management in key sectors such as agriculture, industry, transport, tannery, dams and reservoirs, mining, textiles, irrigation, hydropower and resettlement projects.

Environmental and Social Management Plan Preparation Guideline, Nov. 2004

The guideline provides the essential components to be covered in any environmental and social management plan (e.g., identified impacts, mitigation measures, monitoring, capacity building, etc) and structured formats for mitigation measures, monitoring and institutional arrangements for the implementation of ESMPs.

Environmental and Social Impact Assessments Guideline September 2017

It is a revised version of the Ethiopian ESIA Guidelines with the aim to integrate social issues (gender, health, workplace rights etc) into the environmental impact assessment system of the country.

A Directive Issued to Determine Projects Subject to Environmental Impact Assessment, Directive No.1/ 2008

The directive was issued to identify and list out those investment projects subject to mandatory Environmental and Social Impact Assessment. The regions are entitled to issue similar directive to their own specific cases based on these directives. Extensive list of project types requiring ESIA are provided in this directive.

4.2. Relevant and Applicable International Conventions Ratified by Ethiopia

The Ethiopian government is party to a number of regional and international conventions and protocols on environment. Article 9(4) of the constitution of the Federal Democratic Republic of Ethiopia provides the legitimacy that once an international agreement is ratified through the accepted or established procedure. It automatically becomes an integral part of the law of the land. Ethiopia has ratified several international/multilateral environmental conventions and many of the principles and provisions in those conventions have been well addressed in the national environmental policies and regulations. Consequently, the following, among others are international conventions and protocols that are highly relevant to the implementation of the EELRP sub projects, and hence such program implementation need to be in compliance with those conventions. Some of these conventions include the following:

Convention on Biological Diversity

This convention has three goals, and Ethiopia ratified to meet the goals through proclamation No.98/94 on May 31, 1994:

- Conservation of biodiversity;
- Sustainable use of the components of biodiversity; and
- Fair and equitable sharing of the benefits arising from the use of genetic resources.

United Nations Framework Convention on Climate Change
This convention takes into account the fact that climate change has trans-boundary impacts. The basic objective of the convention is to provide for agreed limits on the release of greenhouse gases into the atmosphere so as to reduce the impacts of climate change. Ethiopia ratified this convention through proclamation No. 97/1994 on May 2/1994. The proposed project needs to be implemented in a manner it promotes adaptation to and mitigation of climate change.

The United Nations Conventions to Combat Desertification

The objective of the convention is to combat desertification and mitigate the effects of droughts in countries experiencing serious drought and desertification, particularly in Africa. Ethiopia has ratified the convention through its proclamation No. 80/1997. Respecting the convention is so important as the proposed project is implemented in historically prone to drought and flooding**.**

The Bamako convention

The Bamako convention on the ban of the import into Africa and the on the control of trans-boundary movements and management of hazardous wastes within Africa, adopted in Bamako, Mali on 30 January, 1991. The **objective of the convention is** to protect the health of populations and the environment of African countries concerning the movement, dumping and handling of hazardous waste coming from other countries.

The Basel Convention

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is the most comprehensive global environmental agreement on hazardous and other wastes. It aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes.

The Basel Convention regulates the transboundary movements of hazardous and other wastes and obliges its Parties to ensure that such wastes are managed and disposed of in an environmentally sound manner.

The Rotterdam Convention

This Convention relates to prior informed consent in the context of international trade in specific hazardous industrial chemicals and pesticides. Ethiopia has ratified this Convention by Proclamation No. 278/2002, on July 2, 2002.

The Stockholm Convention on Persistent Organic Pollutants

The Convention aims to ban the use of Persistent Organic Pollutants (POPs). Ethiopia has ratified this Convention by Proc. No. 279/2002, on July 2, 2002. Therefore, any investment is required to respect the objective of the Convention as per the system of the country.

The *Rotterdam convention on Prior Informed Consent (PIC), Basel convention, Stockholm convention on (POPs), and Bamako Convention (1991),* have importance in pesticides managements. Consideration of these conventions is therefore essential when managing pests and pesticide products.

The International Covenant on Economic, Social and Cultural Rights

This agreement together with the international agreement on Civil and Political Rights and the Universal Declaration on Human Rights make up the International Bill of Rights. It addresses such fundamental rights as the right to fair conditions of employment, the right to social security, the right to food, clothing and housing, and the right to culture. The Convention is adopted in 1966 and come in to force in 1976, ratified by Ethiopia in 1993.

The United Nations Convention on the Elimination of all forms of Discrimination Against Women (UNCEDAW)

The Convention establishes that discrimination against and inequality faced by women violates human rights principles. It calls on States' Parties to actively remedy discrimination against women in several key areas such as marriage, employment, education and religion. CEDAW was adopted by the General Assembly in 1979 and ratified by Ethiopia in 1981.

The Universal Declaration of Human Rights

This declaration was enacted in 1948 and boldly states the need for the protection of human rights. Civil, political, economic, social and cultural rights are the core constituents of the declaration. Ethiopia has accepted the declaration to duly respect the very natural and democratic rights stipulated in this declaration.

The International Labor Organization (ILO) Conventions

The International Labour Organization (ILO) has promulgated several international conventions and standards. Convention No. 111/1958 that deals with the prevention of discrimination in respect of

employment and occupation, Convention No. 100/1951 that calls for all eligible workers are to be paid equal amount for equal type of work, Convention 87/1948 that gives the freedom of association and protection of the right to organize by workers and employers, Convention 98/1949 that gives the right to the workers to organize and collective bargaining, Convention 29/1930 that strives to prevent forced or compulsory labour and Convention 105/1957 that calls for the abolition of forced labour are few of them which Ethiopia is party to them.

Because Ethiopia is part to these and other ILO's Convention, employers in the country are not allowed to discriminate their workers on any basis (such as race, color, gender, age, religion, social class, political tendencies, nationality, union membership, civil status or any other motives). Employers must offer equal pay, training, promotion and benefit opportunities to all workers for the same type of work. No forced labour is allowed for any reason (as a political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system or as a method of mobilizing and using labour for purposes of economic development or as a means of labour discipline or as a punishment for having participated in strikes or as a means of racial, social, national or religious discrimination). ILO Conventions urge that employers must protect the occupation health and safety of the workers as well as create safe working environment with the primary objectives of preventing, if possible, or reducing work-related accidents, injuries and diseases.

4.3. The World Bank Environmental and Social Framework requirement

The ESMF complies with the World Bank Environmental and Social Standards (ESSs) under the Environmental and Social Framework (ESF) and other environmental and social management guidelines that have been stipulated as a requirement. The World Bank Environmental and Social Framework sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity. The Environmental and Social Standards (ESSs), together with their Annexes, have set out the mandatory requirements that apply to the Borrower and projects. The ESSs set out the requirements of the Bank relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the borrower. There are ten ESSs which establish the standards that the Borrower and the project will meet through the project life cycle. Thus, in order to meet the requirements of the WB, the Environmental and Social Risks and impacts of EELRP activities and the ESSs which are applicable to the EELRP were analyzed.

4.3.1. ESSs applicable to the EELRP

ESS1. Assessment and Management of Environmental and Social Risks and Impacts

This Standard request to assess and manage the environmental and social risks and impacts of the proposed project so as to ensure sustainable development. If the project has met this standard, the project will have positive impacts through combating the damage created by the widespread desert locust in Ethiopia and the Horn of Africa region. The project will protect fragile livelihoods from locust infestation and subsequently enhance the food security of communities through livelihood support in the project area. The project activities on livelihoods support component provide opportunities to reclaim human capital and asset losses due to the dessert locust. The support will enable vulnerable households gain access to livelihoods support, feed/fodder distribution and essential agricultural inputs for building livelihoods, restocking livestock, rehabilitating rangelands, veterinary services including vaccination for prevention of disease outbreaks. However, the proposed Project could also cause high environment, health and safety risks due to the highly toxic nature of the pesticides to be used for spraying for the control of the locust. The spraying operation due to inadequate adherence to occupational health and safety standards can lead to illness and death among field workers. But even if there is no direct involvement in control operations, the local population can be exposed to insecticides, as well.

Hence as per **the ESS1 requirement**, the MoA will undertake an environmental and social assessment to assess the environmental and social risks and impacts of a project throughout the project life cycle. The term 'environmental and social assessment' is a generic term that describes the process of analysis and planning used by the PIU to ensure that the environmental and social impacts and risks of a project are identified, avoided, minimized, reduced or mitigated. The environmental and social assessment is the primary means of ensuring projects are environmentally and socially sound and sustainable and will be used to inform decision making. The environmental and social assessment is a flexible process which can use different tools and methods depending on the details of the project and the circumstances of the PIUs. A definition of some of the tools is given below.

Environmental and Social impact assessment (ESIA): is an instrument used to identify and assess the potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.

Environmental and Social Management Plan (ESMP): is an instrument that details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures. An Environmental and Social Management Plan (ESMP), also referred to as an impact management plan, is usually prepared independently or as part of ESIA report. Depending upon particular requirements, the plan may be included in.

When the potential environmental impacts of projects on humans and sensitive areas (wetlands, forests, natural habitats, etc.) are less adverse, site specific, few if any are irreversible, ESIA is not always required, some form of environmental analysis is necessary and an Environmental and Social Management Plan (ESMP) needs to be prepared with recommended measures to prevent, minimize, mitigate or compensate for adverse impacts.

The focus of this section is to suggest appropriate measures in order to avoid and/or minimize negative and enhance positive impacts of the proposed actions.

The Format for preparing an ESMP is provided in Annex 16. On the other hand, if the planned sub project has the potential to cause significant adverse impacts are considered irreversible or unprecedented, and which extend beyond the physical footprint of the activity, comprehensive environmental and social impact assessment or full ESIA report, covering the full range of environment and/or social impacts, and environmental and social impact management plan is required.

If the subproject or activity of the project has required undertaking partial or full ESIA, the ESIA report has be produced in accordance with the Format/ contents of an ESIA report provided in **Annex 5** of this ESMF.

ESS2 Labor and Working Conditions

ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. The MOA shall promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions. The project implementation will involve direct and indirect labor coordinated by the Ministry of Agriculture (MOA), Plant Protection Directorate. The direct labor includes the MOA, Plant Protection Directorate Staff, recruited consultants by the MOA for the project, Bureau of Agriculture, Plant Protection Department Staff, Bureau of Pastoral Development Staff working for the project, and Woreda level Office of Agriculture/pastoral development staff. There will be contracted staff through consultancies for the implementation of the project.

Indirect Labor include contracted labor for the spraying of pesticides, vehicle mounted sprayer drivers, technicians, aircraft operators, flag men/women and scouts. Community labor could be mobilized as part of the pest control activity through operating handheld pest management sprayers, volunteer workers and as part of the livelihood support measures through cash for work.

The MOA will follow both the ESS2 and the FAO guideline: Safety and environment procedure and training manual and other international good practice on observing occupational health and safety of staff involved in the pesticide transport, management, use, disposal of residue and spraying.

The project will ensure the application of **Occupational Health and Safety measures** (e.g., included in the site-specific ESMPs, contracts and monitoring systems) as outlined in the ESMF noted under ESS1 as well as FAO guidelines, including Guidelines for personal protection when handling and applying pesticide (2020).

The recruitment of child labor is forbidden in accordance with ESS2 and the Ethiopian "National Social Protection Policy of Ethiopia**"**, due to the hazardous work situation involving use and management of pesticides for any person under the age of 18. The project may outsource some of the activities to contractors, including rental of aircrafts, vehicle mounted sprayers for spraying. However, the project is not expected to deploy large-scale labor influx during the peak season of locust infestation spraying. In line with ESS2 as well as the Ethiopian law, the use of forced labor or conscripted labor in the project, both for pesticide spraying and the cash for work activities is not allowed. The MOA will ensure consistent application and adherence to the requirements related to the applicable Environmental and Social Standards.

The project will also ensure a basic, responsive grievance mechanism to allow workers to quickly inform management of labor issues, such as a lack of PPE and unreasonable overtime via the Ministry of Agriculture.

ESS 3: Resource Efficiency and Pollution Prevention and Management

ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with Good International Industry Practice (GIIP).

To fulfil the requirements of this ESS the PIU will establish appropriate Environmental Monitoring procedure for the implementation of environmental and social risk management measures; Such as (i) designing an appropriate environmental and social protection plan in the context of regular project monitoring, (ii) on insecticide application quality, control efficacy and the reporting of incidents; in more detail.

In locust control operations large quantities of insecticides are likely to be stored and used, with associated risks to man and the environment. Application of insecticide should be made in accordance with good pest control practice to ensure efficacy and safe use. Some insecticides are more hazardous than others and require very careful handling. It is important, therefore, to know which insecticides are most dangerous so that adequate safety precautions can be taken. The project will require Material Safety Data Sheets to be available for review as set forth by relevant international agencies and outlined in the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The list of the relevant

international conventions related to the project, in order to address their requirements, as relevant, in any proposed mitigation measures is provided in chapter 2 of this ESMF.

The MoA will ensure that all pesticides used will be manufactured, formulated, packaged, labelled, handled, stored, applied and disposed of according to the relevant international standards and codes of conduct, as well as the General and sector-specific EHSGs. Care is therefore required at all stages in their transport, storage and application. Appropriate site selection, design, maintenance and day-to-day organization of stores and transport operations must be planned to keep hazards to a minimum.

The need to dispose of unwanted or surplus insecticides should be kept to an absolute minimum by careful store management and stock rotation. For large quantities, advice should be sought from the supplier. Unless empty pesticide containers are managed correctly, they are hazardous to both mankind and the environment. Therefore, used insecticides' drums and containers will need to be disposed in special landfills. There is a danger that empty containers could be reused for storing food and water, which could result in pesticide poisonings. Containers abandoned in the environment can lead to pesticide pollution in soil and groundwater.

This ESMF and site-specific instruments (ESMPs) will include guidance related to (i) adequate design of pesticide storage, handling, and management facilities; (ii) management of stocks in an effective, efficient, and transparent way, (iii) improvement of the capacity of health centres in the treatment of pesticide poisoning incidents; (iv)dispose of unwanted or surplus insecticides; in line with WHO and FAO Guidelines for Safety and environmental precautions: Guidelines on Developing a Reporting System for Health and Environmental Incidents Resulting from Exposure to Pesticides,2009 ; Prevention of Accumulation and Disposal of Obsolete Stocks; 2009, 2011 and The International Code of Conduct on Pesticide Management.

ESS4 Community Health and Safety

ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.

ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of MOA to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

This ESS addresses potential risks and impacts on communities that may be affected by project activities. Occupational Health and Safety (OHS) requirements for project workers are set out in ESS2, and measures to avoid or minimize impacts on human health and the environment due to existing or potential pollution are set out in ESS3.

In line with safety provisions in ESS2, it is equally important to ensure the safety of communities from the potential impacts and risks of pesticide use and management intended to mitigate the locust infestation.

The use of pesticide for managing locust infestation may require regular community interaction and awareness creation about the benefits, potential side effects of pesticide use on humans, agricultural crops, livestock and livestock feed, on water wells for humans and livestock, and the environment. The management and disposal of residual pesticide including the overuse and misuse may have potential impacts and associated risks on community health and safety. The unintended and out of control effects of pesticide spraying (beyond the defined buffer zone, based on the spraying strategy) should be properly communicated with the different communities in appropriate language, form and media:

ESS5 land acquisition, restrictions on land use, or involuntary resettlement

The RF prepared for the AF lays out potential negative environmental and/or social impacts which may accompany the interventions of the EELRP-AF and identifies measures to address and mitigate adverse socioeconomic impacts which may occur in relation to land acquisition, restrictions on land use, or involuntary resettlement. Activities with these types of potential impacts are limited to component 3: construction of federal-level control operation centers, regional frontline bases, and sub-bases. These activities require land for construction and may result in the possession of the land that would be used for residence, pasture, and farming. Owing to this, the risk of physical and economic displacement in pastoral and agro-pastoral communities is unavoidable.

The ESS5 recognizes that physical and economic displacement, if unmitigated, may give rise to severe economic, social, and environmental risks: production systems may be dismantled; people face impoverishment if their productive resources or other income sources are lost; people may be relocated to environments where their productive skills are less applicable and the competition for resources greater; community institutions and social networks may be weakened; kin groups may be dispersed; and cultural identity, traditional authority, and the potential for mutual help may be diminished or lost. For these reasons, involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts.

ESS 5 applies to permanent or temporary physical and economic displacement resulting from the following types of land acquisition or restrictions on and use undertaken or imposed in connection with project implementation:

- Land rights or land use rights acquired or restricted through expropriation or other compulsory procedures in accordance with national law;
- Land rights or land use rights acquired or restricted through negotiated settlements with property owners or those with legal rights to the land if failure to settle would have resulted in expropriation or other compulsory procedures;
- Restrictions on land use and access to natural resources cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure or recognizable usage rights. This may include situations where legally designated protected areas, forests, biodiversity areas, or buffer zones are established in connection with the project;
- Relocation of people without formal, traditional, or recognizable usage rights, who are occupying or utilizing land prior to a project-specific cut-off date;
- Displacement of people as a result of project impacts that render their land unusable or inaccessible;
- Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting, and gathering grounds, and grazing and cropping areas;
- Land rights or claims to land or resources relinquished by individuals or communities without full payment of compensation; and
- Land acquisition or land use restrictions occurring prior to the project, but which were undertaken or initiated in anticipation of, or preparation for, the project.

With respect to eligibility, WB ESS 5 classifies affected persons as:

- Having formal legal rights to land or assets?
- Who do not have formal legal rights to land or assets, but have a claim to land or assets that is recognized or recognizable under national law; or
- Who have no recognizable legal right or claim to the land or assets they occupy or use

The EES 5 requires that a RAP shall be prepared and cleared by the Bank prior to implementing resettlement activities. ESS 5 also requires the provision of compensation and other assistance to PAPs, to restore livelihoods when they are affected shall be done prior to the displacement of people. ESS 5 requires that possession of land for project activities may take place only after compensation has been paid. Resettlement sites, new homes and related infrastructure, public services and moving allowances must be provided to the affected persons in accordance with the provisions of the RAP.

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

This ESS recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services.

Relevant aspects of this standard are considered under ESS1 above. To ensure to identify all areas that are ecologically and agronomically important or particularly sensitive areas like (National parks; nature reserves; internationally protected areas; important (inland) fisheries areas; forests; important fruit-growing areas; beekeeping areas; areas with export crop or livestock production and areas with organic farming) to insecticides and identify appropriate locust control techniques.

The spraying of insecticides on a wide area within the context of locust control and the manipulation of related chemicals is the main source of negative impact on biodiversity. The project should identify all areas that are ecologically and agronomically important or particularly sensitive to insecticides.

For each sensitive area, locust management options should be evaluated based on the type of organisms at risk and the likely locust targets that may appear in the area. These may include: National parks; nature reserves; internationally protected areas; important (inland) fisheries areas; forests; wetlands; important fruit-growing areas; beekeeping areas; areas with important biological pest control programs; areas with export crop or livestock production and areas with organic farming. Subsequently, appropriate locust control techniques have to be identified for each area. These include the decision to allow chemical control or not, the choice of acceptable insecticides, periods when treatments are or are not allowed, appropriate control methods, etc. In certain areas chemical locust control may not be allowed by law (as in the case of national parks).

In order to ensure the above, it is important that all relevant national expertise is involved in this assessment, such as the national agencies dealing with forest, environment, biological pest control, (inland) fisheries, bee-keeping, national parks, etc. It is often most effective to try to map out the various sensitive areas and make overlays with previous (or newly expected) locust infestations. The procedures outlined in the ESMF in line with FAO Guidelines for Safety and environmental precautions, 2003 and waste management plan will describe how these impacts will be avoided, minimized or mitigated.

- with Good International Industry Practice (FAO guideline).
- Measures in place to prevent or minimize the unintended and out of control effects of pesticide use.
- Emergency and response measures including for poisoning of humans.

ESS7. Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (SSAHUTLC).

The project will be implemented in Afar, Somali, and parts of Oromia and SNNP where the people meet the criteria of ESS7. The PIU will ensure respect to human rights, dignity, aspirations, identity, culture and livelihoods of SSAHUTLC and avoid adverse impacts on them or, when avoidance is not possible, minimize, mitigate or compensate for such impacts. In addition, a separate **Social Assessment** and an **Integrated Pest Management** documents are prepared in parallel with ESMF.

The food insecurity and loss of livelihood disproportionately impact vulnerable group of the community. Though the exact number is unknown, vulnerable group of the community which includes women, women head household, elders, children, and disabled people significantly and disproportionately affected by the impact of desert locust invasion by increased nutrition and food insecurity.

This ESS contributes to poverty reduction and sustainable development by ensuring that projects supported by the Bank enhance opportunities for **Underserved and Vulnerable groups,** to participate in, and benefit from, the development process in ways that do not threaten their well-being.

This will be ensured via the Project's communication and outreach strategy as outlined under ESS10: the project will ensure that such communities are appropriately informed and can share in the benefits of the project in an inclusive and culturally appropriate manner on the locust infestation control, management and livelihoods components.

The proposed project does not involve aspects which would require FPIC, unless the project intends to use community based biopesticides. Where the community based biopesticides are part of SSAHTLC cultural heritage and their use in the project is considered a commercial purpose. However, if SSAHUTLC do use community based biopesticides and they are considered material to their identity, the project would need FPIC not to use them in their areas in order to use the projects different/commercial/chemical pesticides instead. If the project intends to develop and use biopesticides, a due process of consultation should be held including obtaining consent, define benefit sharing.

The MOA will ensure that these communities are appropriately informed and can share from the project benefits in an inclusive and culturally appropriate manner (i.e., prevention and treatment) with provisions included in the SEP.

ESS10. Stakeholder Engagement and Information Disclosure

This ESS recognizes the importance of open and transparent engagement between the PIU in the MOA and project stakeholders as an essential element of good international and national practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Stakeholders will be kept informed as the project develops, including reporting on project environmental and social performance and implementation of the stakeholder engagement plan and grievance mechanism. This will be important for the wider public, but specifically critical for the directly impacted community members.

The project will establish a structured approach to engagement with stakeholders that is based upon meaningful consultation and disclosure of appropriate information, considering the specific challenges associated with the locust emergency response. The project community consultation should focus on awareness raising regarding timing of the spraying, potential impact of the spraying on human health, livestock and fodder, water wells for humans and livestock, agricultural crops, spraying mechanism (handheld, vehicle and aircraft), roles and responsibilities including that of the communities. The consultation should also inform communities about the availability of compensation payments for out of control potential impacts on livestock, humans and agricultural produce. The consultation with the communities will inform about the project components and activities, including targeting for short and

longer term livelihoods support. People affected by project activities should be provided with accessible and inclusive means to raise concerns and grievances.

The Ethiopia Locust Response Project will include adequate resource for the implementation of the Stakeholder Engagement Plan including environmental monitoring program, procurement of protective equipment, livelihoods support assessment (including targeting criteria), community consultation and development of training of experts. These activities will inform an update to the project approach of SEP. These outreach mechanisms will be defined as part of the SEP (currently updated to define the operational steps) based on the local context, language, preferred media, cultural values. The financing will be further used for producing communication materials, including local radio content, and traditional information sharing channels for effectively sharing information with communities during operation of spraying and documentation. These will cover 70,000 community and village leaders' sensitization and training of experts of all infested areas to approach country-wide awareness creation with a target to reach 72,126, as a key activity for the SEP. The project will ensure the establishment of a Grievance Redress Mechanism.

4.3.2. The World Bank Groups Environment, Health and Safety Guidelines (EHSGs)

In light of this, it has to be noted that the World Bank Groups Environment, Health and Safety Guidelines (EHSGs) will be applicable as part of implementation of the proposed EDLER Project. The following guidelines will apply,

1. Occupational Health and Safety: https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=ls62x8l;
2. Perennial Crop Production related to Pest Management, https://www.ifc.org/wps/wcm/connect/2db115fe-4842-4a32-86ed-c9d659a0ea38/English_2016_Perennial+Crop+Production_EHS.pdf?MOD=AJPERES&CVID=lffbDhw;
3. Community Health and Safety related to Transport of Hazardous Materials https://www.ifc.org/wps/wcm/connect/eeb82b4a-e9a8-4ad1-9472-f1c766eb67c8/3%2BCommunity%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=ls62Gai.

4.3.3. FAO Desert Locust Guidelines on safety and environmental precautions:

In addition, the MOA, Plant Protection Directorate, the project implementing entity will use, FAO Desert Locust Guidelines on safety and environmental precautions:

- Guidelines on Good Practice for Ground Application of Pesticides, 2001.
- Guidelines on Good Practice for Aerial Application of Pesticides, 2001.
- Guidelines for personal protection when handling and applying pesticides, 2020.
- FAO Desert Locust Guidelines 4. Control; 2001
- FAO Desert Locust Guidelines 5. Campaign organization and execution; 2001
- FAO Desert Locust Guidelines 6. Safety and environmental precautions; 2003
- Guidelines on Organization and Operation of Training Schemes and Certification Procedures for Operators of Pesticide Application Equipment, 2001.
- Guidelines on Developing a Reporting System for Health and Environmental Incidents Resulting from Exposure to Pesticides, 2009.

- Prevention of Accumulation and Disposal of Obsolete Stocks; 2009, 2011 and
- The International Code of Conduct on Pesticide Management of the World Health Organization Food and Agriculture Organization of the United Nations Rome, 2014.

These guidelines include among others provision to address the reduction of environmental and human health risks from insecticide use during locust control. Accordingly, practical recommendations have been given on how to address risk reduction during the campaign preparation phase, how to implement it during the control operations, and how to evaluate it in post-campaign follow-up, and environmental and human health monitoring during locust control operations. Therefore, the implementation, evaluation and monitoring of this IPMP should be carried out strictly following these guidelines.

4.4. Administrative Structure for Environmental and Social Management

4.4.1. Environment, Forest and Climate Change Commission (EFCCC)

This Commission has overall responsibility for setting environmental policies, regulations, guidelines and standards for administration of ESIA requirements. Regional Bureaus of Environment have been established in all of the regions and the City administration.

4.4.2. Ministry of Agriculture

The Ministry of Agriculture is responsible for a broad array of agricultural production and research, food security, poverty reduction, natural resource management and rural development programs and activities. The regional Bureaus of Agriculture are directly involved in delivery of programs with woredas, in keeping with the decentralization strategy of the country.

4.4.3. Ministry of Water, Irrigation and Energy

This ministry is responsible for overall inventory, planning and management of surface and ground water resources in the country. This includes aspects of watershed management, water supply and water quality management that affect rural development programs. Regional Water Bureaus are directly involved in assisting woredas and other agencies in water resource development projects.

4.4.4. Regional and Woreda Offices

The regions and woredas are a key focus of the government's commitment to the decentralized delivery of services. The regional bureaus have full autonomy to use and manage their resource within their administration boundary based on the country’s policy direction and regulatory requirements. Whereas the various departments at the woreda level have t autonomy and a direct responsibility for finance, land use, natural resources, infrastructure, and development at the regional and local level respectively. The Bureau of Agriculture at the regional level plays an assistance and oversee role over the counterpart woreda office. The agriculture departments have subject matter specialists and others who advise development agents working at the village level. The Desert Locust Control Project implementation will depend upon appropriate inputs and management controls involving both the regional and woreda office related to soil and water conservation, small scale irrigation development, rainwater harvesting, road development and water supply, sanitation and waste management associated with rehabilitated schools and clinics.

4.4.5. Kebele Administration

The kebeles (areas with an average population of about 5,000) are in practice the primary contact level for most Ethiopian citizens. Kebele administrations consist of an elected Kebele council (in principle 100 members), a kebele executive committee of 5-7 citizens, a social court, and the development and security staff posted in the kebele.

The kebele council and Executive committee's main responsibilities are:

- preparing an annual kebele development plan.
- ensuring the collection of land and agricultural income tax.
- organizing local labor and in-kind contributions to development activities.
- Resolving conflicts within the community through the social courts.

Kebele executive committees are responsible to their woreda council. Unlike executive committee members at the region and zone, elected members receive no stipend. The only official Kebele officer is the council chairman, who receives a small monthly allowance. The kebeles provide a link between the state and households and are responsible for enforcing the directives from the government ministries. In remote areas, the kebeles may be the only association; governmental services are conveyed through them.

4.5. Institutional Arrangements

The Ethiopian Ministry of Agriculture (MoA-Plant Protection Directorate) and their counterparts in the respective regions shall be the implementing agency for the project. The State Minister for Agriculture Development who oversees Plant and Animal Protection will provide overall oversight for the project. He/she, together with RBoA heads and in consultation with the World Bank Task Team will make all necessary decisions. The PIU for PSNP IV will be a responsible unit for the coordination of project activities and will be implemented by relevant directorates at the Ministry of Agriculture and Regional levels. A dedicated project manager will be appointed within the PSNP IV PIU for implementation of the Ethiopia project under the MPA-EDLRP. With a few exceptions (some training and delivery of livelihood support package), most funds and procurement will be managed by the PIU. The project manager will report to State Minister for Agriculture Development and, in addition to managing the PIU, will also be responsible to coordinate with DPs and other stakeholders in Ethiopia as well as to provide regular reports and information to the Multiphase Programmatic Approach level Program Coordination Unit.

The Ministry of Finance (MoF), through its Channel One Program's Coordinating Directorate (COPCD), will be responsible for the overall Financial Management (FM) of the project whereas MoA will be responsible for project implementation. The program will follow the government's Channel One fund flow mechanism whereby resources will directly flow from IDA to the MoF and from there to the regional finance bureaus, woreda finance offices, and federal level implementers (MoA). The proposed project will use the Bank-financed Rural Productive Safety Net (RPSNP) project system for implementation. This is one of the many projects under COPCD and implemented by MoA.

Under the overall supervision of the MoA, agencies, every level of Government will be accountable for the oversight and coordination of the project, with implementation of program activities being undertaken by woredas and kebeles, line ministry/agencies and other partners. The roles and responsibilities envisaged for the key institutions at each level are set out in summary form in Table 2. The preparation of the proposed projects identified as priorities by the community is carried out at kebele level, usually by the Development Agent (DA). Technical guidance is provided by the different kinds of Guidelines provided in the Annex Part of this ESMF. Where technical inputs are not available at the kebele these are to be provided by the woreda line, or concerned sector, offices.

Table 2. Institutional framework for pest and pesticide management of EELRP

Institutions/Actors/Stakeholders	**Responsibilities**
Federal Level	

MoA Agriculture sector state Minister Plant Protection Directorate	• Leading the project • Over see • Chair steering • Coordinator • Survey, monitoring, early warning and locust management activities coordination
MoA-Food Security Coordination Directorate, PSNP IV	• Planning and implementation of the SEP (lead all related activities) • Management and implementation of program GRM • Coordination/supervision of contractors on ESCP/SEP activities • Monitoring and reporting on social performance to GoE and WB • Assign Stakeholder Focal Person to manage PSNP stakeholder engagement and monitor the management, resolution, and reporting of grievances by communicating with the regional GRM focal person
Crop Production Directorate and Livestock Development	• Organize grain pasture seed supply to the areas affected by locust
Pest management specialist, hired as a consultant (under project)	• Lead the overall Desert Locust survey and control operation of the project
Environmental and Social safeguard specialist hired (under project)	• Lead the overall Environmental, Social; and Health and Safety issues at Federal level (Project level)
Procurement Directorate	• Coordinate procurement activities
Regional level	
Region Bureaus of Agriculture and/or Pasture Development	• Involve in the coordination of Desert Locust management and impact mitigation activities, the structure up to lover level will involve
BoA-FSCD	• Inform FSCD of any issues related to their engagement with stakeholders. • Monitoring and reporting on gender and social development performance to federal FSCD • Transmit and resolve complaints caused by the project interventions in close collaboration with and as directed by FSCD • Assigns GRM focal person to monitor the management, resolution, and reporting of grievances. This focal person will be responsible for receiving the list of appeals and resolutions from the woreda level and transmitting them to the federal GRM focal person. • The gender desk in regional BoA will be monitoring of issues related to GBV and reported to the program GRM, to report to FS bureau

Environmental and Social safeguard specialists Assigned as focal persons for this project (Regional level)	• Lead the overall Environmental, Social; and Health and Safety issues at their respective Regions (Regional level)
Woreda level	
Woreda Food Security Desk	• Participate in the implementation of assigned activities in the SEP; • Provide report on all grievances submitted to the GRM to the Regional GRM focal person; • Make available project information (brochures, flyers) and GRM procedures to the public. • Provide guidance for the formation of the Kebele Appeals Committee • Support awareness-creation activities • In woredas with MIS, input list of grievances and their resolution into the system • Approve the use of woreda contingency budget • The women, children and youth desk in office of agriculture will be monitoring of issues related to GBV and reported to the program GRM, to report to FS bureau. WoLSA will be part of the woreda BoA women, children and youth desk.
Woreda Council	• Assist in resolving escalated and unresolved appeals
Woreda Women, Children, and Youth Affairs	• Depending on capacity, will advise on gender mainstreaming in the project planning and implementation, and consult on issues related to gender, GBV, children and youth
Community level	
KAC	• Receive grievances from PAP • Provide a listing of the grievances received and their resolution to the Kebele Council and Woreda Council within two months of the complaint being heard.
Kebele Council	• Assist in establishing and ensuring the effective operation of the KAC • Review unresolved appeals from KAC and forward them to the Woreda Council and the Woreda Food Security Desk every quarter • Forward the list of grievances, their resolution and any unresolved cases to the Woreda Council
PAP	• Invited to engage and ask questions about the Project during community gatherings • Lodge their grievances using the Grievance Resolution Mechanism defined in the SEP

Collaborative and regulatory Institutions for effective implementation of the project	
MoA-Women, Children and Youth Affairs	• Monitoring and reporting on issues related to GBV issues and reported to the program GRM. MoLSA will be part of the federal taskforce and collaborating with WCYD on GBV issues.
Environment, Forest and Climate Change commission	• Regulate Environmental and social impact assessment and mitigation, the structure up to lover level will involve
MoF	• Co-chair for steering committee • Facilitate project finance
MoH	• Collaborate in Health impact reduction activities, the structure up to lover level will involve
MoLSA	• Regulate OHS issues, the structure up to lover level will involve
Multilateral Actors	
World Bank	• Financial support and provide any technical guidance as required, and plays an over sighting role on the overall ESF implementation
FAO	• Collaborator in technical aspects and assistance

5. Environmental and Social Risk Management of EELRP

This ESMF has addressed and focused on impacts emanated from activities of Component 1: Locust monitoring and control, Component 2: Livelihood protection and restoration, and Component 3: Strengthening Early Warning Systems and Preparedness.

5.1. Environmental and Social Risk Classification (ESRC) and Impacts of EELRP

5.1.1. Environmental and Social Risk Classification (ESRC) of EELRP- Overall Project Level

According to the ESRC of the proposed Project, overall, this proposed project has been classified as **having high risk** given that significant adverse environmental and social impacts are expected to occur due to implementation of the project. These expected environmental and social risks, if proper management is not designed and implemented, have been discussed as follows.

Environment Risk: The project requires awareness and realistic assessment of risks to agriculture production and livelihoods. As this project will finance procurement of insecticides, supplies of equipment for ground and aerial spray of insecticide like modern vehicle mounted sprayers (with vehicles), motorized sprayers and ULV sprayers, airplane and field vehicles, the environmental risks will mainly be associated with the spraying operation of the insecticides, occupational risk to those directly involved in spraying operations as they tend to be exposed to insecticides and thus also run the highest risk of being poisoned; for local population in the areas in which spraying is carried out, but could also be through consumption of contaminated food grown in sprayed areas.

There are also environment risks in the disposal of empty insecticide drums, bags or other containers, from contaminated or damaged personal protective equipment (PPE) or from accidentally spilled insecticides. The effects of pesticides from chronic to acute depend not only on how heavily they are applied, but also on their toxicity and persistence in the environment, their handling, and the susceptibility of non-target organisms that get sprayed, ingest pesticide granules, or consume contaminated water or food. Improper mixing, dosing, or timing, for instance, can render pesticides less effective and accelerate pest resistance, leading farmers to apply more. Even with proper use, battling pests with chemicals can lead to a kind of arms race that cyclically sends farmers reaching for more potent substances.

The use of highly toxic or persistent chemicals, including ones that have been banned in their country of origin or use, or outdated and improperly stored – risk to human and ecosystems in case of weather related impacts, which could create spillage of deposits and pollute further is another critical problem in many parts of the world; and the consequences of such chemicals can last long after their use has been uprooted. **As a result, the potential environmental risk of the project is high**. The PIU should put in place strong insecticide management operational manual as well as appropriate waste management system.

Social Risk: The key potential risk related to the operation are (i) human health risks, agricultural crop damage, (ii) overuse/misuse (beyond buffer zone damages) of pesticides during spraying on livestock, crop, fodder and humans, (iii) inadequate prior information for communities in target areas about the project, potential benefits and impacts of pesticide use for locust infestation management, (iv) lack of comprehensive compensation for out of control damages (beyond buffer zone damages) on livestock, crops, fodder or humans, (v) potential exacerbation of vulnerable livelihoods of Internally Displaced People (IDPs) in project areas, (v) inadequate/ miscommunication about the targeting for livelihoods support, (vi) pesticide residual impact on humans, crops, livestock (including from grazing area), human and livestock water points (wells) (vii) GBV incident particularly worker deployed in conflict areas, (viii) involuntary resettlement including physical and economic displacement during land acquisition for the base centre construction, (ix) risk of targeting bias and/or error including risks of exclusion of vulnerable people and underserved groups (x) security risk. Whereas, the social and environmental risk management for the project will depend on, (i) adhering to the requirements of safe pesticide use and management international good practices, national guidelines and World Bank Environment and Social Standard requirements outlined in the ESMF, (ii) systematic communication and community outreach to create awareness (a) the potential benefits and risks, (b) awareness and prior information about pesticide spraying; (iii) articulated and negotiated compensation mechanism for out of control (beyond buffer zone) potential impacts and damages, (iv) ensure tailored approach for locust infestation management in IDP and conflict affected areas; (v) provide adequate information and adopt a participatory approach for the implementation of the livelihoods support component; (vi) avoiding involuntary resettlement, and providing the necessary compensation and livelihood restoration mechanism based on early planning of the RAP; (vii) adopting differentiated mitigation measures and targeting mechanisms to avoid targeting bias and error (viii) ensuring vulnerable people have access to project benefits. This includes placing clear beneficiary targeting criteria and procedures for various stages of the targeting exercise; (ix) participating the community in the decision-making process of beneficiary targeting and input package selection (x) implementing security management measures for workers appointed in a conflict area and (xi) implementing the updated GBV Action Plan.

The project should map the services and referral pathways for any potential poisoning of humans and livestock, livestock feed including direct workers safety. The project will use and build on the FAO Desert Locust Guidelines, section 6. Safety and environmental Precautions issued 2003. The International Code of Conduct on Pesticide Management of the WHO FAO of the United Nations issued 2014; Good Practices for Aerial and Ground Application of Pesticides and develop a community outreach and

communication guideline, complemented by Rural Productive Safety Nets Project ESMF, etc. The comprehensive ESRC is considered high.

Positive Impacts: The Potential positive impacts of EELRP include among others are: -

- Combating the damage created by the widespread desert locust in Ethiopia,
- Protect fragile livelihoods from locust infestation and subsequently enhance the food security of communities through livelihood support in the project area,
- Provision of opportunities to reclaim human capital and asset losses due to the dessert locust,
- support vulnerable households to gain access to livelihoods support,
- Temporary feed/fodder distribution and essential agricultural inputs for building livelihoods, and
- Restocking of livestock, rehabilitating rangelands, provision of veterinary services including vaccination for prevention of disease outbreaks
- Provision of employment opportunity for pesticide spraying operators and
- Reduction of poverty and food insecurity through PSNP.
- The establishment of the base also enables the timely and right reaction to locusts as well as other migratory pests by early survey, surveillance, and controlling the outbreak or infestation of crops that will in turn reduce the number of resources spent such as the time, the financial and human power that would be wasted otherwise

In order to avoid or mitigate environmental and social risks and enhancing positive impact of the project, this ESMF has given due attention and emphasis on proper planning and design of Subprojects/activities of the proposed Project. The selection, planning, design and implementation of the activities under EELRP have to be consistent with the relevant national environmental and social management requirements as well as the World Bank **Environmental and Social Standards (ESSs)** applicable to the project and international conventions. In each case, national, regional, woreda and local institutions to be involved in screening, reviewing and approving subprojects; will carry out their respective roles and responsibilities. The responsibilities may include identification, screening, conducting environmental and social impact assessment (ESIA), and reviewing the ESIA report for ensuring compliance to obligatory requirements under laws and regulations, and issuing approvals for subproject implementation.

5.1.2. EELRP's Component Level Potential Environmental and Social Impacts Analysis and Precautions

5.1.2.1. Component 1: Locust monitoring and control

Component 1- Locust monitoring and control: Under this component there are two major Subprojects/Activities which needs special concern regarding potential Environmental and Social impacts emanated from those subproject activities and respective risk/impact management. These Subprojects are spraying operation and Renovation of nine Major Pesticide Stores located one in the center (National Store) and eight in major towns of the country.

1. Spraying Subprojects: Under this Subproject, various activities will be carried out. Among those activities Pesticide management and spraying operations are key area for effective pest management and are also concern for Environmental and Social risks/impacts. Farmers use pesticide chemicals (herbicide, insecticide, fungicide and others) to control pests and increase agricultural productivity. Pesticides have played an important role in creating and sustaining the agricultural revolution. However, their toxic nature, pesticides pose a risk to humans, animals, and the environment when they are not handled properly. Absence of safety precautions can result in accidents, affecting the producer, the employees, their families, and farm animals, sometimes with serious consequences. Those at greatest risk are those who experience the greatest exposures typically small- holder farmers, farm workers, pesticide spray operation workers and their families. Larger holders are more likely to have received training on pesticide

risk avoidance; however, laborers hired by them may not. The unsafe use of pesticide product also poses serious negative impact on the environment (soil, water, plant, wildlife, microorganisms, and others).

The spraying operation due to inadequate adherence to occupational health and safety standards can lead to illness and death among field workers. Though there is no direct involvement in control operations, the local population can be exposed to insecticides. The same way, the insecticides that are used at present for Locust control may have broad-spectrum activity and are thus not entirely specific to locusts. As a result, they may adversely affect other organisms in the environment. Effluents resulting from the rinsing of pesticide drums and aircraft tanks may also pollute the environment and ground water through leakages.

Furthermore, insecticides can have a broad impact on many aspects of life and ecosystems. Effects on ambient conditions such as the incremental contribution of pollutant emissions in an air shed increases in pollutant concentrations in a water body or in the soil. The loss of biodiversity (death of plant, wildlife, and microorganisms) are also possible cumulative risks and impacts of insecticide use. Therefore, the insecticide must have negligible adverse human health effects:

- The insecticide must be shown to be effective against the target species.
- The insecticide must have minimal effect on non-target species and the natural environment. The methods, timing, and frequency of pesticide application are aimed to minimize damage to natural environment.
- Their use must consider the need to prevent the development of resistance in pests.

Besides, pesticides to be financed should be manufactured, packaged, labelled, handled, stored, disposed of, and applied according to standards acceptable to the World Bank. This Project will not finance formulated products that fall in WHO classes IA and IB, or formulations of products in Class II. Thus, an appropriate pesticide management plan is prepared in parallel with this ESMF to address the potential risks.

Therefore, to implement the EELRP, an appropriate approach should be developed to protect human health and the environment from risks associated with pesticide use. This includes protection of pesticide users, consumers, the public, livestock, wildlife, water bodies, etc. For this project, the criteria, as per the list of FAO Desert Locust Guidelines should be considered in the selection and use of insecticides.

This ESMF emphasizes subproject planning should strive for plans and designs that avoid or minimize creating adverse environmental and social impacts that have to be explicitly managed. Initially, the potential Positive and negative impacts of the project are identified, and some of the positive impacts of the EELRP are listed below:

- Protect fragile livelihoods from locust infestation and subsequently enhance the food security of communities through livelihood support in the project area.
- Provides opportunities to reclaim human capital and asset losses due to the dessert locust.
- Support vulnerable households directly and significantly affected by Desert Locust infestation to gain access to livelihoods support in the form of, feed/fodder distribution and essential agricultural inputs for building livelihoods, restocking livestock, rehabilitating rangelands, veterinary services including vaccination for prevention of disease outbreaks.

For this project, the following criteria, as per the list of FAO Desert Locust Guidelines stated below, will be considered in the selection and use of insecticides:

- The insecticide must have negligible adverse human health effects
- The insecticide must be shown to be effective against the target species.
- The insecticide must have minimal effect on non-target species and the natural environment. The methods, timing, and frequency of pesticide application are aimed to minimize damage to natural environment.

- Their use must consider the need to prevent the development of resistance in pests.

Only registered insecticides should be used for Desert Locust control (where applicable). Use the decision scheme provided in Annex 8, Figure **4, and 5** below to check whether actions are needed for the registration of products in your campaign.

Besides, pesticides to be financed should be manufactured, packaged, labelled, handled, stored, disposed of, and applied according to standards acceptable to the Bank. This Project will not finance formulated products that fall in WHO classes IA and IB, or formulations of products in Class II, if (a) the country lacks restrictions on their distribution and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly. The PIU should prepare an appropriate pesticide management plan to address the potential risks. The list of potential Impacts of EELRP and the associated potential Mitigation Measures of EELRP are provided in **Table 4**.

In addition, the MOA, Plant Protection Directorate, the project implementing entity will use, FAO Desert Locust Guidelines on safety and environmental precautions:

- Guidelines on Good Practice for Ground Application of Pesticides, 2001;
- Guidelines on Good Practice for Aerial Application of Pesticides, 2001;
- Guidelines for personal protection when handling and applying pesticides, 2020;
- FAO Desert Locust Guidelines 4. Control; 2001
- FAO Desert Locust Guidelines 5. Campaign organization and execution; 2001
- FAO Desert Locust Guidelines 6. Safety and environmental precautions; 2003
- Guidelines on Organization and Operation of Training Schemes and Certification Procedures for Operators of Pesticide Application Equipment, 2001;
- Guidelines on Developing a Reporting System for Health and Environmental Incidents Resulting from Exposure to Pesticides, 2009;
- Prevention of Accumulation and Disposal of Obsolete Stocks; 2009, 2011 and
- The International Code of Conduct on Pesticide Management of the World Health Organization Food and Agriculture Organization of the United Nations Rome, 2014

These guidelines include among others provision to address the reduction of environmental and human health risks from insecticide use during locust control are discussed. Practical recommendations are given on how to address risk reduction during the campaign preparation phase, how to implement it during the control operations, and how to evaluate it in post-campaign follow-up, and environmental and human health monitoring during locust control operations.

The Environmental and Social Management Framework (ESMF) developed for the EELRP to incorporate the issues related to the increased use of pesticides and associated potential risks, impacts and proposed measures to avoid, minimize or mitigate these risks. The ESMF (including an ESMP template and a IPMP template) will adequately cover environmental and social potential impact control measures and procedures, for the safe handling, storage, and processing of locust management pesticide and materials including the techniques for preventing, minimizing, and controlling environmental and social impacts during the operation of project. It will incorporate measures to reflect climate variability in the design of sub-projects, to add elements of runoff and leaching control during the rainy seasons.

Negative Environmental Impacts and Risks of Pesticides and Associated Precautions

It is obvious that potential environmental and health risk are likely to occur at the various handling stages of pesticides for the management of Desert Locust outbreaks. This is due to the fact that potential risks on the human health, animal health and the environment associated with various handling stages including during shipment /importation, transportation, storage, distribution, use of pesticides and disposal of the empty container.

The use of pesticides for management of desert locust infestation project employs essential safeguard measures. Among the measures adhering to pesticides only in compliance with the World Bank ESS, and within the list of FAO guideline and registered by the local government, i.e, MoA, Plant Health Regulatory General Directorate.

Table 3. Registered pesticides for desert locust control in Ethiopia

Common name	**Trade name**	**Approved use**	**Registrant**
Malathion	Ethiolathion	Desert locust control	Adamitulu Pesticide Formulation Plant
Chlorpyriphos	Ethiopyriphos	Desert locust control	Adamitulu Pesticide Formulation Plant
Fipronil	Adonis	Desert locust control	FS Plc. (Not Actively supplying)
Chlorpyriphos	Dursban	Desert locust control	FS Plc (Not Actively supplying)
Carbosulfan	Marshal	Desert locust control	FS Plc (Not Actively supplying)

Source: Plant Protection Directorate, MoA

Currently EELRP has planned to purchase and apply/use the following pesticides for the Desert Locust invasion prevention and control in most desert locust prone areas. These are Malathion 50% EC (100,000 litres); Chlorpyrifos 24% ULV (100,000 litres) and Malathion 95% ULV (300,000 litres). The nature of these pesticides indicated that Malathion pesticides has less toxicity and categorized (WHO) as Class 3, while Chlorpyrifos 24% ULV has moderate toxicity and categorized (WHO) as Class 2.

Accordingly, before the application of every pesticide that will be used for the management of locust invasion, through evaluation will be made as per the Project's IPMP requirements. In line with this, Project level IPMP has been developed. This IPMP encompasses all subprojects/spraying activities undertaken in the project jurisdiction. However, if the need arise to develop site specific IPMP, the woredas or Regions could customize the already prepared Project level IPMP. Adequate and quality (fit to the purpose) Personal Protective Equipment (PPE) will be provided for all as per the recommended minimum personal protective equipment (PPE) for desert locust control. Provisions of training on proper use and maintenance of PPE will be made as per WHO standard. Apart from this, all control staff including drivers, storekeepers, driver assistance, pesticide refilling personnel, Hand-held motorized sprayer workers, vehicles mounted sprayer workers, flagman, etc will be trained on OHS, emergency response, IPM, etc.

Linkage will be established with zonal hospital and health center and contact will be made with those institutions. Data sheets on pesticide poisoning will be provided to hospitals and health centres. Beside all control staff will undergo pre-campaign medical examinations baseline will be taken. Referral system will be established. Post-campaign health examinations, residue or ecological monitoring needs to be continued after the last control operation.

Besides, only aircraft equipped by modem navigation system GPS to identify the site will be treated with geographical co-ordinate and a radio connection between the agents on the ground and the pilot will be used. Complete list of ecologically and agronomically sensitive areas list has been made in all regions. Control teams will also always make sure that no ecologically and agronomically sensitive areas, person and livestock is present in the area to be sprayed. Besides during spraying, control staff who will not directly involved in the application will verify that bystanders remain at a safe distance. Moreover, the staff will make sure withholding periods are respected after locust control treatments through intensive sensation. The aircraft will use chemical stores previously established for the army worm at Arba Minch airport, Bale Robe airport, Jig Jiga airports and Borena Tele airport.

The quality of any insecticide imported or locally formulated for locust control will be checked by national quality specifications exist and as per the FAO pesticide specifications that the packaging and labelling of the highest standard and container is durable and very robust to avoid damage, and subsequent environmental contamination. Furthermore, it will be ensured that each pesticide has safety data sheet. This is mainly done through incorporation of the above requirements in the procurement bidding document. The transportation of pesticides will be made by trucks meant for transporting chemicals owned by MoA and additional trucks which are fit to the purpose will be rented. Any terrestrial treatment devices will be regularly calibrated by the concerned body. Accordingly, the motorized spray, Vehicle mounted spray, and GPS will be calibrated before every operation on site by trained expert on control and calibration guideline for the experts. Besides, the treated data will be through with recording forms from the operational team to properly trace the use of pesticides. The forms used for this purpose are adopted from FAO. The technicians in charge of the management of the data will be on the RAMSES system developed by the FAO. The tablet used for RAMSEs are only ten in number throughout the country of which six are in federal and four in Afar, Somali, Oromia and Tigray regions. Procurement of Tablet, RAMSES software and the computer will be made for regions and for the federal.

2. Renovation of Pesticide Stores Subprojects: Under this Subproject, renovation of nine Major Pesticide Stores located one in the center (National Store) and eight in major towns of the country will be carried out.

Furthermore, the project will make use of exciting pesticides storage in the target zonal and woredas Agricultural bureau which is well-guarded to avoid local people exposure to the insecticides. The stores are located well away from habitations and main traffic routes, and a good distance downwind. The buffer zone around the pesticide storage site will be made. In addition, fuel storages are located well away from habitations and camp sites. Necessary precautionary measures also have to be taken to avoid the fire risk.

Empty containers, Contaminated PPE and accidentally spilled insecticides will be cleaned up immediately to the control center to avoid further contamination and if possible, the purchasing contract should include the pesticide manufacturer to take back the drums for reconditioning. Impacts associated with this subproject are mainly OHS and COVID 19 issue during the renovation of those nine stores located in various towns of the Country. Furthermore, operational risk associated with storing will occur. Since this Subproject dwells on Spraying operation, storing, loading and transporting pesticides and fuels, there could be occurrences of unprecedented risks and accidents. In order to avert the occurrence of such risks, this ESMF has specified this Emergency preparedness measures as specified table below. Accordingly, those subprojects specified under Component 1 should follow this Emergency preparedness measures.

Risk of Spraying Subprojects and Emergency Preparedness Measures

S.N	Risk	Risk Source	Emergency preparedness measures
1.	**Fire risk**	**Stores** Certain insecticide formulations are inflammable and aircraft fuel is very highly so	No smoking is allowed around fuel and insecticide storage sites and during refuelling of aircraft. During refuelling any engine or apparatus that may give off sparks (e.g., cars) should be shut down or moved away.
			Preparedness for firefighting equipment's and procedures in all stores and full station of the operation
			Training on fire fighting for pesticide and fuel stores workers
2.	**Spillage and leakage**	**Stores and Transportation** Care should be taken that	Large-scale pesticide stores should be custom-built. They must have all the necessary safety

		insecticides are stored in the shade, whenever this is possible. Overheating may lead to build up of pressure inside the insecticide drums, which may burst or forcefully eject the product when the bungs are opened.	features to contain possible insecticide spillage,
			If control is carried out from the same site for several days, drums can be protected from direct sunlight by placing them under tarpaulins on poles. To contain any possible spills that may accidentally occur, temporary soil bunding should be constructed around the storage site. Special portable bunding also exists for temporary drum storage, which has the advantage that spilled insecticides will not penetrate into the soil
			Provision of emergency response measure training to drivers, storekeepers, driver assistance, and pesticide refilling personnel
3.	**Fumes**	**Stores**	Ensure sufficient ventilation and provide protection against rain and sunlight.
			Adopt FAO detailed guidelines on the design of pesticide stores
4.	Splash and Drenched by the insecticide	**Filling aircraft hoppers, Filling vehicle-mounted, hand-held sprayers and insecticide loading** This is potentially a hazardous operation, because if an accident occurs the operator may literally be drenched by the insecticide. The main risks associated with pumping are bursting of hoses and loosening of the connections between the hose and the pump. Both risks are more likely to occur with motor pumps. It is therefore essential that pumping gear is of good quality and well maintained. ULV insecticides may be very corrosive and can destroy pump hoses relatively rapidly. Filling other types of sprayers may also be hazardous, since concentrated ULV formulation can splash on to the operator.	Hoses should be checked daily for wear and tear and corrosion and replaced as soon as needed. Similarly, connections between the hose and the pump may slowly loosen during operation, increasing the risk of operator exposure. They should be checked and fastened on a daily basis. Directly pouring insecticides from drums into an aircraft hopper poses a high risk of operator contamination and may also damage the aircraft. This practice is therefore not recommended.
			Vehicle-mounted sprayers are best filled using a hand-operated drum pump. As with aircraft pumps, the hose may corrode relatively rapidly, and should be replaced immediately when this occurs. Smaller containers (up to 20 litres) can be poured directly into the sprayer. Hand-held sprayers are normally filled by pouring the insecticide directly from the container. A wide funnel should be used to facilitate pouring and avoid spillage.
			For all insecticide loading operations, personnel should wear appropriate PPE, and water and soap for washing should be available. Sprayers should always be filled well away from habitations, bystanders, animals and water sources. Empty containers should be rinsed with a small amount of diesel or kerosene, and the rinsed added to the hopper or sprayer. Containers should be closed well after use (even if empty) and stored

			in a safe location

Potential Adverse Environmental and Social Impacts and Risks of Component 1

Locust monitoring and control Component of the Project will have potential Environmental and Social risks and impacts associated with communities in target areas not having adequate information and priory informed about impacts of pesticide use for locust infestation management. The other risk can be low capacity at woreda and kebele levels and coordination gaps between sector offices including technical capacity limitation on the part of implementing offices. In addition, lack of occupational health and safety of the labor force and neighbouring communities' exposure to health and safety, especially exposure to pesticide and COVID-19 pandemic are among the potential risk and impacts relate to Component 1 of the Project.

Some of the well-known potential impacts and risks on environment and humans including socio economic impacts of Component 1 are the following.

- **Risks to the environment:**

- pollution of ecologically sensitive habitats such as wetlands, national parks and water bodies as a result of pesticide
- loss of non-target biodiversity as a result of pesticide spraying
- fire risk as a result of inflammable nature of pesticides and fuels visa vis improper storage and application
- Soil, surface water and ground water pollution as a result of pesticide spillage and leakage
- air pollution through dust emissions, and

- Pollution due to unused and obsolete pesticide, and empty pesticide containers **Social Risks:**

- Risks to community and workers' health,
- Accidental poising of workers and nearby community members
- Risks to animal health and greenhouse gas emissions and climate change risks,
- Inadequate prior information for communities in target areas about impacts of pesticide use for locust infestation management, availability of compensation for assets and human affected by pesticide spraying beyond the defined buffer zone and livelihood support,
- low capacity at woreda and kebele levels and coordination gaps between sector offices including technical capacity limitation on the part of implementing offices,
- Lack of awareness on the impact of pesticides among the local community
- lack of occupational health and safety of the labour force and neighbouring communities' exposure to health and safety, especially exposure to pesticide and COVID-19 pandemic,
- risk of involving dominant clan that may create targeting error,
- Exclusion of eligible beneficiaries,
- GBV risks and Risk of elite capture,
- risks of GRM, and elite capture that may create targeting error,
- Inadequate awareness about the nature, amount and use of fertilizers and pesticides by the community, and
- Risk of overlooking of historically underserved regions and vulnerable community; and Potential exacerbation of vulnerable livelihoods of IDPs in project areas and worsening of conflicts among the pastoralists.

5.1.2.2. Component 2: Livelihood protection and restoration

Component 2: Livelihood protection and restoration: Under this component there are four major but interrelated Subprojects/Activities which need special concern with regard to potential Environmental and Social impacts emanated from those subproject activities and respective risk/impact management. These Subprojects are Provision and distribution of Seeds- Fertilizer-Pesticides- Subprojects; Provision of forage seeds to be planted- Subprojects; Establishment of Nursery sites for Forage seedlings- Subprojects; and Provision and Distribution of Forage/Fodder- Subprojects.

Some of well-known potential impacts and risks on environment and humans including socio economic impacts of this Component are the following:

- **Risks to the environment:**

- Loss of ecologically sensitive habitats such as wetlands, forestlands and water bodies as a result of seeking for agricultural land and pasture development,
- loss of biodiversity as a result misuse of pesticides
- Surface water pollution as a result of misuse of agricultural inputs such as pesticide and fertilizers,
- air pollution through dust emissions
- Pollution due to unused and obsolete pesticide, and empty pesticide containers
- Generation of Solid waste as a result of agrochemical wastes/ (i.e. packaging containers)
- Soil erosion, farm input & grant may lead to opening up new areas for cultivation
- Introduction of alien and invasive species as a result of efforts made for restoration of degraded rangeland with seeding of pastures and appropriate livestock fodder

- **Social Risks:**

the potential social risks and impacts related this Component include

- Lack of information on the potential project's livelihoods support and compensation for out of control damages and unintentional overuse/misuse (beyond buffer zone damages) on livestock, crops, and fodder. is
- Involving one clan that is more dominant over others during targeting process mainly among lowland communities in relation to the provision of seeds-fertilizer-pesticides.
- targeting errors might happen during pasture/crop seeds and temporary fodder/forage provision for the desert locust affected communities. This means locust impacted individuals might be excluded.
- increase instances of domestic violence between women and men or husband and wives in relation to livelihoods support or interventions at household level by the project in which men or husbands may not properly use the crop/pasture seeds/pesticides/fertilizers in combating the outbreak of locust.
- in the pastoral and agro-pastoral community, it is common practice that men tend to grab resources or properties from women by force to meet their individual needs. As a result, the supports might not be used for eligible households that are affected by the outbreak of the locust infestation.
- elite capture and/or different interest groups including traditional authority structures in influencing community's prioritization and manipulation of support provided; lack of transparency during beneficiary selection for the packages and technical assistance and the exclusion of certain groups and individuals from project benefits in particular vulnerable people and the historically disadvantaged regions of Ethiopia.

- lack of occupational health and safety of the labour force and neighbouring communities' exposure to health and safety, especially exposure to pesticide and COVID-19 pandemic,
- Occupational Safety and Health Risks associated with the construction of detours and other facilities for the stocking and distribution of fodders and other support for the affected communities.
- Exclusion of eligible beneficiaries,
- GBV risks and Risk of elite capture,
- risks of GRM, and elite capture that may create targeting error,
- Inadequate awareness about the nature, amount and use of fertilizers and pesticides by the community, and
- Risk of overlooking of historically underserved regions and vulnerable community; and Potential exacerbation of vulnerable livelihoods of IDPs in project areas and worsening of conflicts among the pastoralists.

5.1.2.3. Component 3: Environmental and Social Risks/Impacts and Precautions

Component 3: E&S risk of this component arises from the proposed construction of federal-level control operation centers, regional frontline bases, and sub-bases. These activities require land for construction and may result in the possession of the land that would be used for residence, business, pasture, and farming. Owing to this, the risk of physical and economic displacement in the community is expected. On the other hand, the construction operation of the base center will also be associated with risk of human remains or archaeological damage as a result of land clearing and excavation, risk of cultural and physical heritage damage; community health and safety risks due to labor influx for construction work, and worker health and safety risk. Since the project has for a long time relay on PSNP grievance system it is important to establish project-specific GRM system which has a systematic uptake, processing and resolution of project related complaints and grievances, specifically, for spraying activities.

5.1.2.4. Component 4 Project Management

Component 4: Project Management- This component is mainly dwell on financial, human resource and administrative issues of the project and not involved in other on ground project activities. Hence no environmental and social impacts are expected from this component. However, lack of capacity in managing project at different levels particularly at woreda and the kebele levels and there might also be a problem of timely allowing budget and implementing the activities; and weak linkages and coordination among institutions, sectors, programs and projects at all levels are risks and impacts related to component four of the project.

Besides, there are risks related to cross cutting issues that include exacerbating gender based violence and sexual exploitation and abuse due to labor influx mostly associated with the cash transfer activities and to a more limited extent with other activities that involve non-local workers; overlooking of historically underserved regions and vulnerable community in general, and people with disability, children, women in polygamous unions and female headed households in particular; and potential exacerbation of vulnerable livelihoods of IDPs in project areas and worsening of conflicts among the pastoralists due to the damage of the pasture by the locust invasion and during migration to other territories in search of grazing land for their livestock.

5.2. Possible Mitigation Measures

In the Table 4 below potential negative impacts and risks of the project aligned with their proposed mitigation measures. Moreover, for the main mitigation measures that have been proposed, appropriate budget has been allocated in the draft PIM of the project. Accordingly, Component 1 mainly the Spraying subprojects, the IPM and the implementation of IPMP (see separate but appendix part of this ESMF's IPMP document) of this project will be guided and act in line with the proposed mitigation measures specified in this ESMF and EELRP's PIM documents. Other Components, like component 2, subprojects

will fully be adhered with this ESMF requirements and guidance on managing environmental and social impacts emanated from this component activity. It is also relevant to refer the standalone instruments prepared and cleared (SA, GBV/SEA, LMP and SEP) during the project implementation.

Table 4. Potential environmental and social Impact/Risk Description and Proposed Mitigation Measures

(i) Potential environmental impact and mitigation measure		
Components-Subprojects/Key activities	**Potential Environmental Impacts**	**Mitigation Measures**
Component 1	• Loss of ecologically sensitive habitats • Contamination of local water sources and agronomically sensitive areas • Loss of biodiversity • Soil erosion and pollution, • Degradation of the rangelands: excessive application of pesticides can contaminate soil and kills other non-target organisms which are beneficial for enriching the soil nutrient content. • Air pollution through dust emissions, • Accidental Pesticide spills during storage and transportation and excessive use • Disposal obsolete pesticides, and empty pesticide containers disposal • Generation of solid waste, • Accumulation of obsolete stocks. • Greenhouse gas emissions and Climate change	• Identifying and mapping out sensitive ecological and agronomical areas, establishing Strict Operational Procedures (SOP) and a judicious choice of pesticides (i.e. Biopesticides could be used in/near potentially sensitive areas). • Map out the various sensitive areas and make overlays with previous (or newly expected) locust infestations. • Establishing buffer zone free of spraying for each type of sensitive areas such as (1) National Park with 1km buffer zone (2) Ponds, lakes and rivers with 500-meter buffer zone (3) Churches like Lalibela, Gishen, with 1km buffer zone (4) Beehives and Agronomical Important Farm areas with 500-meter buffer zone • Implement Integrated Pest Management (IPM) technique and reduce reliance on synthetic chemical pesticides. (Use both synthetic chemical pesticides and Biopesticides). • Apply Integrated Pest Management Plan document of the EELRP • Use alternative pest control methods (physical, mechanical, and biochemical) • Recommended Classification of Pesticides for Ethiopia is Malathion which is WHO Class III and slightly hazardous. • Develop a mechanism/ design a system for safe disposal of unused and obsolete pesticide, and empty pesticide containers and never reuse. Ensure the safe disposal of empty containers, tank washings and surplus pesticides • Train all control staff including drivers, store keepers, driver assistance, pesticide refilling personnel, Hand-held motorized sprayer workers, vehicles mounted sprayer workers, flagman, etc on OHS, emergency response measures and IPM
Component 2	• Loss of ecologically sensitive habitats • Loss of biodiversity as a result misuse of agricultural inputs such as	• All mitigation measures proposed for Environmental risks/impacts of Component 1 will be applicable for Component 2 as

	pesticides and fertilizer • Surface water pollution as a result of misuse of agricultural inputs such as pesticide and fertilizers, • Air pollution through dust emissions • Pollution due to unused and obsolete pesticide, and empty pesticide containers • Generation of Solid waste as a result of agrochemical wastes/ (i.e. packaging containers) • Soil erosion, farm input & grant may lead to opening up new areas for cultivation • Introduction of alien and invasive species as a result of efforts made for restoration of degraded rangeland with seeding of pastures and appropriate livestock fodder	required
Component 3	• Solid waste generation during construction and operation of the base-centres • Accidental spill of pesticide and groundwater contamination during operation phase of the base centres • Empty chemical container and obsolete/unused pesticide accumulation during operation stage of the base centres • Occupational health and safety risks during pesticide handling, transportation, and spraying	• Prepare site specific ESIA and ESMP for each base centre and implement the mitigation measures accordingly • Incorporate environmental risk management specific standard and ESCP provision in contractual agreement entered between the MoA and contractor • Monitor and reporting the implementation of ESMP and contract provisions

(ii) Potential social impact and mitigation measure		
Components-Subprojects/Key activities	**Potential Social Impacts**	**Mitigation Measures**
Component 1	• Inadequate prior information for communities in target areas about impacts of pesticide use for locust infestation management. • Low capacity at woreda and kebele levels and coordination gaps between sector offices including technical capacity limitation on the part of implementing offices. • Lack of occupational health and safety of the Labor force and neighbouring communities' exposure to health and safety, especially exposure to pesticide and COVID-19 pandemic	• Carry out awareness-raising and provide relevant and timely information to local communities on pesticide treatment schedules and potential negative impacts. • Provide public awareness and inform the local population about safety precautions using different approaches (local radio, TV, leaflet with local language, public presentation) and prepare contextualized communication strategy. • Inhabitants in the treatment areas should be informed of the operation beforehand and warned not to come close to it. • Control teams should always make sure that no ecologically and agronomically sensitive areas, person and livestock are present in the area to be sprayed.

		• The projects LMP which provides mitigation and monitoring related to worker risks and impacts. • During spraying, control staff who will not directly involved in the application will verify that bystanders remain at a safe distance. • The staff will make sure withholding periods are respected after locust control treatments through intensive sensation. • Training for staffs to strengthen on desert locust monitoring and control capabilities in the handling and application of insecticides and important ways to reduce health and environmental risks. • Follow and implement the project Labor Management Procedures and • In all activities of the project, prevention of COVID-19 should be mainstreamed and the necessary protective equipment should be provided to all staffs. Besides, social distancing should be implemented during meetings. • All sanitary material helpful for washing and disinfection should be availed. Stringent guideline of WB should also be used.
Component 2	• Inadequate awareness about the nature, amount and use of fertilizers and pesticides by the community. • There might be targeting error in the process of providing seeds-fertilizer and pesticides and also pasture seeds and fodder. • Lack of information on the potential project's livelihoods support and compensation for out of control damages and unintentional overuse/misuse (beyond buffer zone damages) on livestock, crops, fodder or humans. • Risk of involving one clan that is more dominant over others during targeting process mainly among lowland communities in relation to the provision of seeds-fertilizer-pesticides, as a result targeting errors might happen during pasture/crop seeds and temporary fodder/forage provision for the desert locust affected communities. This means locust impacted individuals or eligible beneficiaries might be excluded • Increase instances of domestic violence between women and men or	• Monitor changing livelihood dynamics with view to retargeting to include those that may fall into food insecurity; • The MOA has to ensure the involvement of the community in a participatory, consultative and transparent manner to select the appropriate beneficiaries who deserve for it • Inform and define compensation mechanism for unintended overuse/misuse (beyond buffer zone damages) of pesticides on livestock, crops, fodder or humans. • Ensure awareness around importance of targeting women for livelihoods support activities Broaden the representation of community members on targeting committees with greater emphasis on the participation of women; • Awareness creation among the men that the women are using the support for the whole family and elders or traditional leaders should provide awareness for the community to avoid violence against women There should be controlling mechanism of the elite capture. In this respect, beneficiaries should be realistically selected in consultation with representatives of the community • Create awareness among traditional authority structures and undertake information campaign to ensure the purpose and principles

	husband and wives in relation to livelihoods support or interventions at household level by the project in which men or husbands may not properly use the crop/pasture seeds/pesticides/fertilizers in combating the outbreak of locust. Similarly, in the pastoral and agro-pastoral community, it is common practice that men tend to grab resources or properties from women by force to meet their individual needs. As a result, the supports might not be used for eligible households that are affected by the outbreak of the locust infestation. • Increase instances of domestic violence between women and men or husband and wives in relation to livelihoods support or interventions at household level by the project. In the pastoral and agro-pastoral community, it is common practice that men tend to grab resources or properties from women by force to meet their individual needs. • Elite capture and/or different interest groups including traditional authority structures in influencing community's prioritization and manipulation of support provided; lack of transparency during selection of the beneficiaries for the financial and technical assistance and the exclusion of certain groups and individuals from project benefits in particular vulnerable people and the historically disadvantages regions of Ethiopia	of EELRP are understood, including targeting procedures and design targeting structures with careful consideration to the balance between formal and informal traditional authority structures and inclusive project target • Transparent reporting on project interventions • Affirmative action should be given for vulnerable people and for the historically disadvantages regions of Ethiopia. A rapid information dissemination campaign should be designed and disseminated to fit the local context and requirements, including through local radio in appropriate languages. • Communities should be sensitized on the techniques and timing of spraying, the chemicals used, its impacts on human health, crops and livestock, and risk mitigation instructions appropriate to the specific spraying. • All community engagements, including consultations, should be developed to minimize the risk of introducing disease– particularly COVID19 into remote communities. • The GRM developed for the project should be implemented in a proper way. The trainings can cover an array of topics that include technical themes, project management, monitoring and evaluation for implementer at different levels including the woreda and kebele level implementers of the project. Create linkages among institutions, sectors, programs, and projects at all levels. • Addressing gender dimensions of the operation including gender-based violence (GBV). • The project has prepared GBV Action Plan which will be implemented and defined the potential project GBV issues thus during implementation, measures should be taken in accordance with the project GBV action plan. • The project implementing teams will regularly access and manage the risks of SEA/H and other forms of GBV extending from project activities, including key infrastructure elements as well as the receipt of cash-for-work schemes by women and other vulnerable groups and sexual exploitation and abuse risks such as sexual favours for registration or release of funds. • The PIU will engage a GBV specialist dedicated to support oversight and management of these risks. • Monitoring of the management of GBV risks

		will be an integral part of the project activities. • The project will also ensure regular consultation and engagement with women and women's groups throughout the project to ensure equitable inclusion in project activities and to monitor potential risks that may emerge over the life of the project. • Strengthening of the Woreda Bureaus of Women and Children Affairs as first contact points for GBV cases • These sections of the community should be given special attention during the project implementation. • They should be benefited from the project a certain percent • The project needs to include a conflict sensitivity assessment checklist in the ESMF and also consider sensitivity of local conflict dynamics and implement in a way to avoid escalating local tensions as the works cover IDP and refugee areas. • The community and the local government should put in place appropriate mechanism including meaningful consultation and full participation of the beneficiary communities during planning, design and implementation phases of the project. • Attempt should be made to resolve conflicts using the traditional way and if this fails to resolve the conflict, government institutions will intervene to settle these conflicts. • The project should consider the livelihoods and political vulnerability in this areas and craft communication messages in accordance with the local context. • The MOA and the PIU should alert the Bank any incidents related to security, conflict and potential sensitivities towards conflict in the project areas. • Assist discussions between community representatives of clan leaders, *Kebele* chairpersons and elders to support peaceful inter-clan and inter-ethnic as well as cross-border relations by supporting regular forums and workshops that promote inter-ethnic dialogue.
Component 3	• Land acquisition and risk of involuntary displacement and access restriction to the use of property • Physical and economic displacement of people due to land acquisition for base centres construction • Risk of human remains or archaeological damage during land	• Prepare site -specific ESIA, ESMP, and RAP before land acquisition and construction of the base centres • Provide the necessary compensation for affected people and restore their livelihood as specified by the RAP • Ensure the implementation of social risk/impact management measures that would

	clearing, excavation, and construction • Risk of cultural and physical heritage damage • Community health and safety risk due to labor influx for construction wok • Worker health and safety risk	be proposed by the ESIA and ESMP • As much as possible avoid involuntary land acquisition • Ensure facilitation of meaningful consultation with affected people and vulnerable people • Incorporate social risk management -specific standard and the relevant ESCP provisions in the contractual agreement entered between the MoA and contractor • Map cultural and physical heritage and intangible heritages to avoid damages as a result of land clearing, excavation, and construction activities. • If any human remains or archaeological remains (e.g. fossils, bones, artifacts etc.) are disturbed, exposed or uncovered during excavations, all work shall stop immediately. The incidence needs to be immediately informed and reported to the authority for Research and Conservation of Cultural Heritage (ARCCH) for an appropriate course of action. • Assist and follow up with the contractor to prepare an OHS management plan and ensure the implementation of the proposed Occupation Health and Safety risk measures accordingly • Ensure all labor and working conditions requirements are met as per the LMP

In addition to the above mentioned mitigation measures, the transportation, storage and management of pesticide should follow the 2003 FAO guideline on Desert Locust Guidelines, section six Safety and environmental precautions and all the other FAO guidelines mention in Section 4.3.3. Further, the project will follow the provisions outlined in the ESMF with specific guidance under each environmental and social standard. The preparedness MOA should also provide its pesticide storage plan, including options for central and regional storage facilities.

Establish **Community Communication Protocol**: while the project should adopt a comprehensive community communication and outreach strategy, with specific provisions to be included in each sub-project ESMP and relevant contracts. The protocol should include messaging for pesticide spraying, type of pesticide spraying strategy, potential impacts and risks on humans, livestock, livestock feed, human and livestock water wells, grievance mechanism to provide feedback.

The project will ensure the avoidance of any form of Gender Based Abuse/Sexual Exploitation and Abuse by relying on the FAO Guidance Code of Ethics and Professional conduct, Ethiopian Law and the applicable Environmental and Social standards.

6. ESMF Procedure for Subproject/Activities Specific IPMPs, ESMPs Preparation, Review, Approval, Implementation and Reporting of EELRP

This chapter outlines the EELRP-ESMF coordination and implementation, including the environmental and social screening procedures, approval, and implementation and reporting systems. To avoid or minimize the adverse environmental and social impacts of EELRP, the steps in the Subproject/Activities Screening and Approval procedure are set out in **Figure 2** below**.**

To avoid or minimize the adverse environmental and social impacts of EELRP subprojects, in all the ESMF processes, the KDC including the DA, the Woreda Agricultural offices, Safeguard specialists from the Regional Agricultural Bureaus and PIUs are required to use the **environmental and social screening checklist and environmental *and social impact rating* are indicated in Annex 2**

The information given in **Chapter 5** above helps to avoid, minimize or mitigate the adverse environmental and social impacts of the project. The community will participate in subproject identification through Community Level Participatory Planning (CLPP) approach. The KDC which the DA is member of it participate in the environmental and social screening process. The ESMF process is consistent with the applicable National ESIA procedure and CLPP process. The responsibilities of project implementing units in doing so are also outlined in this chapter.

6.1. Project Coordination and Implementation Arrangement

The implementation of the EELRP and the ESMF will take place through the existing government structures from the federal to the local or community level institutions. The Project's subprojects or activities addressed in this ESMF includes the Ground and Arial pesticide spraying at different localities and administrative Regions of the country considered as subprojects; Renovations of nine pesticide Stores Subprojects located at various part of the country; and Livelihood protection and restoration Subprojects/activities.

The operation of the project, spraying of pesticide, will carried out entirely by the staffs of MoA and respective Regional and Woreda offices. From the known fact, for spraying either contract for companies or outsourcing will not be made. While for the renovation of Stores, minor contractors will be involved.

Federal Level Implementation

The main organization responsible for implementation of this ESMF at federal level is the Ministry of Agriculture (MoA). The MoA, through the plant Protection directorate (PIU), will play a leading role in ensuring the proper implementation of the ESMF. It will ensure that the applicable GoE rules and regulations as well as the required World Bank Environmental and Social Standards are enforced. Under the MoA, the Plant protection Directorate and PSNP are responsible body for the follow up and management as well as day-to-day implementation of the project. Besides, environmental and social safeguards specialists will be assigned/ recruited to follow up the implementation of EELRP-ESMF within the Plant Protection Directorate (PIU).

Regional level implementation

Similarly, at regional level, the EELRP-IUs under the Bureau of Agriculture (BoA) are established to follow up the management as well as day-to-day implementation of the program for matters pertaining to the regions. The BoA, through the EELRP-IUs, plays a leading role in ensuring the proper implementation of the ESMF at regional level. It will ensure that the applicable GoE rules and regulations as well as World Bank ESSs are enforced. At regional level, Environmental Protection Authority (REPA) is responsible for ensuring the implementation of the ESMF through review and approval of safeguard instruments and conducting environmental and social audit of the ESMF implementation. Similarly, the environmental and social safeguard specialists within the regional PIUs coordination units are responsible

for following up the implementation of the ESMF. The Regional Bureaus focal experts (Region Bureau Plant Protection experts, Zone focal experts, Plant Health clinics experts and District level experts) will also play their own role in terms of risk management implementation.

Woreda level implementation

The Woreda level subject matter specialists (Plant protection, Crop development and Extension communication, Animal husbandry and animal health experts) are responsible for community sensitization, DA training, Desert Locust presence and absence information collection and transfer in frontline Desert Locust breeding Districts. The Woreda plant protection experts are leading the team (subject matter specialists) of experts during survey, information collection, and daily data transfer and control operation campaign coordination. At woreda level the implementation of ESMF in general and Screening of subprojects/activities in particular will be carried out by Woreda subject matter specialists assigned as safeguard focal person at each Woreda together with kebele DAs. At Woreda level, environmental protection offices are established to review (desk review and field Appraisal), and issue environmental and social clearance (ESC). The overall responsibility for supervision of the implementation of the ESMF will be that of, Environmental protection organ of the woreda, and PIUs.

Kebele level implementation

Kebele Development Committees (KDCs) and DAs at Kebele level are responsible to follow up and supervise implementation of the ESMF including involving in carrying out environmental and social screening of subprojects. The Kebele level Natural Resources Management Development Agent (DA) has also the responsibility to ensure the implementation of the ESMF.

Role of Project Implementation Units (PIU)

i. will screen any proposed subprojects in accordance with the ESMF prepared for the Project, and, thereafter, draft, adopt, and implement the subproject Environmental and Social Management Plan (ESMP), or other instruments, if required for the respective Project activities based on the assessment process as required, in a manner acceptable to the Bank, in accordance with the ESSs and the ESMF, in a manner acceptable to the Bank.
ii. Incorporate the relevant aspects of the ESCP, including, inter alia, any ESMPs or other instruments, ESS2 requirements, and any other required ESHS measures, into the ESHS specifications of the procurement documents and contracts with contractors (if any) and supervising firms. Thereafter ensure that the contractors and supervising firms comply with the ESHS specifications of their respective contracts.

6.2. ESMF Processes and Procedures for Subproject Screening

The objective of screening is to assess any potential risk management issues early in the design phase of sub projects and identify the potential risks along with the required safeguards instruments. Screening of EELRP subprojects will be conducted by completing the designated subproject screening checklist as indicated in **Table 7 below and in Annex 2.** The environmental and social screening will be conducted by either the regional or Woreda level safeguards specialists depending on the level of anticipated risks. This is to mean that if the screening of pesticides takes place in only one woreda, DAs and KDCs together with woreda subject matter specialist team will screen and the review and approval is the responsibility of the woreda Environmental Protection Organ. On the other hand, if the spraying of pesticides touches 2 or more woredas, the screening report shall be prepared by the subject matter specialists found at regional level. The review and approval (issuance of Environmental and Social Clearance is the responsibility of the regional Environmental Protection Organ.

Component 1- Locust Monitoring and control Subprojects/Activities

A. Pesticide Spraying Subprojects/Activities

Step (i): Eligibility Checking of Subprojects/Activities of EELRP by Woreda Subject matter specialists together with DA, and KDC both at Woreda and/or at Kebele level

Woreda Subject matter specialists' team together with DAs and KDCs will conduct screening of subprojects/activities against the following environmental and social screening checklist to check their eligibility for EELRP action or financing. Activities having one or more nature stated in Table 5 are prohibited and not eligible for funding.

Table 5. Checklist to check subprojects/activities ineligibility for EELRP action and financing

Will the sub-project/activity directly?	**Yes**	**No**
may cause long term, permanent and/or irreversible (e.g. loss of major natural habitat) impacts		
have high probability of causing serious adverse effects to human health and/or the environment other than during spray to control pests		
may have significant adverse social impacts and may give rise to significant social conflict		
may affect lands or rights of indigenous people or other vulnerable minorities		
may involve permanent resettlement or land acquisition or impacts on cultural heritage		
may cause long term, permanent and/or irreversible (e.g. loss of major natural habitat) impacts		

If the answer to any one of the questions indicated in table 5 above is 'Yes', then the subproject/activity should be rejected unless the features can be avoided by changing other safe pest management action. If on the contrary the answer is 'No', then proceed to the next step. Once subprojects screened, the subproject will be sent to ***Woreda relevant Implementing Agencies*** (IAs) such as Office of agriculture or Pastoral community development office Head for further screening.

Step (ii): Subproject screening and reviewing at Woreda level

Once the subprojects/activities requested and screened at Kebele level, they should further be screened at Woreda level by relevant Woreda Implementing Agencies (IAs) to which the subproject refers to as indicated above in step (i). The screening of sub-projects/ activities by their implementing agency at the Woreda level should be done using the checklist provided in **Annex 2.** The following sections explain the steps that should be followed in screening sub-projects/activities.

First, the Woreda subject matter specialists team with a lead of Woreda plant protection expert would check all the subprojects if they fall under each of the following categories.

Table 6. Checklist to check projects which need special attention

Feature of Concern	**Yes**	**No**
Subproject/activities likely to use or spray pesticides near to protected areas		
Subproject/activities likely to use or spray pesticides near to natural habitat		
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot areas		
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and only alternative for domestic use of the locality)		

Subproject/activities likely to use or spray pesticides near to agronomically important areas- such as organic farms, export crops and vegetables		

If any of the EELRP subprojects/activities fall under the above category, projects in areas requiring special attention such as in the vicinity of Protected Areas or agronomically important areas, the Woreda IA should seek advice from the relevant regional PIU, respective Regional EPO as deemed necessary and Woreda EPO and ensure whether include all the necessary measures before approval of the subproject are completed. Environmental and Social Impact Assessment should be conducted prior to the commencement of the project activities. If full ESIA at project level has required, an independent consultant for this purpose will be hired by the MoA and PIU (IA). If the subprojects/activities have required an ESMP, the document could be prepared with own force (woreda and Regional experts). Moreover, if the subproject is likely to use pesticides, the woredas or Regions will customize the already prepared Integrated Pest Management Plan (IPMP) of the Project. and applied as appropriate (see Annex 1) and solid waste management plan should be prepared separately and included as a component of the ESMP. Hence the IPMP of the Project may be customized for subprojects managed at Woreda and/or Regional level, by the regional and federal level safeguards specialists of the project together with the Woreda level subject matter specialists, depending on the level of anticipated risks.

The Woreda relevant IAs and the Woreda level subject matter specialists should also check whether or not the subprojects fall under one of the following categories of environmental and social concerns.

Table 7. Checklist to screen subprojects of environmental and social concerns

Feature of Concern	**Yes**	**No**
Subproject/activities likely to use or spray pesticides near to protected areas		
Subproject/activities likely to use or spray pesticides near to natural habitat		
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot areas		
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and the only alternative for domestic use of the locality)		
Subproject/activities likely to use or spray pesticides near to agronomically important areas- such as organic farms, export crops and vegetables		
Risk of pesticide storage and handling		
Risk of pollution as a result of disposal of obsolete pesticide and containers		
Impact on health and safety of the community and workers		
Offsite impact of the Projects activities such as pesticide spraying		
Risk on livestock and bee keeping		

If the answer to any one of the above environmental and social concerns is 'Yes', the design of the subprojects/activities should be modified to overcome the said environmental and social concern. If it is not possible to avoid the environmental and social concern, the subprojects/activities should be labelled as '***subprojects of environmental and social concern'***.

For those sub-projects/activities of environmental and social concern, a checklist of potential impacts and impact significance Table 8 below is provided as a sample.

Table 8. Sample environmental and social impact significance rating checklist

Feature of Concern	**Potential for adverse impact**				
	None	**Low**	**Medium**	**High**	**Unknown**
Subproject/activities likely to use or spray pesticides near to protected areas					
Subproject/activities likely to use or spray pesticides near to natural habitat					
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot areas					
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and the only alternative for domestic use of the locality)					
Subproject/activities likely to use or spray pesticides near to agronomically important areas-such as organic farms, export crops and vegetables					
Subproject/activities likely to use or spray pesticides near to PCR, ex. close to churches, mosques and other sites with PCR significance					
Risk of pesticide storage and handling					
Risk of pollution as a result of disposal of obsolete pesticide and containers					
Impact on health and safety of the community and workers					
Offsite impact of the Projects activities such as pesticide spraying					
Risk on livestock and bee keeping					

The checklist provides potential impacts for EELRP subprojects/activities with different rate of potential impacts. Go to the relevant section of the checklist and mark (✓) each potential impacts listed as None, Low, Medium, High or Unknown.

Once the checklist is filled, count the number of potential impacts marked as **None**, **Low**, **Medium**, **High** and **Unknown.** The table below (table 9) helps you to determine whether or not the subprojects/activities should be labelled as 'subprojects/activities of environmental concern' and further actions need to be taken at this stage before proceeding to the next level.

Table 9. Rating of potential impacts of EELRP subprojects/activities

Rating of potential impacts of EELRP subprojects/activities	**Action needed**
Subprojects are marked from ***low*** to ***medium*** for potential impacts	Prepare an ESMP with appropriate mitigation measures and incorporate into the design of the subprojects/activities. During preparation of ESMP, refer to the potential mitigation measures listed for each potential impact in chapter 5 of this ESMF. The general IPMP prepared as part of preparation of the parent project shall also be applicable for these kinds of subprojects.

Rating of potential impacts of EELRP subprojects/activities	Action needed
Subprojects cause only one ***high*** potential impact	Refer to the potential mitigation measures listed for each potential impact in this ESMF, to prepare the ESMP and then incorporate the potential mitigation measures into the design of the subprojects. And further prepare special plans such as IPMP and Waste management plan as appropriate
Subprojects cause more than one ***high*** potential impacts	These types of subprojects/activities will be labelled as 'subprojects/activities ***of environmental and social concern'*** because changing the design may not avoid the anticipated adverse impacts. In such a case an ESIA and customised IPMP shall be prepared before control action and review & cleared by the respective regional EFCC Authorities
Subprojects where it is difficult to predict the potential impacts, i.e., subprojects which have two or more ***unknown*** potential impacts.	These subprojects/activities should also be labelled as '***subprojects of environmental and social concern'*** because of the many unpredictable potential impacts.

For subprojects/activities which are not labelled as '**subprojects of environmental concern'**, environmental clearance is issued by Woreda Environmental Organ to Woreda Agriculture Office or Pastoral Community Development Office to continue the planned subproject/activities. For those subprojects which are not labelled as subprojects of environmental concerns but requiring preparation of environmental and social management plan (ESMP), the ESMP should be prepared and sent to the woreda environmental organ for review and approval. However, ESIAs and customized IPMPs shall be reviewed and cleared by the respective regional EFCC Authorities.

B. Renovation of Pesticide Stores subproject

The nature of this subproject, since only minor renovation activities would be undertaken, has not major ans significant environmental impacts. However, there could be some occupational related issues like OHS and the COVID 19 which needs special attention. Hence the contractors for the renovation of these stores should follow the WB ESHS procedures, such as guideline or requirements for ESHS bidding on small construction works and Interim Guidance Note on Construction Measures during COVID 19. Furthermore, Large-scale pesticide stores should be custom-built. They must have all the necessary safety features to contain possible insecticide spillage, ensure sufficient ventilation and provide protection against rain and sunlight. FAO provides detailed guidelines on the design of pesticide stores. Hence the project should strictly follow this FAO guidelines on the construction of Stores.

Component 2- Livelihood Protection and Restoration Subprojects/Activities

A. Provision and distribution of Seeds- Fertilizer-Pesticides- Subprojects

This subproject has some environmental and social concerns, there could be some crop biodiversity related issues that should need special attention on procurement of crop seeds. The possible impact could be an introduction of exotic species seeds that will cause the erosion of indigenous or local varieties. Hence, before and during purchasing of crop seeds, the Ministry of Agriculture (MoA) and Regional Bureaus should follow plant genetic resource quarantine laws to avoid the potential adverse consequences of exotic species introduction, and permission have to be given from the relevant authorities. The MoA

has to ensure the purchased seeds are not exotic and/or the proposed seeds are naturally compatible with a given intervention areas (agro-ecological zones). Moreover, there will be inadequate awareness about the nature, amount and use of fertilizers and pesticides by the community. In addition, there might be targeting error in the process of providing seeds-fertilizer and pesticides. The MOA has to ensure the involvement of the community in a participatory, consultative and transparent manner.

B. Provision of forage seeds to be planted- Subprojects

The nature of this subproject has not significant environmental and social concerns. However, there could be some biodiversity related issues that should need special attention on procurement of forage seeds. The possible impact could be an introduction of exotic species seeds will cause the erosion of indigenous or local varieties of pasture resource. Thus, before and during purchasing of forage seeds, the Ministry of Agriculture (MoA) and Regional Bureaus; and/or Pastoral Community Development Bureaus should follow plant genetic resource quarantine laws to avoid the potential adverse consequences of exotic species introduction, and permission have to be given from the relevant authorities. The MoA and/or the Pastoral Community Development Bureaus have to ensure the purchased seeds whether they are exotic or not and the proposed seeds are naturally compatible with a given intervention areas (agro-ecological zones). Moreover, there will be inadequate awareness about the kind of forage/fodder seeds by the community. In addition, there might be targeting error in the process of providing forage/fodder seeds. The MOA has to ensure the involvement of the community in a participatory, consultative and transparent manner.

C. Establishment of Nursery sites for Forage seedlings- Subprojects

The nature of this subproject has not significant environmental and social concerns if the activity will undertake in existing nursery sites. If new nursery sites will be established in a personal and communal land, some concerns like land acquisition and property loss will be occurred. Hence, in such cases, the Ministry of Agriculture (MoA) and Regional Bureaus and woreda offices as required; and/or Pastoral Community Development Bureaus and woreda offices as required should follow the screening and approval processes specified under Section 6 of this document. Moreover, in as much as possible the nursery site should be established on the existing pastureland due to the fact the nursery is for one time activity.

D. Provision and Distribution of Forage/Fodder- Subprojects

If those two subprojects above (Subproject B and C) are addressed properly, the impact of this subproject on environment and social is insignificant. Rather the positive impacts outweigh on supporting the affected communities with locust invasion following forage loss.

Component 3: Strengthening Early Warning Systems and Preparedness

To avoid the impact/risk on environmentally sensitive area and socially significant site, a standard site selection criterion will be required across the proposed base centres. Site selection for the base centre need to avoid environmentally or socially sensitive areas. The following sensitive sites will be considered as exclusion criteria for site selection of the base centres:

- Area close to municipal water supply source
- Area close to settlement, social services facility (education & health centre) and religious institutions (churches & mosques),
- Area close culturally important sites;
- Area close to natural water bodies such as streams, rivers, lakes and springs;

- Area close to indigenous people settlement and livelihood source
- Area close to protected areas.

The proposed site has to satisfy all these criteria, if one of the following criteria does not satisfied the site shall be rejected and other site shall be considered for further screening. The MoA shall be aware of the site selection criteria, and prepare screening checklist taking the above criteria into account. The MoA need to establish a relevant evidence to ascertain avoidance of environmental and social sensitive area and report to the World Bank for clearance. For each site, the MoA shall prepare a detailed site specific ESIA and ESMP consistent with what is outlined in Annex 4. Likewise, for each site RAP should be developed as indicated in the RF. All report shall be submitted for Bank's clearance and subsequent approval of the respective local Environmental Authority. The ESIA, RAP and ESMP should provide appropriate risk mitigation measures, compensation procedures, livelihood restoration strategy, implementation management plan, monitoring and rereporting procedure, and the cost required for the mitigation, compensation and livelihood restoration. Also provide more information about the proposed site location and proposed extent of the site, existing land use and land cover and details of landholdings and land acquisition plan, affected community and public consultation report, and the land permit acquired from the relevant municipality or region or woreda government.

6.3. Guideline for Subproject Review and Approval at Woreda and Regional level

The screening report/ESMP of subprojects/activities which are exclusively conducted in one woreda will be prepared by the Woreda Agricultural offices and Pastoral Community Development Offices and should be reviewed by the Woreda Environmental Protection Organ. In doing so, the Woreda EPO follows two appraisal steps (field and desk appraisal) to appraise/review subprojects of which are conducted only in one woreda. The reviewing and approval of screening report /ESMP should be carried out by the Woreda Environmental Protection Organ.

If the sub-project is implemented exclusively in one woreda and supposed to affect sensitive environment and social facility, the Woreda Environmental Protection Organ in consultation with regional EPO request the respective IA to submit the ESIA. If ESIA at project level has required, an independent consultant for this purpose will be hired by the MoA and PIU (IA).

Desk appraisal of subprojects

The Woreda Environmental Protection Organ checks the environmental and social screening checklist and impact rating checklist filled by the Woreda implementing agency (subject matter specialist team) to see whether or not it is done correctly and as per the requirement of the ESMF guideline. Woreda environmental protection organ also review the ESMP including customized IPMP to check whether all the necessary information are included; and is done using the ToR presented for this purpose.

Field Appraisal

If the desk appraisal indicates that the proposed subproject may have environmental or social concerns that are not adequately addressed in the application, or if the application meets certain criteria but the review authority requires field appraisal before the application can be considered further. For the field appraisal, the woreda environmental organ uses the field appraisal form.

After carrying out desk review and field appraisal, the woreda environmental organ issues environmental and social clearance (ESC) to the woreda relevant IAs to which the subproject is to be financed by

EELRP. The subprojects should not be financed and implemented by the woreda IAs before ESC is obtained from the woreda environmental organ. The finance section/unit of the woreda IAs should not process any payment without the ESC letter, attached with the request for payment.

For subprojects like pesticide spraying (applications) which will be conducted in 2 or more woredas' proceed to the next step.

Step (iii): Notification of subproject activities implemented in two or more woredas at a time

EELRP subprojects/pesticide application activities which are conducted in two or more woredas' should be communicated to regional agricultural bureaus. The regional agricultural bureau communicates the EELRP activities to the regional environmental protection organ.

Step (iv): Review of notified subprojects by regional environmental organ

The regional environmental organ should make note of the following points when reviewing/appraising EELRP subprojects/activities applied in two or more woredas.

EELRP subprojects/activities which involve two or more Woredas of the Region a at a time (more than one Woreda of the Region) and if the environmental concerns shared with those Woredas, the regional BoA or IA (Bureau of Agriculture) should undertake screening of subprojects; prepare ESMP/ESIA of the subprojects and customized the Project's IPMP to respective regional conditions then submit these documents for approval to the respective regional Environmental Protection Organ. In cases where subprojects do not require preparation of an ESMP and IPMP, all the environmental and social impacts as a result of the subprojects will be managed by the mitigation measures included in chapter 5 of the ESMF.

The regional environmental organ should advice the concerned regional implementing agency on the following points:

1. Communicate the decisions for each of these subprojects of environmental and social concern about the need or not of a full ESIA.
2. If a full ESIA is required, the regional environmental organ advice the concerned regional implementing agency to prepare TOR. The regional environmental organ incorporating its comment, return the TOR without delay to the implementing agency to hire an ESIA consultant, to carry out the ESIA. The ESIA consultant prepare ESIA report and submit to regional environmental organ for review and approval
3. In this regard, the regional and federal EELRP environmental and social safeguards specialists provide technical support in the preparation of the TOR.
4. If a full ESIA is not required, the regional environmental organ provides the concerned implementing agency with guidelines in connection to technical matters, related to the preparation of environmental and social management plan (ESMP) or customized the Project's IPMP. The concerned implementing agency should prepare and submit the ESMP to regional environmental organ for review. The regional environmental organ review and issue environmental and social clearance as soon as possible to avoid implementation delay.

Similar to the Woreda level review and appraisal, the regional Environmental Organ may follow both the desk and field appraisal procedure to appraise subprojects of environmental and social concern and which do not require full ESIA.

Step (v): Conducting ESIA study. In general, EELRP at project level has been classified **as high risk project**. Hence whenever some (environmental and social risk management instruments such as the IPMP and waste management plans are not adequate to address project risk and impacts) for this project a **full**

ESIA has to be prepared by the project proponent and subject for review by Federal Environmental and Social Safeguard Specialists and submitted for the World Bank review and clearance, and reviewing by appropriate Federal EPO which is a mandated and regulatory body for **Environmental Review and Clearance at Federal level.**

If the screening report for a project indicated that full ESIA is required, all concerned regional implementing agencies of EELRP subprojects/activities are responsible for ESIA. ESIA should be done by licensed ESIA consulting firm, as stipulated in the directive of EFCCC. The responsibility of Environmental Organ at regional level is to review the terms of reference for conducting ESIA, and later the ESIA reports, and give Environmental and Social Clearance for subprojects to be implemented within their own regions. It has to be noted that all ESIAs are subject to the World Bank's review and clearance prior to initiation of the proposed subproject activities. Besides, ESIAs and IPMPs shall be disclosed via the government's websites and the WB's external website. In both cases, the cost of the ESIA study is part of the budget of EELRP subprojects.

Step (vi): Reviewing ESIA report by regional Environmental Organ

The final step in this ESMF process is the review of the ESIA reports produced for EELRP and/or subprojects/activities of environmental concern. This review should be conducted by the regional environmental organ in the shortest possible time to avoid delaying EELRP subprojects/Activities from implementation. The environmental and social management plan (ESMP) including IPMP prepared by the regional IAs should be reviewed by the regional environmental organ. Both field appraisal and desk review shall be done by the regional environmental organ.

Criteria for Safeguard approval

Two decisions can be made based on the ESIA of the Locust Control Project.

1. If the ESIA is in conformity with the applicable World Bank Environmental and Social Standards and the environmental and social laws and guidelines of Ethiopia, the subprojects will be granted an environmental and social clearance.
2. On the other hand, if the ESIA does not fulfil the Bank's Environmental and social requirements and the country's environmental laws and guidelines, the decision will be one of the following:
    - Request for supplementary or new ESIA report; or
    - Approval of the implementation of the subproject with condition; or Rejection.

The regional environmental protection organ should communicate the decision of the review of the ESIA report to concerned regional implementing units and regional project coordination units as soon as possible. The regional PIUs should not implement the subprojects unless they received environmental and social clearance from the respective regional environmental protection organ. The finance unit of each PIU implementing agency which their activities are implemented in two or more woredas and are required to prepare ESMP/ESIA report should not issue any payment unless the environmental and social clearance is attached with the request for payment. The ESIAs prepared for EELRP should also be submitted to the WB for review and no objection. Figure 2 shows the flow chart for EELRP-ESMF planning and implementation process**.**

Fig. 2. Flow chart for the ESMF Processes and Procedures6.4. Reporting of ESMF Implementation

Local authorities are normally required to submit quarterly and annual reports, regarding the implementation of activities proposed in the ESMP/ESIA and IPMP. These quarter and annual reports should capture the experience with implementation of the ESMF procedures. The purpose of these reports is to provide:

- A record of experience and issues running from quarter-to-quarter/year-to-year throughout the subproject that can be used for identifying difficulties and improving performance, with regard to implementation of ESMF; and
- Practical information for undertaking an annual review.

In view of the significant nature of the impacts of some of the activities of EELRP, a robust system of compliance monitoring and reporting should be in place.

Quarter and annual reports should be prepared at Woreda, regional and federal levels. At *Woreda level*, quarter and annual report will be prepared by Woreda Agricultural office. The objective of the report is to provide a feedback on the activities and observations on the implemented EELRP subprojects over the review period in the Woredas.

The regional EELRP-CU Environmental and Social Safeguard Specialist will compile the reports submitted from the wereda Agricultural offices and accordingly quarterly and annual regional ESMF performance reports has to be prepared and submit it to the federal EELRP-CU (PPD).

At the federal level, the quarterly and annual reports will be compiled and prepared by Environmental and Social Safeguard Specialists of Federal PIU and will be submitted to the MoA and the World Bank country office. The report should also include the following reports as specified in the Project's ESCP>

REGULAR REPORTING: Prepare and submit to the Bank regular monitoring reports on the environmental, social, health and safety (ESHS) performance of the Project, including but not limited to, the implementation of the ESCP, status of preparation and implementation of E&S documents required under the ESCP, stakeholder engagement activities, and the grievance mechanism.

INCIDENTS AND ACCIDENTS: Promptly notify the Bank of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, communities, or workers within 48 hours its occurrence and root-cause analysis to be provided within fifteen days.

INTERNATIONAL ALIGNMENT: An internationally renowned agricultural agency (FAO) shall regularly review the Project's implementation, monitoring, and reporting provisions made under the Project.

Annual Review

The objectives of conducting annual reviews of ESMF implementation are two-fold:

- to assess project performance in complying with ESMF procedures, learn lessons, and improve future performance; and
- to assess the occurrence of, and potential for, cumulative impacts due to project-funded and other development activities.

The annual reviews are intended to be used by project management to improve procedures and capacity for integrating natural resources and environmental/social management into project operations. They will also be a principal source of information to Bank supervision missions.

Annual reviews should be undertaken after the annual ESMF report has been prepared and before Bank supervision of the Project, at the closing of each year of the project. It is expected that each review would require **3-4** weeks of field work (interviews, examination of subprojects), and that the review report would be completed within 2 weeks of completing the field work. The principal output is an **annual review (audit) report** that documents the review methodology, summarizes the results, and provides practical recommendations. Distinct sections should address a) ESMF performance and b) cumulative impacts.

It is expected that these reviews will be carried out by an independent local consultant, NGO or other service provider that is not otherwise involved in the project. Copies of the annual review report should be delivered to project management, to each district office responsible for appraisal, approval and implementation of subprojects, and to the Bank. Project management (federal, regional or woreda) may also host federal, regional or woreda workshops to review and discuss the review findings and recommendations.

7. ESMF Implementation Monitoring

7.1. Roles and Responsibilities

The primary aim of monitoring is to provide information that will aid in impact management, and to achieve a better understanding of cause-effect relationships and to improve the prediction and mitigation methods for impacts.

The data collected during monitoring is critical in ensuring that the mitigation measures, priorities listed in the ESMP/IPMP, are implemented as approved and that they are effective in addressing the impacts. It also ensures that the project complies with the existing environmental standards and limits and the mitigation measures recommended in the ESMP/IPMP are implemented and maintained throughout the operational life of the project.

Monitoring indicators that measure the impacts on the environment and communities in the context of mitigation measures are critical to ensure fulfillment of all the commitments made in the approved ESMP/ESIA. Monitoring is also important to keep track of changes that may happen in the environment and communities because of other global and local changes, such as changes in water availability due to

droughts, economic crisis and or in a migration. After the project is completed, basic monitoring efforts will continue during project remediation.

After the required safeguard instruments (ESIA, and/or ESMP, IPMP, and other safeguard tools) are prepared, reviewed and approved, and environmental and social clearance received from the EPOs), the relevant implementing agencies (either at woreda or regional or both level) which the subproject refers to are the main responsible bodies to implement and ensure the implementation of the mitigation measures identified and planned in the ESMPs and/or ESIAs, SA and IPMP.

7.1.1. The objectives of ESMF monitoring and follow up

- To alert project managers and implementers by providing timely information about the success or otherwise of the environmental and social management process outlined in this ESMF in such a manner that changes can be made as required ensuring continuous improvement to EELRP environmental and social management process.
- To make a final evaluation in order to determine whether the mitigation measures incorporated in the ESMPs/IPMPs have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon or is worse than before and to determine what further mitigation measures may be required.

7.1.2. Types of monitoring

Process monitoring

The purpose of environmental and social process monitoring is to check whether the different types of safeguard instruments (ESMP, ESIA, IPMP and SA, ESMF, GBV action plan, SEP, LMP) are prepared, reviewed, and approved; the quality of the safeguard instruments; the implementation of the mitigation measures identified and planned in the safeguard instruments; the participation of the community and other stakeholders in all these process; capacity building processes; reporting; and others. The monitoring is done by EELERS implementing agencies at Woreda and regional level involving in implementing the ESMP/ESIA, and IPMP; woreda and regional NR case teams; and the community. Monitoring will be carried out in accordance with the ESMP and other safeguard instruments prepared for each subproject. Moreover, the monitoring and reporting modalities, according to the ESCP of the Project's, has been specified here under the following table.

Monitoring and Reporting

Monitoring and Reporting	Time frame	Responsible Body
REGULAR REPORTING: Prepare and submit to the Bank regular monitoring reports on the environmental, social, health and safety (ESHS) performance of the Project, including but not limited to, the implementation of the ESCP, status of preparation and implementation of E&S documents required under the ESCP, stakeholder engagement activities, and the grievance redress mechanism.	Annually Project implementation period	MoA/PIU
INCIDENTS AND ACCIDENTS: Promptly notify the Bank of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, communities, or workers.	Notification of the Bank within 48 hours. Root-cause analysis to be provided within fifteen days.	MoA/ PIU

INTERNATIONAL ALIGNMENT: An internationally renowned agricultural agency (FAO) shall regularly review the Project's implementation, monitoring, and reporting provisions made under the Project.	FAO will review and their comments will be conveyed to the Bank through PIU quarterly report throughout the Project implementation period.	MoA/PIU

Result monitoring

The result monitoring plan has two components: i) monitoring of the compliance and effectiveness of the ESMF and application of the recommended standards; ii) impact monitoring, i.e., measuring the socio-economic impacts of the project interventions.

All stakeholders undertaking process monitoring above conduct result monitoring. The purpose of result monitoring is to support compliance with safeguard policies and laws, to identify the emergence of any unforeseen safeguard issues, to determine lessons learnt during project implementation; to provide recommendations for improving future performance; and to provide an early warning about potential cumulative impacts. Besides, the World Bank, as necessary, will periodically conduct reviews of the implementation of the safeguard instruments (ESMF, ESIA, ESMP SA, GBV action plan, SEP, and LMP) under EELRP. The woreda and regional EPOs also conduct environmental and social audit periodically.

Moreover, final evaluation will be done by independent consultant in order to determine whether the mitigation measures designed into EELRP interventions have been successful in such a way that the mitigation measures are properly in place and environmental and social condition positively maintained.

7.1.3. Monitoring of EELRP Activities

The term monitoring is used here for the collection, analysis, interpretation and dissemination of data on the effects (both intentional and unintentional) of operational locust control. This includes control efficacy, effects on human health, impact on non-target organisms and the presence of insecticide residues. The objective of monitoring is to identify what goes right in operational locust control, and what can be improved. Monitoring is therefore an essential element of a locust control campaign. It aims to optimize control, improve cost efficacy and minimize adverse side-effects on human health and the environment.

Three types of monitoring will be distinguished: rapid assessments (done by locust control teams), dedicated operational monitoring (carried out by special monitoring teams) and in-depth monitoring (executed by specialized research teams). These three types of monitoring differ by the activities that are carried out, the time span in which the work has to be done and the functional links to the control campaign organization. Rapid assessments focus on insecticide application quality, control efficacy and the reporting of incidents. Both dedicated operational monitoring and in-depth monitoring look in more detail into control efficacy, environmental impact, and occupational health and insecticide residues. The main difference is that operational monitoring attempts to cover many control actions, in relatively limited detail, while in-depth monitoring looks at only a few control actions, but in much more detail. The first two types of monitoring will be discussed in more detail in these guidelines. In-depth monitoring, on the other hand, will only be briefly touched upon, as it is rather specialized and therefore not always part of a normal control campaign.

Monitoring of the implementation of the ESMF is an important aspect of ensuring that the commitment to environmental and social sustainability of the Project is being met. The regular monitoring of the implementation of the ESMF, IPMP, SA, LMP, ESCP, GBV Action Plan and SEP will be overseen at

regional level.

The ESMF Specialists assigned at Regions should receive the relevant information from each Woreda focal persons assigned for this purpose. Direct supervision of project implementation will be undertaken at kebele, woreda and regional levels, and the data will used as inputs to the EELRP M&E system and that will form part of the overall EELRP MIS.

- The DAs, with assistance if required from the concerned, woreda line office will ensure that the specified mitigating measures for the EELRP subprojects are implemented,
- The Woreda NR Expert in the NR Case Team, in liaison with the Woreda (Environmental Protection Office (EPO), will verify that the proper procedures are being followed for all the EELRP activities in the woreda, and that no significant negative environmental and Social impacts are taking place. Where such impacts may occur, the woreda EPO will provide advice on actions to be taken.
- The E &S Specialist(s) in the EELRP coordinating units at all level will monitor, in conjunction with the respective Environmental Protection Organs,

The ESMF Specialist in the federal Project Implementation Unit will monitor the overall implementation of the EELRP's ESMF, and

The PIU will also ensure that the implementation of the recommendations in the Social Assessment are monitored, ensuring that all prescribed measures for under-served and particularly vulnerable groups have been implemented.

The PIU will develop a Social Management and Monitoring Plan and during implementation will submit regular separate monitoring reports to the World Bank showing the status of the implementation of the Plan, issues faced, mitigating measures implemented, public meetings held, community development activities started, etc. The detailed M&E of the implementation of this ESMF will be specified in the design of the EELRP system.

7.1.4. Targeted Monitoring and Evaluation

In addition, *targeted* monitoring will be conducted annually by EELRP. Strengthening Reviews, in which a sample woreda in each region will be visited and spot-checked in order to verify the implementation of the revised ESMF, and the SA, procedures. **Annex 5** shows the contents of a monitoring report and an example of Environmental Monitoring Plan is provided in **Annex 3.**

7.2. Environmental and Social Auditing

Environmental and social auditing can be defined as "a systematic, periodic, documented and objective review of project activities related to meeting environmental requirements". An audit should assess the actual environmental and social impact, the accuracy of prediction, the effectiveness of mitigation and enhancement measures, and the functioning of monitoring mechanism. Further, the review should be systematic and objective. The objectives of environmental and social audits are to:

- verify compliance with environmental and social requirements;
- evaluate the effectiveness of environmental and social management plan and;
- Assess risk from regulated and unregulated practices.

Environmental and social auditing has been universally accepted as one of the components of Environmental and Social Management Plan (ESMP) and should be undertaken during construction, operation, and upon the completion of the project decommissioning as well in the entire life of the project.

The responsible institution to undertake environmental and social audit is the regulatory body which is the environmental protection authority/agency/office at various levels. For EELRP subprojects/activities, regional and woreda level Environmental Protection Authorities/agencies/offices are responsible to undertake environmental and social audit for subprojects which are reviewed, approved and implemented at regional and woreda level respectively. Environmental and Social audit can be done once in a year or every two years. The audit report should be communicated to the implementing agencies which the subproject refers to and to the regional PIU. The regional PIU should submit the audit report to the federal MoA and PSNP-CU (EELRP-PIU). The contents of an environmental and social audit report are provided in Annex 7.

8. Capacity Building, Training and Technical Assistance

Effective implementation of ESMF requires technical capacity in the human resource base of implementing institutions and logistics. Implementers need to understand inherent environmental and social issues and values and be able to clearly identify their indicators.

Therefore, Capacity building training is an important element of EELRP. The trainings for experts, scouts, workers and awareness raising for the community will be continuously targeted. The trainings include:

- Training on the GoE environment, social, health and safety provisions, and as well on the World Bank's ESF/EHS Guideline requirements,
- Capacity building for the PIU staff on stakeholder mapping and engagement, specific requirements on the ESMF, ESIA, IPMP, and social development plan to be prepared based on the social assessment.
- Training for farmers, pastoralists, scouts, experts and officials at different levels on locust infestation control management, and others using the FAO Desert Locust Control Training Manual
- Community awareness (including clan and religious leaders) raising trainings on community health, safety, and the impact of pesticide spraying before, during and after the operation.
- Specific aspects of environmental and social impact assessment.
- Training on the rights of people who will be affected due to locust infestation and GRM
- Training operation workers on occupational health and safety requirements of the project.
- Training workers on GBV and response mechanism.
- Review and approval of locust control proposals.
- Training on waste management, including insecticide empty containers and obsolete chemicals
- Environmental Audit/ monitoring training
- Assessment of impacts and design of site-specific monitoring measures which also takes into account social issues and impacts, over and above the standard measures recommended in the Technical Materials
- Incorporation of mitigation measures in subproject designs and construction documents
- Public consultations in the ESIA process which includes women and other vulnerable groups

8.1. Institutional Capacity for ESMF Implementation

The institutional structure for managing the environmental and social aspects of the program involves four levels. These four levels are **Federal Level, Regional Level, Woreda Level, and Kebele Staff.**

As it was discussed above the implementation of the EELRP and the ESMF including IPMP will take place through the existing government structures from the federal to the local or community level institutions. This structure has been believed strong and having best experience on DL control of the country. However, the capacity assessment reveals that there are some areas need qualified personnel's for the overall implementation of the ESMF and IPM. These are the following committed manpower specified by the ESCP and other proposed recommended manpower for effective implementation of the ESMF, among others.

- Hire, as a consultant, one pest management specialist, who led the Desert Locust survey and control operation (Under project),
- Hire at least one Environmental and social safeguards officer working as Environmental and Social Safeguard Specialist, who is responsible to perform major activities:

- Provide Training of Trainers (TOT**)** on Environmental safeguard issues
- Monitor, supervise and gives technical support to the regional, and woreda level PIUs with regard to the implementation of environmental safeguard tools (ESMF, ESMP and ESIAs).
- Prepare and compile quarterly, bi-annual, and annual environmental performance Reports. and submit to the World Bank, and to the Federal PIU
- Conduct internal environmental auditing, to make sure that the Environmental safeguard tools (ESIAs and ESMPs) are effectively implemented in the project implementing regions.
- Provide Training of Trainers (TOT) on social safeguard issues
- Monitor, supervise and provide technical support to the regional, and woreda level PIUs regarding the implementation of social safeguard tools. (SA, LMP, SEP, GBV action plan, GRM etc)
- Prepare and compile quarterly, bi-annual, and annual social performance Reports. Including OHS incidents and submit to the Federal PIU and the World Bank.
- Conduct internal social auditing, to make sure that the social safeguard tools are effectively implemented in the project implementing regions.

- Hire a monitoring and evaluation officer,
- Hire an information technology officer,
- Hire a communications and knowledge management officer,
- At Regional level officially appoint safeguard specialists from BoAs and/or Bureau of Pastoral community developments (trained or to be trained) and allocate operational budget, and
- At Woreda level officially appoint safeguard specialists from Agricultural offices and/or Pastoral development offices (trained or to be trained) and allocate operational budget.

8.2. Estimated Budget for the Implementation of EELRP's ESMF Requirements

8.2.1. Estimated budget of ESMF Implementation

The total amount budget required, for the implementation of the EELRP's ESMF related with capacity building, monitoring and auditing of both the environmental and social management, is 2,112,959 USD. For the detail see Table 10.

Table 10. Estimated budget in Birr for the implementation of ELDERP's ESMF requirements

No	Activity by Component and sub component	Unit	Target (Required Quantity)	Unit Price	Total Amount USD
1	Community and village leader's sensitization	No	70,000	2.8571429	200,000.00
2	Environmental, Social and Health Impact Assessment	No	1	50,000	50,000.00
3	Procurement of PPE	No	20,000	83	1,650,000
4	EHS Monitoring	No of districts	50	2,000	100,000
5	EHS Monitoring	No	9	11,111	100,000
6	ESS Auditing	# of Audit	3	4319.925	12,959.78
				Total	2,112,959.78

8.2.21. Overall estimated budget for Implementation of all ES safeguards

The proposed budget for the implementation of IPM in association with ESMF requirements has been made based and framed on the EELRP's Project Implementation Manual (PIM). The PIM has clearly indicating and earmark budget, under Annex 2 of the document (Project cost summary) for capacity building (Trainings and large community awareness creations); Health and Environmental impact assessment & monitoring; and hiring one consultant are some among others.

Accordingly, under Component 1, Provision of PPE for 20,000 persons with total amount of 1.6 million USD; Health and Environmental impact assessment including monitoring activities 0.25 million USD for AF ; for about 70,000 community and village leaders sensitization workshops about 200,000.00 USD; For ES Auditing about USD 13,000. Most of the proposed activities for the implementation of IPMP have covered and addressed in the IPM. For some proposed activities not clearly addressed in the PIM, such as Research activities, renovation of big pesticide stores and transportation of empty or damaged containers to the center, an estimated cost has been proposed.

a. Implementation and Monitoring of the IPMP

For implementation and monitoring of the IPMP the following budgets have been earmarked and it should be proportionally dispersed for each activity stated in the proposed action for the implementation of the IPMP and Monitoring (see Table 6 and Table 7).

- Provision of set of PPEs for 30,000 persons with total amount of 6 million USD
- For Health and Environmental impact assessment, which includes baseline ecological feature assessment (before & after project intervention) and monitoring; and pre and post health examination of persons involved in pesticide and related monitoring, a total of 2.5 USD has been budgeted
- For renovation of big pesticide stores found in some part of the country 40,000.00 USD has been proposed (not indicated or specified in the PIM)
- For collection and transportation of empty and damage pesticide containers to the center 10,000.00 USD has been proposed (not indicated or specified in the PIM)

b. Training and Capacity Building.

For trainings and capacity building the following budgets have been earmarked and it should be proportionally dispersed for each activity stated here under. For some proposed activities not clearly addressed in the PIM, such as Research activities an estimated cost has been proposed.

- Sensitization workshops for about 70,000 community and village leaders and Make a Panel discussions among Project coordinators and Key Governmental Ministries about 980,000.00 USD budget has earmarked
- For ToT on safe use, application and disposal of pesticide for Federal and Regional Experts; ToT on ESMF and relevant Environmental and social frameworks, plans and instruments for Federal and Regions appointed safeguard specialists, relevant technical staff and regulatory body (respective environmental organs); Cascading these two ToTs to Zonal, Woreda experts and Das; other trainings as require about 6,048,000 for the1st and 1,512,000.00 for the 2nd phase have been budgeted.
- For research activity, on assessing and come with mapping and documenting country wide best practices- Non pesticide control methods applying for all DL lifecycle stages, about 50,000.00 USD has been proposed (not indicated or specified in the PIM)

- For research and trial on low toxic pesticides and biopesticides, such as Fipronil (pesticide) or blanket application of Metarhizium acridium (biopesticide), and others suggested as low toxic in trial carried out elsewhere in locust prone countries, about 70,000.00 USD has been proposed (not indicated or specified in the PIM)

c. ES risk management staffing

For trainings and capacity building the following budgets have been earmarked and it should be proportionally dispersed for each activity stated here under. For some proposed activities not clearly addressed in the PIM, such as Research activities an estimated cost has been proposed.

c. ES risk management staffing

For the Environmental and Social risk management, the following staffs have to be hired or assigned:-

- At Federal level hire pest management specialist, who lead the Desert Locust survey and control operation (Under project),

- At Federal level hire at least one Environmental and Social safeguard specialist Under Project,

- At Regional level officially appoint safeguard specialists from BoAs and/or Bureau of Pastoral community developments (trained or to be trained) and allocate operational budget,

- At Woreda level officially appoint safeguard specialists, from all 157-project target woredas, from Agricultural offices and/or Pastoral development offices (trained or to be trained) and allocate operational budget.

9. Stakeholder Engagement and Information Disclosure

Interviews were conducted to incorporate the views and concerns of key federal stake holders with regard to storage, transportation and use of Pesticides, waste handling mechanisms, institutional capacity to implement EELRP etc, and the summary of the results of the consultations is summarized in chapter 9 section 3 of this document.

9.1. Stakeholder Consultation and Disclosure of ESMF

Stakeholder consultation is an integral part of the ESMF social assessment (SA) and provides inputs for the preparation of Environmental and Social Management Framework (ESMF), the Stakeholder Engagement Plan (SEP), and more importantly for effective implementation of the project. The overall objective of such consultations was to document the concerns of the stakeholders with specific reference to the project planned interventions. The consultation meetings were organized basically for two important purposes, i.e., (1) to share project objectives and proposed project interventions with the identified stakeholder groups and (2) to consult with the stakeholders and document their concern, with particular reference.

Accordingly, the project has conducted a national and Regional stakeholders' public consultation on the use of pesticides to control the locusts. Three different stakeholder consultations were carried out while using Key Informant Interviews (KII). In the first two consultation processes, the project has consulted key stakeholders from the Ministry of Agriculture, the Project Implementer, and the Project Partners. In the third phase of consultation, the project consulted targeted regional governments from Amhara, Afar, SNNP, Oromia, Somali, Harari, Benshangul-Gumze, Gambella, and Tigray regions and Dire Dawa Administration. Community consultation is a method used to ensure a broad participation of the local communities. The usual community consultation was not satisfactorily done due to COVID 19 crisis and the restrictions made following that by the government of Ethiopia on the April 9, 2020 State of Emergency on gathering not more than four people at a time. Hence, the consultation has limited to stakeholders working in relation to desert locust control at different levels (see Annex 8 for the summary of consultations, and Annex 9 and 10 for the guiding questions for FGD and KII). This has been substantiated by extensive community consultations assessed so far for various related aspects and concerns. Furthermore, consultations will be conducted in a sample of the target Regions and Woredas a during project lifetime as appropriate. This will bring together representatives of respective Woreda governments, local communities and their leaders, and local CBOs. After the national, Regional and Woreda stakeholders' consultations, the issues raised will be integrated in the ESMP, the ESMP will be disclosed at the website of the Ministry of Agriculture, and a link shared with the Bank for disclosure on the Bank's info shop. Additionally, the ESMP will be published in at least two daily newsletters with wider national and Regional coverage and through local FM radios.

9.2. Grievance Redress Mechanism

Grievance redress mechanism is commonly used to receive and act on grievances or complaints reported by affected groups or concerned stakeholders to enable them get prompt actions from program implementers on issues of concern or unaddressed impacts and risks. Grievances can take the form of specific complaints for damages/injury, concerns about routine program activities, or perceived incidents or impacts. Identifying and responding to grievances supports

the development of affirmative relationships between project and affected groups/communities, and other stakeholders. According to World Bank Grievance Redress, communities and individuals who believe they are adversely affected by a Bank-supported project may submit complaints to existing project-level grievance redress mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns and impacts. Project affected communities and individuals may submit their complaint to the Bank's Independent Inspection Panel, which determines whether harm occurred, or could occur, because of the Bank's noncompliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the Bank's attention and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's corporate GRS, see http://www.worldbank.org/GRS, and Bank's Inspection Panel, see www.inspectionpanel.org.

In the implementation process of the EELRP, there should be a grievance redress mechanism established to allow the communities, project beneficiaries and stakeholders to complain/request about any decision of activities regarding inclusion in the livelihood support and combat towards the invasion of locust. It is also good to consider context dependent forms of traditional conflict redress mechanism for the project implementation regions. The traditional forms of managing issues can even be recognized and used by the government structures. Previous community consultation in various regions confirmed the relevance of using traditional conflict resolution mechanism parallel to the formal structure such as the *denb* system in SNNPR, *odiyash deganka* in Somali region, *Jarsuma*, *Aadaa, Safuu*, *Seera and Sinqee* relate to *Gada* system in Oromia region, *Makaboon* in Afar, *Wilok* in Nuer and *Carlok* in Anyawa in Gambella region. These traditional institutions were often used as a common customary practice to solve particularly interethnic conflict, mainly caused by grazing and water resource. Thus, selected communities for the implementation of EELRP need to have constant awareness creation in a culturally sensible form about the GRM and project implementation. They should also take trainings on the design and deliberation process of the project. Besides, it is necessary to consider national, regional, zonal, and Woreda levels discussions to strengthen their solidarity and integrity. The MOA should do this from the Federal down to the *Woreda* levels.

A GRM is oriented toward providing solutions and incorporates the principles of transparency, accessibility, due diligence, and responsiveness. The project will also recognize customary and/or traditional conflict resolution mechanisms. The project will equally ensure that grievances related to GBV are recognized and referred to respective service providers based on a survivor-centered approach (that is, always based on the demands of survivors and ensuring confidentiality). Such grievances shall not be handled according to standard GRM procedures but by the Woreda Women and Children Affairs Office or female GBV focal points to be selected and trained to provide basic referrals.

Key Considerations for EELRP GRM Procedure

No.	Key considerations	Detail about the GRM procedure
1	**Disclosure of the GRM**	GRM uptake location (RPSNP, assign focal person for Non PSNP target areas) need to be established at Regional and Woreda levels and Kebele Appeals Committee (KAC). The existence and condition of access to register (how, where, and when) shall be widely disseminated

		within the Project implementation areas.
2	**Expectation When Grievances Arise**	Affected or concerned persons expect to be heard and taken seriously. Thus, the MOA and other respective regional, *Woreda*, and Kebele Appeals Committee (KAC) levels implementing agencies and stakeholders need to provide adequate information to people that they can voice grievances and work to resolve without fear of retaliation.
3	**Grievance Submission Method**	Complaints can be submitted formally and informally through telephone (hotline), e-mail, MoA websites, program staff, text message (SMS) or in person. However, once the complaint is received, it will have to be documented in writing using a standard format containing detailed timeline for resolving conflict/complaint.
4	**Registration of Grievances**	Complaints will be recorded in a log using standard format, examined, investigated and remedial actions will be taken.
5	**Management of Reported Grievances**	The procedure for managing grievances should be as follows: 1) The affected or concerned person files his/her grievance, relating to any issue associated with the EELRP in writing or phone to the focal person. Where it is written, the grievance note should be signed and dated by the aggrieved person. In addition, where it is phone, the receiver should document every detail. 2) Where the affected or concerned person is unable to write, the focal persons will write the note on the aggrieved person's behalf. 3) Assigned/focal staffs at Regional and Woredas PIUs will collaborate with *Kebele* administrators by giving them awareness training on how to document and report grievance.
6	**Grievance Log and Response Time**	The process of grievance redress will start with registration that should contain a record of the person responsible for an individual complaint, and records of date for the complaint reported; date the Grievance Logged; date information on proposed corrective action sent to complainant (if appropriate), the date the complaint was closed out and the date response was sent to complainant. Kebele Appeals Committee (KAC), Woredas and regions should keep compliant lodger recording all grievances, date and results of the closure with all supporting documents available (completed compliant logging forms, decision minutes, emails, etc.) and ensure that each complaint has an individual reference number, and is appropriately tracked and recorded actions are completed. The response time will depend on the issue to be addressed but the grievance at different levels should be addressed in 25 working days.
7	**Grievances Reporting Mechanism**	The focal person at Woredas and Regions will be responsible for compiling submitted and processed complaints/grievances on regular basis and report to relevant stakeholders every quarter. The Woreda should report the complaints registered and addressed to regions every month. The regions will report quarterly to MOA safeguard experts. The Kebele Appeals Committee (KAC) should report the complaints registered and addressed to woreda. Review unresolved appeals from KAC and forward them to the Woreda Council and the Woreda Food

		Security Desk every quarter. Forward the list of grievances, their resolution and any unresolved cases to the Woreda Council.

9.3. Summary of stakeholder consultation for the preparation of the ESMF

Three different stakeholder consultations were held based on key informant interviews. The stakeholders that are considered for Key informant interview were selected from the Ministry of Agriculture, Project Implementer, Project Partners, and project-targeted regions such as Amhara, Afar, SNNP, Oromia, Somali, Harari, Benshangul-Gumze, Gambella, and Tigray regions and Dire Dawa Administration. Selected informants from targeted regions and organizations were interviewed using a predefined interview guide. A total of 12 informants were interviewed to understand their views, concern, and interest toward the parent and AF project. The Key informant was interviewed through phone calls and in-person meetings. All consultations were conducted prior to updating the ESRM tools.

The process of the stakeholders' consultation meets the requirements of World Bank ESS7 of the ESF and to achieve this, in each of the target Regions, selected government bodies linked with the issues were consulted on the potential positive and adverse effects of the project, their views and concerns towards the project. Accordingly, they pinpointed that the project might more effects or risks on large community as a result of pesticide spray activities in general and in vulnerable or disadvantaged groups in particular as these sections of the communities have not been accessed to opportunities relative to other social groups in the country. Moreover, rapid mobilization for emergency response under the government requires rapid decision-making that does not always have time and space for adequate consultation of other stakeholders. This can lead to discontent, especially if compounded by mis-targeting of critical interventions for locust control and livelihood protection due to inadequate consultations. During stakeholder consultation, some environmental and social concerns were reflected (see Annexes 9, 10 and 11). These are summarized as follows:

A. Environmental concerns

The following are some of the views of stakeholders on the environmental risks (See annex 8, 9, and 10)

- Capacity limitation on implementing of IPM. No adequate trainings were given on the overall Environmental and Social Management issues,
- Lack of environmental and social safeguard specialist, responsible for overall environmental and social management of the project, at all level from federal up to woreda,
- deterioration of physical situation of big Government pesticide stores found in various part of the country, and
- Having limited non pest management options as required.

B. Social concern

- Some informants in the pastoralist and agro-pastoralists areas indicated the seriousness of the infestation on the pasture of their livestock and its effects that leads pastoralists into conflicts.
- reasons for the presence of conflicts in the pastoral, agro-pastoral and farming communities of Ethiopia are due to livelihoods, rangeland or pasture, unstable situation of the youth, and misinformation

10. Lessons Learned

The project will be managed by the existing PIU for Ethiopia Productive Safety Net Project and the ESMF is updated from the ESMF of the existing project. Therefore, the good experiences and lessons learnt include:

The issue of addressing the basic food needs of food insecure households via a productive safety net system, and the linkages created between livelihoods strengthening and the environment which is explained by the fact that the ERSNP incorporates a Livelihoods Strengthening component which provides mentoring and coaching to support aspiration development, improved access to appropriate financial services, a focus on savings for all households, livelihoods transfers, and credit for the credit-ready. This supports the livelihoods through:

- Improved extension for increased agricultural production;
- Off-farm income generating activities, supported by business and technical skills training;
- Workforce development and linkages to employment.

Hence these experiences can be taken as a good lessons and experiences to implement the activities stated in Component 2: Livelihood protection and restoration, of the EELRP. This experience will help to restore thousands of households that will be directly affected by the locust crisis in Ethiopia, through loss of crop production and some loss to livestock. Because, the project will provide a seed-fertilizer-pesticide package to selected farmers to ensure planting in the upcoming cropping season and, in pastoralist areas, fodder to guard against further livestock losses and thus loss of their main productive assets.

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Annex 1: Integrated Pest Management Plan

Ethiopia Emergency Locust Response Project IPMP

A. IPMP for EELRP

All assessment made at various steps were evaluated with existing new knowledge and practices (both indigenous and scientific). Once the evaluation of the assessment results have been made and analysed, the main component (Plan) of the IPMP have been developed and documented as follows (See Table 1below). Accordingly, this IPMP has been prepared for and to be implemented by the EELRP. Regions can develop their own IPMPs based on this comprehensive IPMP by adopting it according with their Regional condition, and level of responsibility and involvement.

IPMP Goals:

1. Total project intervention (pest prevention and control) area in ha: - **842, 000 hectares**

2. Total area planned to treat with pesticide spray: - **500,000 hectares**

i. Ground spray: 100,000 hectares, Amount of pesticide: **- 100,000 lt.**

ii. Arial spray: 400,000 hectares, Amount of pesticide: - **400,000 lt.**

3. Total area planned to treat with non-pesticide: - **342,000 hectares**

4. Target: - **342,000 lt. Pesticide reduced by using non pesticide techniques on DL infestation**

Table 1. IPMP of Ethiopia Emergency Locust Response Project

S.N	Project intervention regions	Respective target and hot spot woredas	Agro-ecology Zone	Life cycle of DL vis-à-vis seasons	Areas in ha. Planned to treat with pesticides spray	Types and amount of pesticide planned to be sprayed	Areas in ha. Planned to treat with non-pesticides covered	Non pesticide intervention practiced (Biological, physical and agronomical), and traditional
1.	Afar	Chifra	Low Land	Mature, Nymph and immature adults	10076	Malathion	400	Identify night roosting sites, manually Chop and kill early in the morning settled swarm for mature and Immature. For hoppers dig trenches and cover soil on the top
		EWA	Low Land	Hopper	3000	Malathion, Chloropyrifos	200	Dig trenches the crossing hopper fall down inside and cover the soil and egg field expose eggs to radiation.
		Mile	Low Land	Immature	4000	Malathion, Chloropyrifos	100	Identify night roosting sites, manually Chop and kill early in the morning settled swarm for mature and Immature.
		Kuri, Bidu	Desert	Immature	2000	Malathion	100	Chase specific distance and manually kill settled swarm early in the morning before flying
		Eldar, Erebiti	Desert	Immature	500	Chloropyrifos	100	Chase specific distance and manually kill settled swarm early in the morning before flying
		Afdera, Asayita Dufti	Desert	Immature	700	Chloropyrifos	300	Chase specific distance and manually kill settled swarm early in the morning before flying
2.	Amhara-eastern	Worababu	Low Land	Mature	5000	Malathion	1000	Chase specific distance and manually kill settled swarm early in the morning before flying
		Bati	Low Land	Hopper	6551	Malathion	200	Chase specific distance and manually kill settled swarm early in the morning before flying
		Habru	Low Land	Immature	1000	Chloropyrifos	200	Chase specific distance and manually kill settled swarm early in the morning before flying

S.N	Project intervention regions	Respective target and hot spot woredas	Agro-ecology Zone	Life cycle of DL vis-à-vis seasons	Areas in ha. Planned to treat with pesticides spray	Types and amount of pesticide planned to be sprayed	Areas in ha. Planned to treat with non-pesticides covered	Non pesticide intervention practiced (Biological, physical and agronomical), and traditional
		Kobo	Low land	Immature	2000	Chloropyrifos		Chase specific distance and manually kill settled swarm early in the morning before flying
3.	Dire Dawa C. administration	Culster 1	Low Land	Mature	55	Malathion	12	Manually chop and kill
		Cluster 2	Low Land	Hopper	58	Malathion	10	Dig trenches on the marching direction and make the hopper fall down inside the hole and cover soil
4.	Oromiya-eastern and south eastern	Chineksan	Low Land	Immature	355	Chloropyrifos	20	Manually chop and kill
		Doba	Low Land	Mature	200	Chloropyrifos	100	Manually chop and kill
		Teltele	Low Land	Hopper	2000	Chloropyrifos	250	Dig trenches on the marching direction and make the hopper fall down inside the hole and cover soil
		Wachile	Low Land	Immature	1500	Chloropyrifos	300	Chase specific distance and manually kill settled swarm early in the morning before flying
5.	Somali	Erer	Low Land	Mature	1200	Malathion	120	Identify roosting site late afternoon and manually kill before flying
		Aysha, Adigala	Low Land	Hopper	600	Malathion	50	Dig trenches on the marching direction and make the hopper fall down inside the hole and cover soil
		Denbel, Awubare	Low Land	Immature	500	Malathion	100	Identify roosting site late afternoon and manually kill before flying
		Jijiga	Low Land	Mature	1000	Malathion	200	Identify roosting site late afternoon and manually kill before flying
6.	SNNP- low land woredas of the southern zones	Benatsemay	Low Land	Mature	80,000	Chloropyrifos	10,000	Identify roosting site late afternoon and manually kill before flying
		Male	Low Land	Hopper	6000	Chloropyrifos	200	Identify the marching direction and make the hopper fall down inside the hole and cover soil
		Karat	Low Land	Immature	12,000	Chloropyrifos	2000	Identify roosting site late afternoon and manually kill before flying

S.N	Project intervention regions	Respective target and hot spot woredas	Agro-ecology Zone	Life cycle of DL vis-à-vis seasons	Areas in ha. Planned to treat with pesticides spray	Types and amount of pesticide planned to be sprayed	Areas in ha. Planned to treat with non-pesticides covered	Non pesticide intervention practiced (Biological, physical and agronomical), and traditional
		Ale	Low Land	Mature	20,000	Chloropyrifos	3000	Identify roosting site late afternoon and manually kill before flying
7.	Tigray- eastern and southern lowlands	Raya Azebo	Low Land	Hopper	2500	Malathion	1500	Dig trenches on the marching direction and make the hopper fall down inside the hole and cover soil
		Raya Alamata	Low Land	Immature	450	Malathion	400	Identify roosting site late afternoon and manually kill before flying
		Gantaafishu	Low Land	Mature	300	Malathion	200	Identify roosting site late afternoon and manually kill before flying
		Hantalo	Low Land	Hopper	900	Malathion	100	Dig trenches on the marching direction and make the hopper fall down inside the hole and cover soil

The proposed actions for effective implementation of the IPMP are described here under Table 2.

Table 2. Action for the implementation of recommended strategies and activities of the IPMP

S/N	Activities	Detailed description of the activity	Period of implementation and frequency	Responsible body/Implementers	Estimated Budget/Cost[2]	Remark
I.	**Capacity Building/Trainings**					
1.1	Make a Panel discussions among Project coordinators and Key Governmental Ministries	Creating common ground and commitment with Project coordinators, Steering and Technical committees on the effective implementation of the Project's IPMP	End of June 2020 up to mid July 2020	MoA, EELRP		
1.2	A day long awareness raising, refreshment course and briefing workshops on IPM-Basics	Conducting Awareness raising workshops and refreshment course for Federal, Regional, Zonal, Woreda experts, Das and	End Jun – End July 2020	MoA, EELRP, Regal Bureau of agriculture and Regional Pastoral Development Bureau		

[2] Refer Budget summary of Project PIM document and Section 9(budget Summary) of this document for not stated in the budget column. While those fixed budget in the column either clearly fixed for activity mentioned or those activities not budgeted in the PIM but proposed for effective implementation of the IPMP

		Scouts				
1.3	Conducting ToTs	ToT on best practice (FAO guidelines) of handling and disposal of pesticide; and locust biology and best control strategy for Federal and Regional Surveillance and control Team members	August up to September 2020	MoA, EELRP, Regal Bureau of agriculture and Regional Pastoral Development Bureau, Consultant		
1.4	Cascading ToTs at lower level	Cascading ToTs to Woreda Experts and Das	September up to October 2020	MoA, EELRP, Regal Bureau of agriculture and Regional Pastoral Development Bureau with lead contribution of ToT trainees		
1.5	Undertake basic research on non-pesticide techniques	Assessing and come with mapping and documenting country wide best practices-Non pesticide control methods applying for all DL lifecycle stages	June up to September 2020	MoA and EELRP		
1.6	Research and trial on low toxic pesticides and biopesticides.	Research and trial on low toxic pesticides and biopesticides. Such as Fipronil (pesticide) or blanket application of *Metarhizium acridium* (biopesticide), and others suggested as low toxic in trial carried out locust prone countries.	July up to November 2020	MoA and EELRP		
II.	**Capacitating with Manpower**					
2.1	At Federal level	Officially appoint the pest management specialist, who lead Desert Locust survey and control operation (Under project)	Up to June 30, 2020	MoA and EELRP		Allocated budget for monitoring and reporting
2.2	At Federal	Hire Environmental safeguard specialist	Up to June 30	MoA and EELRP		Allocated budget for monitoring and reporting
2.3	Regions	Officially appoint safeguard specialists from BoAs and/or Bureau of Pastoral developments (trained or to be trained)	Up to June 30	MoA, EELRP and Regional Bureaus		Allocated budget for monitoring and reporting
2.5	Woredas	Officially appoint safeguard specialists from Agricultural offices and/or Pastoral	Up to June 30	Regional Bureaus and Woreda offices		Allocated budget for monitoring and reporting

		development offices (trained or to be trained)				
III	**Insuring Safe use, application, storage and disposal of pesticides containers**					The training of safe use application, and etc have been covered.
3.1	Provision of PPE (Set)	Provision of PPE (set) for about 30,000 people involved on DL pest control program	Spring (March – June 2020) 35% of the PPE has required Summer (June to September 2020) 40% of the PPE has required Winter (October 2020 to January 2021) 25% of the PPE has required	MoA, EELRP and FAO country office	**6,000,000.00**	As specified in the Project's PIM for specific provision of PPE
3.2	Ensuring storage handling system up to standard by improving and making maintenance for major pesticide stores including rain flood drainage system of these sores	Chemical store at National with more than 400,000lt capacity, in East Dire Dawa 100,000 lt, In Samara 100,000lt capacity, 100,000 lt in Jigjiga, 50,000 lt capacity in Hawassa, 100,000lt capacity in Bishoftu, Kombolcha 100,000 lt Bahir Dar 100,000lt and Mekele 100,000 lt capacity and there are also medium storage in all zones in the country	Starting from June 2020	MoA, EELRP	**40,000.00**	New proposed activity
3.3	Disposal of Pesticide containers as per FAO guidelines	Collecting and transporting these containers to be reused or back to manufacturer (with in country) or recycling	In all operation periods	MoA, EELRP	**10,000.00**	New proposed activity
3.4	Disposal of pesticide	Based on best practices supported with FAO guidelines	When there is obsolete pesticide	MoA, EELRP		No disposal of pesticide will be carried on in the country- send to manufacturers
IV	**Monitoring, Evaluation and reporting**					
4.1	Assessment and monitoring of Status on human health and ecological features.	-Pre and post health examination for people involved in pesticide - Baseline unique Ecological feature assessment (before and after project interventions	In all operation and post operation periods	Project Implementing bodies from Woreda up to Federal level; and Environmental Protection organs from Woreda up to Federal level (EFCCC), MoH from Health centres up to Federal level		

		- Assessment of residual effect				
4.2	Overall monitoring and reporting of the DL control program including the implementation of this IPMP	Monitoring and reporting will be carried out from kebele, Woreda up to Federal level	In all operation periods	Project Implementing bodies from Woreda up to Federal level; and Environmental Protection organs from Woreda up to Federal level		This part should be more or less much with this IPMP's monitoring plan specified on Table 3 of this document

B. Monitoring, Inspection and reporting arrangements for the IPMP

Monitoring

The term monitoring is used here for the collection, analysis, interpretation and dissemination of data on the effects (both intentional and unintentional) of operational locust control. This includes control efficacy, effects on human health, impact on non-target organisms and the presence of insecticide residues. The objective of monitoring is to identify what goes right in operational locust control, and what can be improved. Monitoring is therefore an essential element of a locust control campaign. It aims to optimize control, improve cost efficacy and minimize adverse side-effects on human health and the environment.

According to the FAO Desert Locust Guidelines No. 4 – control, there are three types of operational monitoring: rapid assessments (done by locust control teams), dedicated operational monitoring (carried out by special monitoring teams) and in-depth monitoring (executed by specialized research teams). These three types of monitoring differ by the activities that are carried out, the time span in which the work has to be done and the functional links to the control campaign organization.

What to be monitored on Locust control operation

The project has to follow the FAO "Desert Locust Guidelines No. 4 – control" procedures and requirements on monitoring in all DL control campaigns. The following are some among to be monitored:

Desert Locust control operational monitoring areas

i. Monitoring human health

- **Occupational exposure.** Locust control staffs run the highest risk of being exposed to, and possibly poisoned by, insecticides. It is therefore important that insecticide exposure is regularly monitored.
- **External exposure**. External exposure to insecticides can be monitored using absorbent pads that are fixed, before insecticide spraying or handling, to certain parts of the body. The pads are stored after treatment in a refrigerator, transported to the laboratory, and analyzed for insecticide residues. If the pads are also fixed inside the protective clothing, the level of protection provided can be assessed too. A second method to assess external exposure is to mix a (fluorescent) tracer with the insecticide. Control staffs subsequently carry out handling and spraying as usual. The tracer can be visualized after the control operation (for fluorescent tracers this can be done at night, back at the camp, using a battery-powered UV light). This method is only qualitative but is an effective way of demonstrating potentially hazardous control practices.
- **Internal exposure.** A commonly used indicator for organophosphate absorption is the depression of acetylcholinesterase (in red blood cells) and pseudocholinesterase (in blood plasma). This can be tested after taking a blood sample and subsequent analysis using a field test kit or in a specialized laboratory

ii. Monitoring ecological side-effects

One of the main constraints for ecological monitoring of Desert Locust control is that the exact location of the insecticide treatments will often only be known very shortly before spraying. Many spray targets are identified the evening before treatment, and sometimes only on the day itself. This means that pre-spray observations or sampling are generally impossible. As a result, the scope of the ecological monitoring that can be carried out is relatively limited.

Three approaches to operational ecological monitoring can generally be used in Desert Locust control: observations, measurements and experiments.

- **Observations**. Observations are (mostly) qualitative assessments of the direct impact of a treatment, e.g., fish kills, behavioral changes in birds, large bee mortality, etc.
- **Measurements.** Measurements are all quantitative assessments of the impact of an insecticide treatment. Normally this will be the difference in a biological parameter between untreated and treated plots.
- **Blood cholinesterase (ChE) depression** is an indicator of exposure to organophosphates and carbamates. It is a non-destructive technique, and useful for livestock. Brain ChE levels can only be measured in dead animals and may be used to confirm whether casualties were the result of spraying. Comparisons should be made with ChE levels in non-exposed organisms.

Monitoring on Implementation level of the IPMP

For successful implementation of the EELRP's IPMP, regular monitoring and evaluation of activities undertaken by all actors involved in DL control program should be undertaken. The focus of monitoring and evaluation will be to assess effectiveness of the IPMP and the capacity level in all actors involved in DL prevention and control program. More importantly, to assess the involvement of Farmer Groups and the extent to which IPM techniques are being adopted in crop production, and the economic benefits that farmers derive by adopting IPM techniques. It is also crucial to evaluate the prevailing trends in the benefits of reducing pesticide distribution; application and misuse (see Table3).

Indicators that require regular monitoring and evaluation during the IPMP implementation include the following:

- The IPM capacity building performance at all level: Number of program staffs, scouts and farmers who have successfully received IPM training in IPM methods; evaluation of the training content, methodology and trainee response to training through feedback
- Numbers of Farmer Organizations that nominated members for IPM training; emphasize the number of women trained; assess Farmer Groups understanding of the importance of IPM for sustainable crop production
- Numbers of farmers who have adopted IPM practices as crop protection strategy in their crop production efforts; evaluate the rate of IPM adoption
- In how many crop production systems is IPM applied? Are the numbers increased and at what rate?
- How has the adoption of IPM improved the plant protection and crop production derive by adopting IPM?
- Economic benefits: decreased loss as a result of DL infestation and increased crop productivity due to adoption of IPM practices; increase in farm revenue resulting from adoption of IPM practices, compared with farmer conventional practices
- Social benefits: improvement in the health status of farmers
- Numbers of IPM networks operational and types of activities undertaken
- Extent to which pesticides are used for crop production
- Efficiency of pesticide use and handling and reduction in pesticide poisoning and environmental contamination
- Levels of reduction of pesticide use and reduction in pesticide poisoning and environmental contamination
- Overall assessment of activities that are going according to plans; activities that need improvements; and remedial actions required

Table 3. Summary of Monitoring and Evaluation of the implementation of IPMP

S/N	Activities description	Verifiable indicators	Implication for pest and pest management	Time frame and Frequency of monitoring	Responsible body	Estimated Budget/Cost[3]	Remark
1	**Capacity Building/ Training**						
1.1	Developing and dispatching of IPM Posters, Broachers and leaflets; and make Panel discussion for creating common ground and commitment with all actors	-No. of project coordinators and Steering committee members attended in the panel discussion -No. of Panel discussion carried out - No, of Posters, Broachers and leaflets prepared and dispatched to user -% in increasing the involvement or support of IAs and experts on overall IPM program of the country	- Platform for planning and implementation of IPMP established -Increasing the higher level IAs and experts in the involvement of the IPM implementation practices of the country	End of July 2020 – August 2020 (monitoring reports have to be produced)	MoA, EELRP		
1.2	Conducting a day long awareness raising workshops and refreshment course for Federal, Regional, Zonal, Woreda experts, DAs and Scouts on IPM- Basics	-No. of Expert, DAs and Scouts successfully attend in the workshops -No. of workshops conducted at various level	-Inclination towards IPM approach increased over the conventional approach (Using only pesticide as the only solution)	August 2020 (monitoring reports have to be produced)	MoA, EELRP, Regal Bureau of agriculture and Regional Pastoral Development Bureau		
1.3	Conducting ToTs on best practice (FAO guidelines) of handling and disposal of pesticide; and locust biology and best control strategy at Federal level- Regions will be particpated	-No. of Expert successfully attend in the ToT program -% in increasing the involvement or support of IAs and experts on overall IPM program of the country	-Change in the conventional pest management approach to IPM occurred	October 2020 monitoring reports have to be produced)	MoA, EELRP, Regal Bureau of agriculture and Regional Pastoral Development Bureau,		
1.4	Cascading ToTs at lower level (Woreda experts, DA, Kebele leaders and KDCs	-No. of ToTs cascaded to woreda DAs and experts -No of participants attending in the trainings -% in increasing the involvement or support of experts, DA, Kebele Leaders and KDCs on overall IPM program	-The idea and practice of the IPM approach and its implementation will be broadly accepted by farmers who are in the DL infestation prone areas	November 2020 monitoring reports have to be produced)	MoA, EELRP, Regal Bureau of agriculture and Regional Pastoral Development Bureau,		

[3] Refer Budget summary of Project PIM document and mainly Section 9 (budget Summary) of this document for budget column for monitoring.

		of the country			and ToT trainees		
1.5	Undertake basic researches on non-pesticide techniques	-No. of research -Outcome of the research which leads an increasing opportunity of using non pest side techniques	-Enhancing the ability of using non pesticide techniques on the DL control throughout the country	October 2020 monitoring reports have to be produced)	MoA, LERP and EFCCC		
1.6	Research and trial on low toxic pesticides and biopesticides	-Outcome of the research which leads an increasing opportunity of using less toxic pesticides and biopesticides	-Enhancing the ability of using variety of less toxic pesticides and biopesticides on the DL control throughout the country	December 2020 monitoring reports have to be produced)	MoA, EELRP and EFCCC P		
II. Capacitating with Manpower							
2.1	At Federal level Officially appoint the pest management specialist, who lead Desert Locust survey and control operation (Under project)	- One expert assigned at federal level - Amount of budget allocated for monitoring and reporting (operational budget)	- Effective implementation of the IPMP realized	July 2020 monitoring reports have to be produced)	MoA and EELRP		
2.2	At Federal hire EHS specialist as Environmental safeguard specialist	- One expert assigned at federal level - Amount of budget allocated for monitoring and reporting (operational budget)	- Effective implementation of the IPMP realized	July 2020 monitoring reports have to be produced)	MoA and EELRP		
2.3	Regions Officially appoint safeguard specialists from BoAs and/or Bureau of Pastoral developments (trained or to be trained)	- One expert assigned at Regional level - Amount of budget allocated for monitoring and reporting (operational budget)	- Effective implementation of the IPMP realized	July 2020 monitoring reports have to be produced)	MoA, EELRP and Regional Bureaus		
2.4	Woredas Officially appoint safeguard specialists from Agricultural offices and/or Pastoral development offices (trained or to be trained)	- One expert assigned at Woreda level - Amount of budget allocated for monitoring and reporting (operational budget)	- Effective implementation of the IPMP realized	July 2020 monitoring reports have to be produced)30	Regional Bureaus and Woreda offices		
III. Insuring Safe use, application, storage and disposal of pesticides containers							
3.1	Provision of PPE (Set)	-No. of PPEs purchased and dispatched for a person involved in DL control program in various seasons of Locust out breaking, that is Spring, Summer and Winter	-Safe working condition created	Spring Summer Winter	MoA, MOLSA, EELRP		

3.2	Ensuring storage handling system up to standard by improving and making maintenance for major DL control pesticide stores	-No. of pesticide stores renovated	-Safe pesticide handling created	Starting from June 2020	MoA, EELRP		
3.3	Disposal of Pesticide containers as per FAO guidelines	-No container disposed % of containers returned back to manufacturer of the pesticide -% containers ordered for recycling	Safe and environmentally friendly pesticide container disposal method created	In all operation periods	MoA, EELRP, EFCCC		
3.4	Disposal of pesticide	% Amount of pesticide disposed	Safe and environmentally friendly obsolete pesticides disposal method created	When there is obsolete pesticide	MoA, LERP, EFCCC		
IV.	**Overall implementation of the IPMP**						
4.1	Socioeconomic	-% increasing in productivity -% decreasing in crop loss as a result of pests -% increasing in income -% increasing farmers in adopting IPM	-Motivation and trust will be developed on the IPM	Through whole operation process	Woreda Agriculture office, DA and farmers		
4.2	environmental	-% decrease in complaining environmental pollution, especially surface water pollution -% decrease in complaining environmental pollution on unique ecological features	Motivation and trust will be developed on the IPM	Through whole operation and post operation process	Regional bureau Environmental protection organs, Woreda Agriculture office, DA		
4.3	Health and safety	-% decrease in human poisoning accident -% decreasing in complaining of health problem related with pesticide workers crop loss as a result of pests -% decrease on accident report related with pesticide	Motivation and trust will be developed on the IPM	Through whole operation process	Regional bureau of Environmental protection organs, Health centres, Labour and Social Affaire offices, Woreda Agriculture office, DA		
4.4	Goal of the IPMP	-% hectares Land covered using non pesticide DL control -% lt. pesticide decreased for the application of DL control	Measuring the effectiveness and weakness of the IPMP and lesson learned for further strengthening of the system	Through whole operation process	MoA, EELRP, EFCCC, Regions and Woreda offices,		

					DA and farmers		
V.	**Reporting**						
5.1	Overall monitoring and reporting of the DL control program including the implementation of this IPMP	-Address all issues in reporting format as stated in ESMF -Timely report to the relevant organs as stated in the ESMF	Creating best communication mechanism through bottom up approach so as to facilitate timely decision-making processes enhanced.	Monthly, Quarterly and annual report of IPMP reports and monitoring reports	MoA, EELRP, Regions and Woredas EFCCC		

C. Reporting

Reporting mechanisms of the implementation of IPMP (Monthly, quarterly, and annual Reports) should be in line with ESMF. The quarter and annual year implementation report of the IPMP and monitoring reports will be part and parcel of the overall ESMF report. Hence the overall implementation of the IPMP should be captured in the overall reporting format of the ESMF implementation and monitoring report.

D. Training and Capacity Building

This section will describe the overall training and capacity building requirement for effective implementation of the IPMP in particular and ESMF in general based on training and capacity building need assessment made on the preparation of this document. Accordingly, gaps on human resource, training/Awareness, and research have been identified and possible measures also proposed.

Capacity Building on Training and Research

Capacity building in terms of training/Awareness raising and research are discussed in this section. Even though the capacity building efforts were made before, in order to build common ground and creating commitment at all level, some training needs and research areas have been identified for effective implementation of this IPMP as integral part of the Project's ESMF.

i. Proposed awareness raising and Trainings

The following are the proposed awareness raising for large community and trainings for technicians and experts dealing on project activities:

- Make a Panel discussions among Project coordinators and Key Governmental Ministries
- Sensitization and awareness raising workshops for large community members on the overall project activities including IPM basics and importance
- ToT on safe use, application and disposal of pesticide for Federal and Regional Experts
- Cascading this ToT to Zonal, Woreda experts and DAs
- ToT on IPMP/ESMF and relevant Environmental and social frameworks, plans and instruments for Federal and Regions appointed safeguard specialists, relevant technical staff and regulatory body (respective environmental organs)
- Cascading this ToT to Zonal, Woreda experts and DAs
- Other trainings as required

ii. Proposed Research Areas

The following are the proposed research areas which has been required for effective implementation of the IPM of this project.

- assessing and come with mapping and documenting country wide best practices- Non pesticide control methods applying for all DL lifecycle stages,
- Research and trial on low toxic pesticides and biopesticides. Such as Fipronil (pesticide) or blanket application of Metarhizium acridium (biopesticide), and others suggested as low toxic in trial carried out elsewhere in locust prone countries.

iii. Institutional Arrangements and Capacity Building

As it was discussed above the implementation of the EELRP and the IPMP will take place through the existing government structures from the federal to the local or community level institutions. This structure has been believed strong and having best experience on DL control of the country. However, there are some areas need qualified personnel's for the overall implementation of the ESMF and IPM. These are the following among others.

- Hire, as a consultant, pest management specialist, who lead the Desert Locust survey and control operation (Under project),
- Hire ESHS specialist Under Project) working as Environmental and Social Safeguard Specialist,
- At Regional level officially appoint safeguard specialists from BoAs and/or Bureau of Pastoral community developments (trained or to be trained) and allocate operational budget
- At Woreda level officially appoint safeguard specialists from Agricultural offices and/or Pastoral development offices (trained or to be trained) and allocate operational budget.

Annex 2. Subproject Screening Forms

1. Screening Forms for Component 1- spraying subprojects/activities

Subproject Screening Form 1: EELRP subprojects/Activities

Region: ..... Zone.....Woreda: ……

Kebele: …… Community: ……

Subproject Name: Ground and Arial Spraying…….

Activities: .....

DA and Subject matter specialists Team (Names): …….……...

Step (i) Subprojects Ineligible

Will the sub-project/activity directly:	**Yes**	**No**
Activities that may cause long term, permanent and/or irreversible (e.g. loss of major natural habitat) impacts		
Activities that have high probability of causing serious adverse effects to human health and/or the environment other than during spray to control pests		
Activities that may have significant adverse social impacts and may give rise to significant social conflict		
Activities that may affect lands or rights of indigenous people or other vulnerable minorities		
Activities that may involve permanent resettlement or land acquisition or impacts on cultural heritage		
Activities that may cause long term, permanent and/or irreversible (e.g. loss of major natural habitat) impacts		

Step (ii) a: Subprojects Requiring Special Attention

Feature of Concern	**Yes**	**No**
Subproject/activities likely to use or spray pesticides near to protected areas		
Subproject/activities likely to use or spray pesticides near to natural habitat		
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot areas		
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and only alternative for domestic use of the locality)		
Subproject/activities likely to use or spray pesticides near to agronomically important areas- such as organic farms, export crops and vegetables		

b: Subprojects of Environmental and Social concern

Feature of Concern	**Yes**	**No**
Subproject/activities likely to use or spray pesticides near to protected areas		
Subproject/activities likely to use or spray pesticides near to natural habitat		
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot		

areas		
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and the only alternative for domestic use of the locality)		
Subproject/activities likely to use or spray pesticides near to agronomically important areas- such as organic farms, export crops and vegetables		
Risk of pesticide storage and handling		
Risk of pollution as a result of disposal of obsolete pesticide and containers		
Impact on health and safety of the community and workers		
Offsite impact of the Projects activities such as pesticide spraying		
Risk on livestock and bee keeping		

Step (iii) Subproject Screening

Feature of Concern	**Potential for adverse impact**				
	None	**Low**	**Medium**	**High**	**Unknown**
Subproject/activities likely to use or spray pesticides near to protected areas					
Subproject/activities likely to use or spray pesticides near to natural habitat					
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot areas					
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and the only alternative for domestic use of the locality)					
Subproject/activities likely to use or spray pesticides near to agronomically important areas- such as organic farms, export crops and vegetables					
Risk of pesticide storage and handling					
Risk of pollution as a result of disposal of obsolete pesticide and containers					
Impact on health and safety of the community and workers					
Offsite impact of the Projects activities such as pesticide spraying					
Risk on livestock and bee keeping					

Mitigating Measures Required

Potential Impacts	Mitigation Measure

Approved Unconditionally: ☐ Approved subject to Special Procedures and/or Mitigating measures ☐

Notify to REPA as Subproject of Environmental Concern: ☐

Rejected: ☐

Screening conducted by (DA name):
Name……..……. Position: ……..Signature:……... Date:……

Screening reviewed by (Respective Environmental Protection Organ Environmentalist):
Name……..……. Position: ……..Signature:……... Date:……

2. Screening Forms for Component 2- Livelihood Protection and Restoration Subprojects/Activities

Subproject Screening Form 1: EELRP subprojects/Activities

Region: ..... Zone.....Woreda: ……

Kebele: …… Community: ……

Subproject Name: Ground and Arial Spraying…….

Activities: .....

DA and Subject matter specialists Team (Names): …….……...
Step (i) Subprojects Ineligible

Will the sub-project/activity directly?	**Yes**	**No**
may cause long term, permanent and/or irreversible (e.g. loss of major natural habitat) impacts		
have high probability of causing serious adverse effects to human health and/or the environment other than during spray to control pests		

may have significant adverse social impacts and may give rise to significant social conflict		
may affect lands or rights of indigenous people or other vulnerable minorities		
may involve permanent resettlement or land acquisition or impacts on cultural heritage		

Step (ii) a: Subprojects Requiring Special Attention

Feature of Concern	Yes	No
Subproject likely to use pesticides or other agro-chemicals		
Subproject involves land acquisition, or loss of assets, or access to assets on the land		

b: Subprojects of Environmental and Social concern

Will the sub-project:	Yes	No
Located within National and or regional Park or other designated wildlife area or buffer zone		
Located in forest priority areas and cause destruction of habitats		
Involves draining of or disturbance to a wetland and other ecologically sensitive areas		
Located close to cultural heritage, historical and religious sites		
Subproject that incorporates a dam construction		
Subproject that involves use of hazardous laboratory chemicals		
Subproject involves abstraction of significant volume of water from international waterways		

Step (iii) Subproject Screening

Feature of Concern	Potential for adverse impact				
	None	Low	Medium	High	Unknown
Subproject/activities likely to use or spray pesticides near to protected areas					
Subproject/activities likely to use or spray pesticides near to natural habitat					
Subproject/activities likely to use or spray pesticides near to biodiversity hotspot areas					
Subproject/activities likely to use or spray pesticides near to water bodies such as ponds (which are very important and the only alternative for domestic use of the locality)					
Subproject/activities likely to use or spray pesticides near to agronomically important areas-such as organic farms, export crops and vegetables					
Risk of pesticide storage and handling					
Risk of pollution as a result of disposal of obsolete pesticide and containers					
Impact on health and safety of the community and workers					

Offsite impact of the Projects activities such as pesticide spraying					
Risk on livestock and bee keeping					
Restriction of human and livestock mobility					
Restriction of access to communal lands					
Risk of introduction of invasive exotic species					
Compromise to local biodiversity					
Cause land acquisition and property losses					
Flooding and erosion due to breach of the physical structures					
Others (specify)					

Mitigating Measures Required

Potential Impacts	Mitigation Measure

Approved Unconditionally: ☐ Approved subject to Special Procedures and/or Mitigating measures ☐

Notify to REPA as Subproject of Environmental Concern: ☐

Rejected: ☐

Screening conducted by (DA name):
Name……..……. Position: ……..Signature:……... Date:……

Screening reviewed by (Respective Environmental Protection Organ Environmentalist):
Name……..……. Position: ……..Signature:……... Date:……

Annex 3 Guideline for ESMP Preparation and Contents of ESMP

1. Guideline for ESMP Preparation

The ESMP should be formulated in such a way that it is easy to use. References within the plan should be clearly and readily identifiable. Also, the main text of the ESMP needs to be kept as clear and concise as

possible, with detailed information relegated to annexes. The ESMP should identify linkages to other relevant plans relating to the project, such as plans dealing with resettlement or indigenous peoples issues. The following aspects should typically be addressed within ESMPs.

i. Summary of the potential impacts of the proposed project: The predicted adverse environmental and social impacts for which mitigation is required should be identified and briefly summarized. Cross-referencing to the ESIA report or other documentation is recommended.

II. **Description of the recommended mitigation measures:** Each mitigation measure should be briefly described with reference to the impact to which it relates and the conditions under which it is required (for example, continuously or in the event of contingencies). These should be accompanied by, or referenced to, project design and operating procedures that elaborate on the technical aspects of implementing the various measures.

III. **Description of monitoring and auditing program:** The monitoring and auditing programs should clearly indicate the linkages between impacts identified in the ESIA report, measurement indicators, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions.

IV. **Institutional arrangements**: Responsibilities for mitigation and monitoring should be clearly defined, including arrangements for co-ordination between the various actors responsible for mitigation.

V. **Capacity Building and Training Programmes:** To support timely and effective implementation of the project components and mitigation measures, an assessment and evaluation of the capability of environmental units and other institutions responsible for environmental management is necessary.

VI. **Implementation schedule and reporting procedures:** The timing, frequency and duration of mitigation measure should be specified in an implementation schedule, showing links with overall project implementation. Procedures to provide information on the progress and results of mitigation and monitoring measures should also be clearly specified.

VII. **Cost estimates and sources of funds and allocation of responsibilities**: These should be specified for both the initial investment and recurring expenses for implementing all measures contained in the ESMP, integrated into the total project costs, and factored into loan negotiations, etc.

Template for Environmental and social Management Plan ESMP Preparation

Subproject activities	***Potential Environmental and Social Impacts***	***Proposed Mitigation Measure(s) (Incl. legislation & regulations)***	***Responsible Institutions (Incl. enforcement & coordination)***	***When to implement? (***Schedule for implementation of mitigation measures	***Cost Estimates***	***Comments (e.g. secondary impacts)***

Subproject activities	***Potential Environmental and Social Impacts***	***Proposed Mitigation Measure(s) (Incl. legislation & regulations)***	***Responsible Institutions (Incl. enforcement & coordination)***	***When to implement? (***Schedule for implementation of mitigation measures	***Cost Estimates***	***Comments (e.g. secondary impacts)***

2. Contents of an Environmental and Social Management Plan (ESMP)

This is an action-oriented part of ESIA. The effective implementation of ESIA findings and recommendations hinges largely on the preparation and implementation of appropriate ESMP. It should thus include, at least, the following:

- outline of major positive and negative impacts,
- description of mitigation/enhancement measures,
- schedules of implementation,
- cost estimate,
- assign responsibility for implementation (by name or position of responsibility)
- surveillance and monitoring scheme with defined performance benchmarks and indicators,
- contingency plans, impact management strategy and response plans, where necessary
- attachment of environmental contract for the implementation of ESMP as the case may be,
- any institutional and capacity building requirements,
- Briefly present the planned community environmental management project (s) where necessary.

Annex 4. Format/contents of an ESIS/ESIA report

1. Executive Summary

This is the first part of the report that most people will read. The summary should provide a brief and accurate overview of the report in non-technical and simple language, in particular highlighting the main findings and recommendations. A two or three page summary should be written containing the following:

- Title and location of the proposed undertaking
- Name of the proponent and contact
- Name of the consultancy agency
- A brief outline of the proposal
- Results of public consultation
- Alternatives considered
- Major impacts and their Significance
- Mitigation measure/compensation
- The way forward-Environmental and Social Management Plan

2. Introduction

This section gives overview of the projection conception and the necessity of carrying-out an ESIA. It discusses:

- Background – how the project was conceived, who the developer is, involved cost, financing of the project and ESIA consultant, etc.
- Objectives of ESIA
- Methodology
- Boundaries of ESIA study

- Duration of ESIA study

3. Project Background, Description and Alternatives

This is a more detailed description of the proposal including any reasonable alternatives. A do nothing alternative should also be considered with a view of foregone loss of the expected benefits and future of the environment. Attention should be paid to the major differences between the alternatives. This section of the report should explain:

- The status of the proposal in the project cycle such as pre-feasibility, feasibility, detailed engineering design etc
- A description of plans/designs and implementation strategies used for impacts forecast and management measures
- The requirements for raw materials e.g. water, energy, equipment etc.
- The planned operational characteristics, its uses, process, products etc.
- Visual aids such as appropriate maps, tables, flow diagrams and photographs
- A comparison of proposal options such as size, sitting, technology layout, energy sources, source of raw materials within existing economic, technical, environmental and social constraints
- A summary of the technical, economic and environmental features of the proposal.

4. Administrative, Legal and Policy requirements

Under this section applicable international, national and regional environmental legal and policy frameworks should be described in the context of the proposed action. Furthermore, administrative and institutional arrangement that will be required for implementation of the environmental management aspects of the proposed activities needs to be elaborated.

5. Approach to the study

The methodologies to be used for identifying, predicting and evaluating of the impacts (both positive and negative), alternatives analysis and design of ESMP are required to be described under this section. In describing the approach due consideration should be paid to its appropriateness.

6. Assumptions and /or Knowledge Gap

Reliability and quality of data to be collected regarding the proposed action might not be sound and conclusive enough. Under such circumstance it is important to indicate the gaps and uncertainties. The analyst is, therefore, required to clearly state the level of uncertainties by considering:

- reasons (constraints) for the incomplete nature and/or assumptions of information
- confidentiality of the information
- the implications of those gaps and assumptions for decision making
- proposals or suggestions to make up for the limitations.

7. Baseline Conditions

This elaborates the existing:

- Spatial, institutional and temporal boundaries
- Baseline conditions: biophysical, social, cultural, economic and land use
- Key trends and anticipated conditions, including prediction about the likely future environmental conditions in the absence of the proposed action.

8. Public concerns and views

A concise and complete statement of the nature, scope and results of public consultation is an important section of the report. These particulars are sometimes overlooked, or aspects are insufficiently described. Depending on the provision made for public consultation, some or all of the following points should be included:

- Identification of interested and affected stakeholders
- Method(s) used to inform and involve them
- Analysis of views and concerns expressed
- How these were taken into account
- Issues remaining to be resolved

9. Potential impacts identification and analysis

This section details the actual impacts identification, prediction, and analysis. It includes description of how beneficial/adverse impacts and direct/indirect are expected to occur. The report should discuss about:

- Spatial, Institutional and temporal boundaries adopted for the various aspects of the study
- Condition of the biophysical, socio-economic environment as well as trends and the anticipated future environmental conditions
- Environmentally sensitive areas of special or unique values (such as scientific, socio-economic, cultural, visual etc)
- Causes and/or sources of the impacts
- Methods, techniques and standards used to predict or forecast impacts, of how environmental data was gathered
- Uncertainties in predicting impacts
- Significance of the different impacts; and
- Severity of impact (e.g. magnitude, duration, location, direction, reversibility etc.) as well s the likelihood of its occurrence
- Quantitative or qualitative assessment of the costs of different impacts
- Possible measures for avoiding or mitigating the effects of significant impacts
- Clear statement of residual impacts, i.e. those, which cannot be avoided or minimized, and recommendation for how these shall be managed.

10. Mitigation and enhancement measures

The focus of this section is to suggest appropriate measures in order to avoid and/or minimize negative and enhance positive impacts of the proposed actions. Mitigation and enhancement measures should be project specific and take in to account various issues such as cost, views of stakeholders involved in the ESIA process.

The main types of mitigation and enhancement approaches which need due considerations are the following:

- Prevention or minimization of impacts,
- Elimination or reduction of adverse impacts,
- Rehabilitation or restoration of environmental damage,
- Compensation to environmental and social damage,
- Enhancement of beneficial impacts,
- Consideration of cost and benefit scenarios of recommended measures,
- Appropriateness and cost effectiveness of preferred measures,
- Appropriateness of the technology used, and the level of skill required to operate or maintain the technology, etc.

11. Environmental and social Management Plan (ESMP)

This is an action-oriented part of ESIA. The effective implementation of ESIA findings and recommendations hinges largely on the preparation and implementation of appropriate ESMP. It should thus include, at least, the following:

- outline of major positive and negative impacts,
- description of mitigation/enhancement measures,
- schedules of implementation,
- cost estimate,
- assign responsibility for implementation (by name or position of responsibility)
- surveillance and monitoring scheme with defined performance benchmarks and indicators,
- contingency plans, impact management strategy and response plans, where necessary
- attachment of environmental contract for the implementation of ESMP as the case may be,
- any institutional and capacity building requirements,
- Briefly present the planned community environmental management project (s) where necessary.

12.Environmental and Social Monitoring and Auditing

This section outlines the mechanisms for checking environmental performance during the operational life of the project; so it ensures effective implementation of ESMP. This presents:

- The benchmarks for monitoring program to assess performance,
- An opportunity to review the Environmental and Social Management Plan (E&SMP) to take into account emerging issues/impacts,
- Outlines mechanisms for checking the environmental performance of the project,
- Monitoring schedule,
- Involvement of external experts for internal audits,
- Internal capacity building,
-

13. Conclusions and Recommendations

This section should clearly and concisely indicate the critical justification, which is relevant to the decision-making. It should also highlight the key conditions of implementation.

14. Appendices

These are separate documents to be used as references for the reviewers. They enable reviewers to reach at appropriate decision making. Examples of documents that may be provided as appendices are:

- detailed technical reports,
- site maps and flow charts

Annex 5. Contents of an Environmental and Social Monitoring Report

The following items should appear in a monitoring report:

- Brief description of the project
- Purpose for monitoring
- Phase of the project
- Parameter/indicator (measurement and units)
- Frequency
- Standard level or norm
- Name and capacity of the person doing/reporting the monitoring
- Costs for monitoring
- Interpretation of the data
- Comment on the data

For monitoring to be effective, simple observations and reporting particularly from local people should be valued and taken into consideration. Verification of such observations by the developer should follow.

The Monitoring Plan should be prepared as part of the Environmental and Social Management Plan (ESMP) to mitigate and monitor the impacts of the proposed project. A budget for the monitoring plan needs to be drawn up and the resources and personnel necessary to carry them out should be specified in the ESMP.

Annex 6. Contents of an Environmental and Social Audit Report

An audit report must be prepared and submitted to the competent agency for review. The audit report should at least have the following suggested contents:

- Executive summary;
- Project's current status information;
- Audit objectives and scope;
- Audit protocol, criteria and methodology used;
- Findings and Observations;
- Description of key issues including the discovered project strengths and weaknesses;
- Recommended actions;
- Conclusions; List of documents used/cited as references;
- Appendices (photographs, future Plan of Action, consultancy, list of stakeholders consulted, etc.)

Reviews and Verification of Audit Report

Competent Agency or delegated specialist review team shall conduct an environmental audit review in relation to accuracy and coverage of key issues. The reviewer shall ensure that in the report:

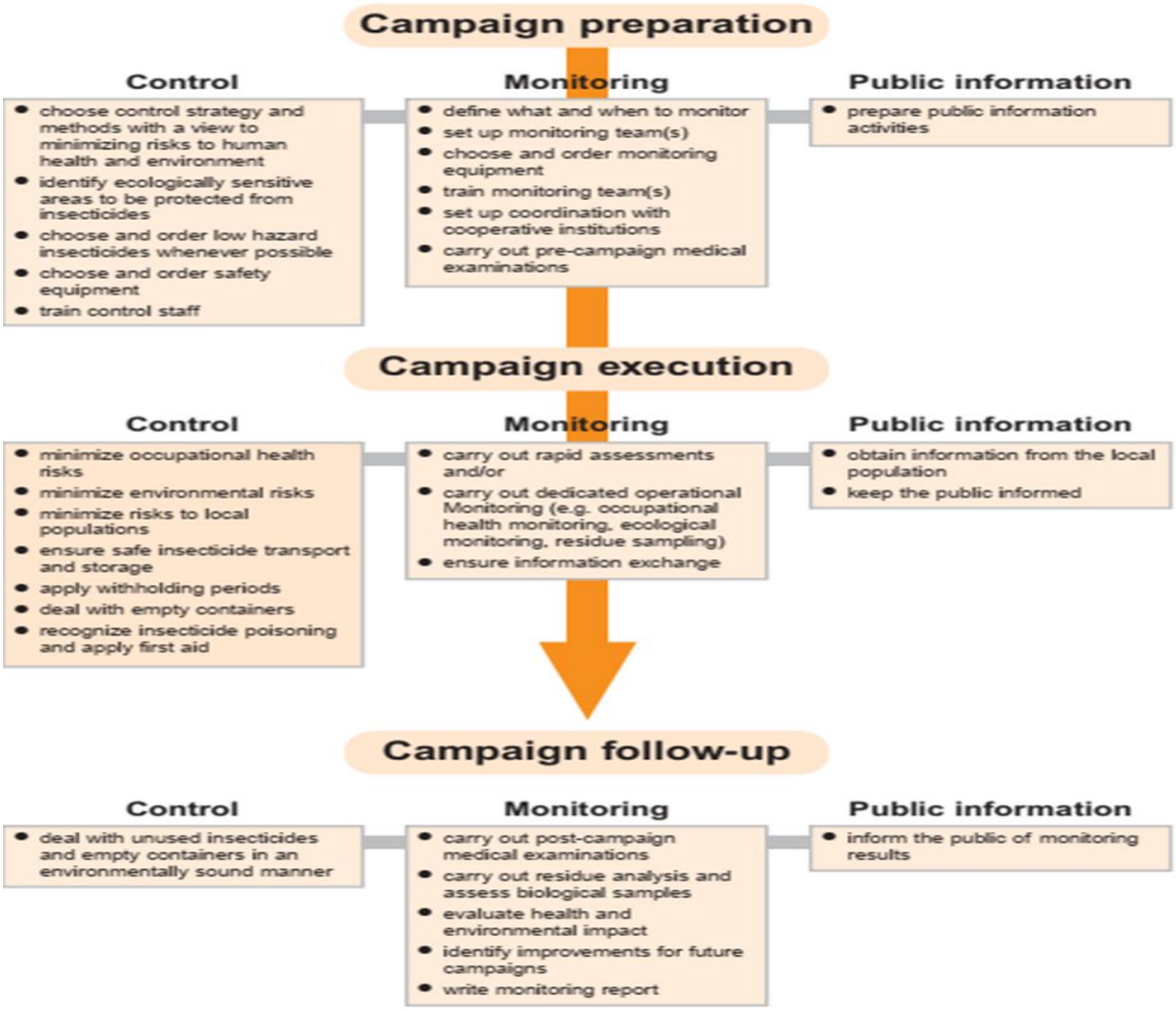
- Comparison between the existing and the predicted impacts in the ESIS is made;
- Evaluation of the implementation and effectiveness of the mitigation measures recommended in the ESMP is done;
- Appropriate recommendations for remedial measures are made.

The review team may make physical inspection and stakeholders' consultations in order to verify the contents of the audit review. Beside physical inspection, the proponent shall be invited for clarification and discussion.

After the review, it is the responsibility of competent agency to provide a feedback to Proponent on the environmental and social performances of the project in relation to ESMP. The developer should take to address issues raised in the audit report.

Annex 7: Additional FAO guidance Figures for further reference

Figure 1. Element of the risk reduction process during campaign preparation, execution and follow up



Furthermore, insecticides can have a broad impact on many aspects of life and ecosystems. Effects on ambient conditions such as the incremental contribution of pollutant emissions in an air shed, increases in pollutant concentrations in a water body or in the soil, Loss of biodiversity (Death of plant, wildlife, and microorganisms), are possible cumulative risks and impacts of insecticide use. An appropriate approach should be developed to protect human health and the environment from risks associated with pesticide use. This includes protection of pesticide users, consumers, the public, livestock, wildlife, water bodies, etc. A table showing some examples of impact of pesticides and a diagrammatic illustration of **risk of locust control insecticides to non-target organisms** is provided below.

Some examples of the impact of insecticides on:

● Agriculture	- mortality of natural enemies of pests - insecticide residues in crops - reduced pollination
● Fisheries	- mortality of fish and shrimp
● Animal husbandry	- insecticide residues in meat and milk - reduction of honey and wax production
● Surface and ground water	- pollution, causing (temporary) reduced availability of drinking-water
● Biodiversity	- reduction of important species for medicine, agriculture, fisheries or animal husbandry - reduction of tourism

Figure 2: Indicative risk of locust control insecticides to non-target organisms

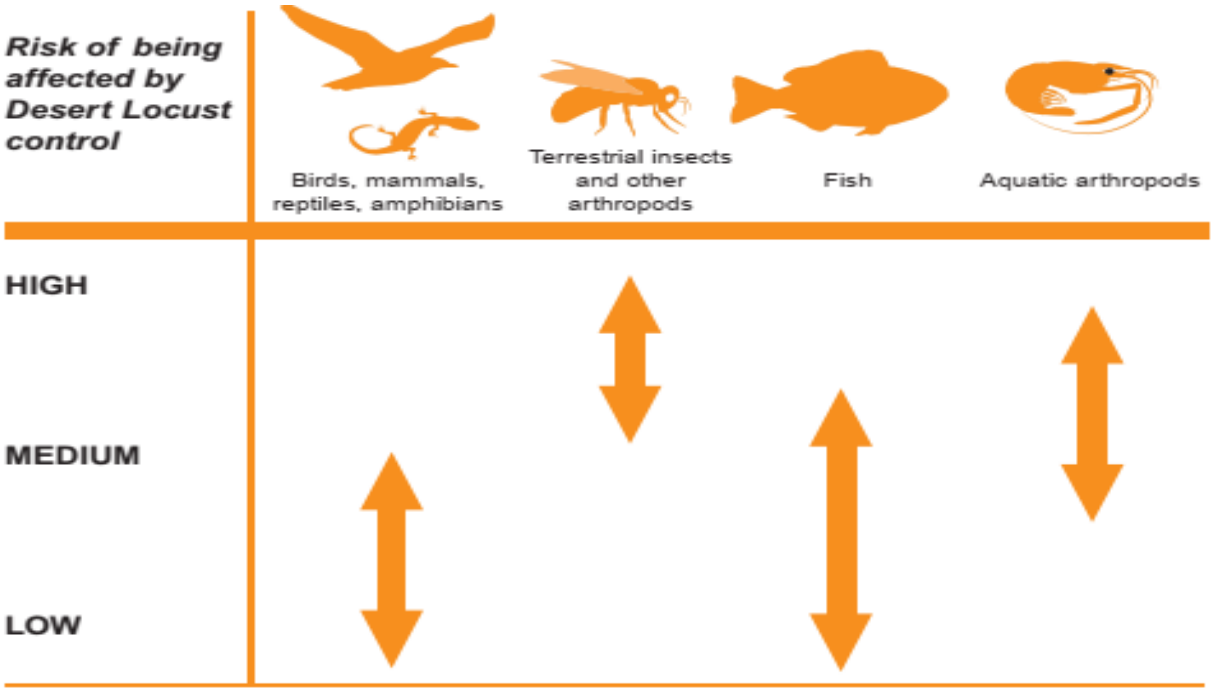
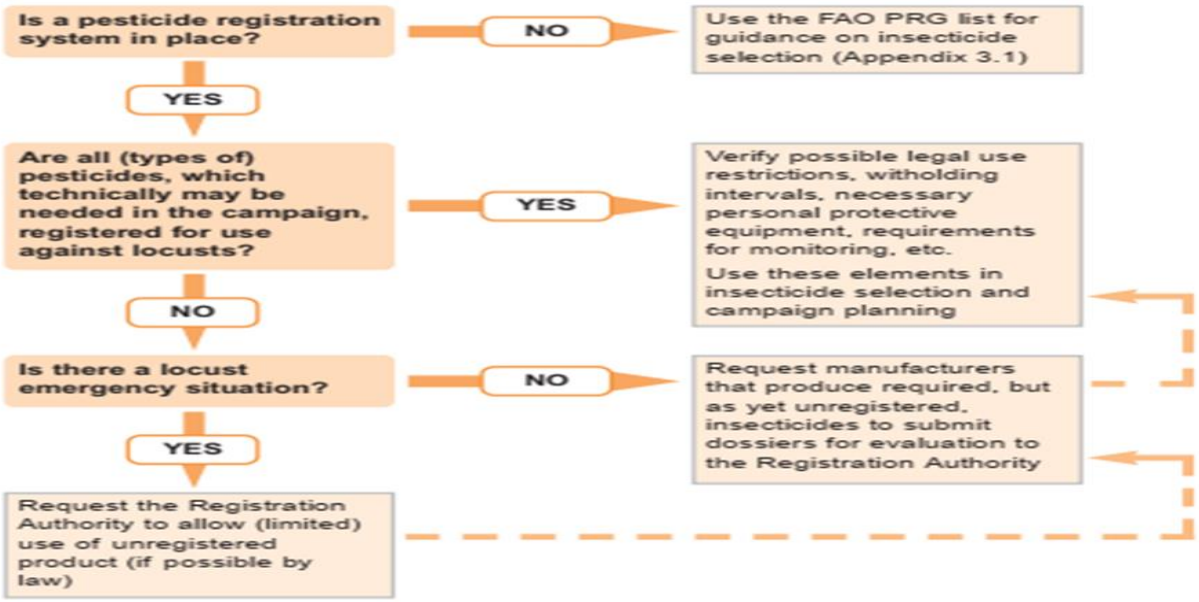
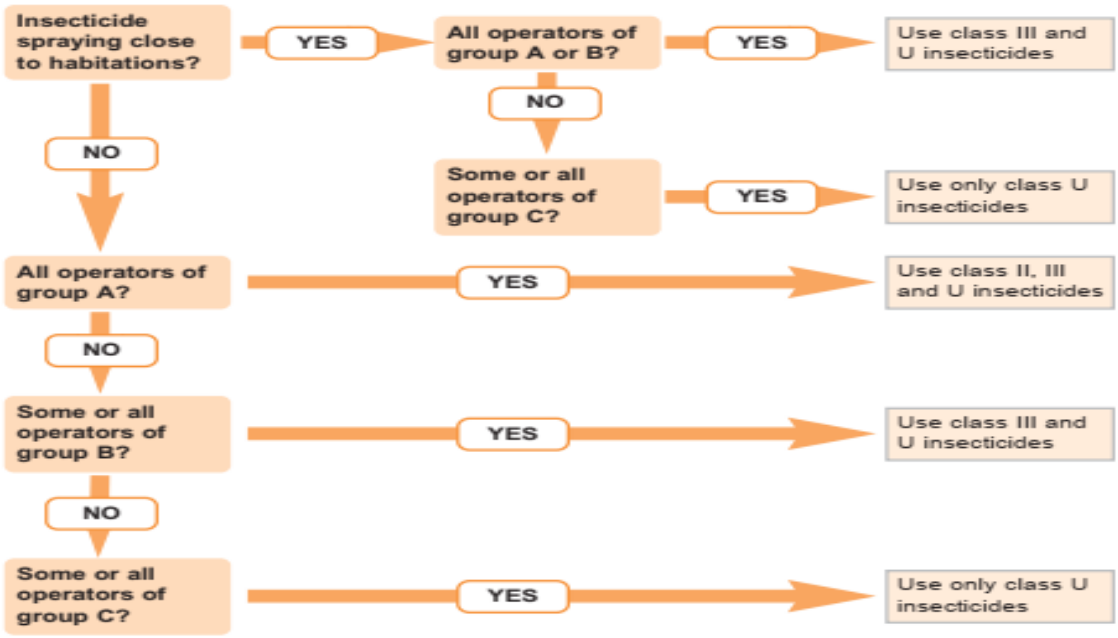


Figure 3. Decision scheme to check whether actions are needed for the registration of products in your campaign



Tip: because pesticide registration authorities rarely receive the evaluation reports of the FAO Pesticide Referee Group, the locust unit should transmit a copy to them, so it can be used in the registration process of new insecticides for locust control.

Figure 4 Indicative decision schemes for the selection of locust control insecticides, based on human health criteria.



Note: operator group codes as in table on opposite page

Tip: for insecticides or formulations that are not listed in Appendix 3.2, the WHO hazard classification can be determined using Appendix 3.3.

If the LD50 of the commercial formulation is known, use the table directly. If this is not the case, look up the LD50 of the active ingredient and then calculate the LD50 of the commercial formulation, using the formula provided .

LD50 values of active ingredients are listed in the most recent version of the WHO classification, which can be downloaded from the WHO Web site.

WHO recommended restrictions on the availability and use of pesticides

WHO hazard class	Availability and use restrictions	Operator code [1]
Ia Extremely hazardous	Only individually licensed operators	--[2]
Ib Highly hazardous	Well-trained, educated, strictly supervised operators	--[2]
II Moderately hazardous	Trained and supervised operators who are known to observe precautionary measures strictly prescribed	**A**
III Slightly hazardous	Trained operators who observe routine precautionary measures	**B**
U Unlikely to pose an acute hazard in normal use	General public, respecting standard general hygienic measures and observing instructions for use given on the label	**C**

Figure 5. Good standards for packaging, labeling and quality control should be followed when ordering insecticides. *(See the FAO Guidelines on tender procedures for the procurement of pesticides, for more information)*

Basic international standards for insecticide packaging are provided by the *United Nations Recommendations on the Transport of Dangerous Goods*. More specific ones are provided by the international transport organizations (e.g. International Air Transport Association (IATA) for air transport and the International Maritime Organization (IMO) for maritime transport).

International guidelines on good labelling practice for insecticide containers have been published by FAO

Pesticide specifications for many individual pesticide formulations are available from FAO

Tip: ask the supplier of the insecticide to provide a reasonable amount of extra labels/technical leaflets and material safety data sheets. These can be distributed among the control teams and the medical authorities in the locust control areas. Also, if insecticides have to be repackaged for some reason, the spare labels can be attached to the new containers.

Comparison of environmental and occupational health concerns between aerial and ground control

Aerial treatment	Ground treatment
Environmental concerns	
Increasing risk	***Increasing risk***
● large areas sprayed	● more temporary and inexperienced staff
● higher probability of contaminating sensitive areas	***Reducing risk***
● more uncontrolled drift	● small areas sprayed
Reducing risk	● more precise applications
● well-trained staff	● less uncontrolled drift
Occupational health concerns	
Increasing risk	***Increasing risk***
● large quantities of pesticides handled	● many staff involved
Reducing risk	● more inexperienced staff
● few staff involved	● more opportunities for exposure
● well-trained staff	● less protective equipment
● protective equipment available	***Reducing risk***
● fewer opportunities for exposure	● smaller amounts of pesticides involved

Note that there are often more environmental concerns with aerial treatments but more occupational health concerns for ground control.

Annex 8 : Summary Federal level Consultations with High level Technical Expert

S/N	Issues to be assed	Responses	Remark
I. Assessment on existing locust control using pesticides			
1.	As an organization, do you think IPM will have a room to reduce the application of pesticides? How? Please describe it with tangible evidences. **N.B:** Please attach published documents, if any.	Yes, IPM has a room to reduce pesticides. Integrated Locust control starts from early monitoring then early warning helps to control locust in small area. Again, in most areas destruction of egg field, digging trenches and cover soil over hoppers, Mechanically killing settled swarms and use of bio pesticides reduce locust population density reduce amount of pesticides application.	
2.	Evaluate and discuss the nature of proposed pesticides for Locust control: Malathion 50% EC, Malathion 95% ULV, and Chlorpyrifos 24% ULV in terms toxicity & efficacy referring the national regulation and registry; FAO; and the WHO and other standards.	1. Malathion and Chlorpyrifos belongs to Organophosphate group and the group is mammalian safe compared to Organochlorine 2. The group is non-persistent 3. Malathion is slightly hazardous and in WHO classification categorized in class III 4. Chlorpyrifos categorized in class II and moderately hazardous 5. Both are efficient if the target is well identified, located and time of application arranged based on the biology and behavior of locusts. Until now in most targets efficacy evaluated above 90% 6. Referring the national regulation and registration both are registered based on WHO toxicology classification. The regulation and registration allows class II, III and Unlikely hazardous groups	
3.	As an organization do you have any pesticide alternatives which have less toxicity but high efficacy for locust control? If any, please list out	As far as pesticides toxicity is concerned these we are using now are classified as moderately and slightly hazardous in Who classification. However, Fipronil (pesticide) or blanket application of *Metarhizium acridium* (biopesticide), suggested as low toxic in trial carried out locust prone countries.	
4.	As an organization, do you have proper storage facilities? Where and how is it being properly stored in terms of bulk pesticide storage? Please describe it in detail	We have chemical store at National with more than 400,000lt capacity, in East Dire Dawa 100,000 lt, In Samara 100,000lt capacity, 100,000 lt in Jigjiga, 50,000 lt capacity in Hawassa, 100,000lt capacity in Bishoftu, Kombolcha 100,000 lt Bahir Dar 100,000lt and Mekele 100,000 lt capacity and there are also medium storage in all zones in the country However, the storage handling system and standard may need improvement	
5.	As an organization, do you have solid waste management plan? Especially pesticide containers. Please describe it in detail. - Do you have procedure and practices in disposal of expired or leftover pesticides? What standard experience of disposal of pesticide do you have? Please describe it in detail.	During the past obsolete pesticides disposal project implementation period solid waste management plan was prepared and the activities stated in the plan are collecting back empty drums and crush all containers and make ready for final disposal The country disposed huge pesticide quantity and we have good experience	

6.	Describe actual measures and precautionary measures being carried out not to pollute the natural habitat in general and non-target species in particular during Arial pesticide spraying activity	We are using FAO standard procedure; the procedure has steps which are 1. Identify the target (Locust) 2. Decide whether spray able or not 3. If spray able, decide type of chemical, tool, plate form 4. For safe spray discuss with community and delimit the spray target, record for corner GPS and aware the community about waiting period of the pesticide to keep away their domestic animals and human being for the decided period. Then the team evaluate efficacy and impacts if any	
II. Assessment of traditional or agronomic practices of locust control			
1.	List out best traditional and agronomical practice of the locust control. And at which stage of Locust life cycle is these practices being effective. **N.B:** Please attach published documents, if any.	Traditional or agronomic practices are:- 1. Digging or destruct egg fields after egg laying of adults 2. Mechanical killing of settled adults before their flying early in the morning. This is applied to Immature and Mature adults 3. Digging trenches and guide or push all hoppers in the surrounding towards trenches and cover the soil in the top. This works for 1st, 2nd and 3rd instar hoppers	
III. Assessment on existing institutional and capacity building efforts			
1.	- Describe capacity building efforts made related with locust control	Desert Locust is a unique insect pest due to their ability to change behavior including their density and color. Desert Locust survey and management requires knowledge of its biology, behavior and ecology. Based on global and national existing situation forecast training given to different groups of experts and community locust scouts. 1. TOT given to Desert Locust information, Survey and forecasting, Logistic and campaign management and control experts. 2. Training given to regional locust focal experts 3 Training given to Community village leaders, scouts, religious and community elders before, during and after control of locust outbreak.	
2.	- Describe capacity building efforts made with safe use and application of pesticides on locust control - Describe capacity building efforts made on the environmental and social management instruments such as ESMF, RPF and others - At Federal level, do you familiar with these environmental and social management instruments? If yes, please describe some. If no please suggest some interventions	1. During capacity building safe use and handling of pesticides and application equipment management is the major covered theoretically and practically 2. EHS (Environmental and Health Standard) is a special topic and our locust officers trained by FAO/CRC 3. The country level in EHS during pest control operation evaluated by using software prepared by FAO. 3. We are not so much familiar with the instruments	
3.	Describe Existing Federal level institutional arrangement on Locust control program/project	The Federal level institutional arrangement in Locust control 1. Ministry of Agriculture 2. Agriculture sector state Minister 3. Plant Health Regulatory Directorate General 4. Plant Protection Directorate	

		5. Migratory pest management case team 6. Desert Locust officer experts 7. Partners FAO, DLCO, WB, WFP, USAID etc	
4.	- Describe the institutional arrangement on Environmental, Social and Health and safety organs - At Federal level for this and related program and/or projects, do you have Environmental and Social safeguard specialist/s? please state the existing condition	The Environmental and social safeguard program is part of locust operation and we have EHS specialist in Plant protection Directorate followed EHS training given by FAO in Egypt and specialized his M.Sc in this field in India	
IV. Assessment on communication means for surveillance of the occurrence of paste and control efforts			
1.	Describe technical support and communication means with Regions in terms of locust surveillance and control	Federal level Plant protection Directorate experts give regular support during survey and also organize control operation in breeding seasons and outbreak. Communication is through report that is daily, weekly and monthly reports including monthly bulletin. Standard survey format is used, elocust tablets and elocust3m Telephone and email are also daily communication channel.	
2.	Describe technical support and communication means with Special Woredas in terms of locust surveillance and control	Migratory pest is a trans-boundary pest management is organized and leaded by Federal Ministry. Region Bureaus are supporting the operation. The Ministry of Agriculture assign experts to the hotspot District and also region and zone offices involve in Campaign. Daily update prepared by using standard reporting format and woreda office daily communicate with the zones and directly with Plant protection Directorate in the Ministry.	
V. Assessment of technical support and communication with international organization dealing on locust control			
1.	Describe technical support and communication means with FAO in terms of locust surveillance and control	FAO developed Desert locust Biology, Survey, Information Forecasting, Environmental and social impacts, campaign leading, control. FAO developed standard survey format and the Ministry communicate twice a week and monthly by monthly bulletin. FAO professionals technical support all front line countries during training, field operation, survey tools and control tools handling and management	
2.	Describe technical support and communication means with East African Locust Control Program in terms of locust surveillance and control	Desert Locust Control Organization for Eastern Africa is one of the collaborators and Ethiopia is pioneer member of the organization. The experts of DLCO-EA carry out survey and support field experts and also deploy spray aircraft.	
VI. Stakeholders environmental and social concerns of this project			
1.	- List out all environmental and social concerns of all stakeholders at Federal level (implementing agencies, Environmental Organs, project affected persons and beneficiaries) related with this project	1. MoA 2. WB, FAO, DLCO-EA 3. Ministry of Health	
VII. Recommendations			
1.	Please forward your recommendations to be used as an input for realizing this project's (Project Development Objective) PDO and		

	sustainable development. With emphasis of Environmental and Social management of this project		

Annex 9. Questions Related to Environmental Issues for KII (Federal Levels Stakeholders)

S/N	Issues to be assed	responses	Remark
I. Assessment on existing locust control using pesticides			
1.	nization, do you think IPM will have a room to application of pesticides? How? Please describe ible evidences. **N.B:** Please attach published documents, if any.	*The key informant from MOA said that, IPM will definitely reduce chemical use for it deals with cultural practices and other methods that reduce pest which is good agronomic practice. The key informant also raised that though they have a certain level of toxicity these pesticides are lethal dose limited for desert locust.*	
2.	Evaluate and discuss the nature of proposed pesticides for Locust control: Malathion 50% EC, Malathion 95% ULV, and Chlorpyrifos 24% ULV in terms toxicity & efficacy referring the national regulation and registry; FAO; and the WHO and other standards.	*The Key informant explained that the effectiveness of the proposed pesticides for Locust control: Malathion 50% EC, Malathion 95% ULV, and Chlorpyrifos 24% ULV when operated manually it is effectiveness is between 94-96% and when sprayed with aircraft it about 90%. On average its effectively is about 95%.* *Regarding toxicity he claimed that first of all the use of chemical should be and is a last resort, when it is difficult to control with cultural practices. Apart from that these chemicals are toxic to a certain level. The natal dose for killing locusts. Their toxicity can be reduced through the use of appropriate PPE and following good spraying practice taking into consideration wind direction, time, and the characteristics of the locust*	
3.	As an organization do you have any pesticide alternatives which have less toxicity but high efficacy for locust control? If any, please list out	*There are no alternative pesticides apart from these pesticides*	
4.	As an organization, do you have proper storage facilities? Where and how is it being properly stored in terms of bulk pesticide storage? Please describe it in detail	*The key informant confirmed that the project will be using the existing pesticides storage in the target mainly Arba Minch airport, Bale Robe airport, Jig Jiga airports and Borena Tele Tele airport. This storage are meant for chemicals storage and is guarded to avoid local people exposure to the insecticides. In terms of distance from the community the storage are well situated.* *One key informant said, we have chemical store at National with more than 400,000lt capacity, in East Dire Dawa 100,000 lt, In Samara 100,000lt capacity, 100,000 lt in Jigjiga, 50,000 lt capacity in Hawassa , 100,000lt capacity in Bishoftu, Kombolcha 100,000 lt Bahir Dar 100,000lt and Mekele 100,000 lt capacity and there are also medium storage in all zones in the country* *However, the storage handling system and standard may need improvement*	
5.	-As an organization do you have solid waste management plan. Especially pesticide containers. Please describe it in detail.	*Previously there was system in which empty containers collected from sites and sent back to Kality from all over the country where it is crushed using dram crusher. However, this time the dram crusher is not functioning as a result currently being done with regard to container is collection and transporting back to Kality site and where it is stored. .*	

	- Do you have procedure and practices in disposal of expired or leftover pesticides? What standard experience of disposal of pesticide do you have? Please describe it in detail.	*The key informant confirmed that we have no clear an articulated* procedure and practices in disposal of expired or leftover pesticides *and this is the problem as country as there expired chemicals disposing mechanisms are not available in the country. But disposal of expired or* leftover pesticides *has been done with the support of development partners mainly FAO. He also added that, search for financing/funding is on progress to dispose the remaining expired pesticides.*	
6.	Describe actual measures and precautionary measures being carried out not to pollute the natural habitat in general and non-target species in particular during Arial pesticide spraying activity	*Before every mission the community are asked questions which include: do you know this?, What is it?, what is the impact on you?, what do you want as to do? And then they ask for intervention then the pesticide formulated for locust will be identified with natal dosage for killing the desert locust. Then the community will get information awareness creation and sensitization is carried out about the purpose of the spraying and the impact it has on them and their family, on water, etc. the community are asked where they drink water from? Beside the community are told to cover water. If the there are water bodies and other and non-target species the spray won`t be carried out until they are out of that sensitive area. Meanwhile the desert locust will be chased so as to protect the crops, pasture, and plants from being damaged by the desert locust. After chasing them to non-sensitive area the spray will be carried out either in area where they spent the night in the morning.* *In addition, the spray is carried out taking into consideration factors such as wind direction, topography, water body, village, and schools are not within the range of the spraying area. Besides, buffer zone is defined.*	
II. Assessment of traditional or agronomic practices of locust control			
1.	- List out best traditional and agronomical practice of the locust control. And at which stage of Locust life cycle is these practices being effective. **N.B:** Please attach published documents, if any.	*The federal key informant reported Various cultural methods made use to control desert locust. For instance, when the locust lay their eggs the area is ploughed so that to crush their eggs (this is done during the egg stage before hatching). The other practice is hitting with stick (locusts are cold blooded insects, as a result they are inactive from min-night to the sun rise. They feel the hot after 1-2 hours and their body relax as their limb is full of fat. Hence, they start moving after their body relaxed with the sun, mainly their limb). This makes it simple for hitting with stick as they cannot escape during this time). The other method is using smoke and collecting with suck and kill and digging hole and bury them).* *The other key informant response on traditional or agronomic practices are:-* 1. *Digging or destruct egg fields after egg laying of adults* 2. *Mechanical killing of settled adults before their flying early in the morning. This is applied to Immature and Mature*	

		adults *3. Digging trenches and guide or push all hoppers in the surrounding towards trenches and cover the soil in the top. This works for 1st, 2nd and 3rd instar hoppers*	
III. Assessment on existing institutional and capacity building efforts			
1.	- Describe capacity building efforts made related with locust control	*According to the key informant training has been provided before a head of campaign. So far capacity building has been provided to SNNP, Oromia, Dire Dawa, Somali and Afar. The approach is through ToT. In this respect the Federal train the regions, the regions train or provide capacity building for the Zonal officials and experts, the zonal to the woreda, the woreda to kebele and elders, Development Agents and extension workers and through them to the community. Besides, technical assistance is continuously provided to the region on different areas including resources, technical support on survey and surveillance, identifying, treatment and control.*	
2.	- Describe capacity building efforts made with safe use and application of pesticides on locust control	*In this regard the key informant confirmed that, the experts in the devolving government structure and the representatives of the community (clan leader, religious and traditional faith leaders, elders) on the purpose spraying and impact of pesticide use and precautionary measure they should be taken.* *For officials, experts, scouts capacity building efforts made include provision of training on when, where, how and what pesticide to use; factors to be considered during use of pesticide use (wind direction, topography, time, spraying, calibration of machines), proper Use of PPE; communication with community need to be taken before, during and after the spray are among efforts made.* FAO guideline on safety and environment precautionary Guideline 2003 is what using. Apart from this so far no capacity building has been provided ESMF and SA. But the documents for this project are under preparation.	
	- Describe capacity building efforts made on the environmental and social management instruments such as ESMF, SA and others	- Responses from one key informants about EHS 1. During capacity building safe use and handling of pesticides and application equipment management is the major covered theoretically and practically 2. EHS (Environmental and Health Standard) is a special topic and our locust officers trained by FAO/CRC 3. The country level in EHS during pest control operation evaluated by using software prepared by FAO.	
	- At Federal level, do you familiar with these environmental and social management	3. We are not so much familiar with the instruments	

	instruments? If yes please describe some. If no please suggest some interventions	No, only FAO guideline on safety and environment precautionary Guideline 2003 is what we are using and well aware about.	
3.	Describe Existing Federal level institutional arrangement on Locust control program/project	*The key informant mentioned the MoA, FAO/DLCO; and Plant protection Directorate,*	
4.	- Describe the institutional arrangement on Environmental, Social and Health and safety organs - At Federal level for this and related program and/or projects, do you have Environmental and Social safeguard specialist/s? please state the existing condition	*Environment Forest Climate Change Commission and MoLSA* *Currently we do not have ESSSs hired for this project, but the AGP safeguard specialists are supporting this project. But the project in the process of hiring ESSS for this project.*	
IV. Assessment on communication means for surveillance of the occurrence of paste and control efforts			
1.	Describe technical support and communication means with Regions in terms of locust surveillance and control	*According to the key informant the technical assistance provided to the region on different areas including resources, on survey and surveillance, identifying, treatment and control of desert locust. He also confirmed that they are also in regular communications with regions in provision of early warning and control support the communications channel used include email, and RAMSAS and telephone, letter. However, The tablet used for RAMSEs are limited to federal and regions such as Afar, Somale, and Oromia regions.*	
2.	Describe technical support and communication means with Special Woredas in terms of locust surveillance and control	Assistance provided including resources, on survey and surveillance, identifying, treatment and control of desert locust. He also confirmed that they are also in regular communications through regions in provision of early warning and control support the communications channel used include email, telephone, and letter.	
V. Assessment of technical support and communication with international organization dealing on locust control			
1.	Describe technical support and communication means with FAO in terms of locust surveillance and control	FAO is very much supporting us through provision of information about the desert Locust and provision early warning and resources (pesticides) to control the desert locust. We are also in regular communications with FAO in terms of surveillance and control the communications channel used include email, The FAO/DCCO RAMSAS Inter locust interlinked, Elocust software and telephone and letter.	
2.	Describe technical support and communication means with East African Locust Control Program in terms of locust surveillance and control	Where the desert locust, its stage, its distribution and direction. The communication channels include Email, information exchange and software elocust M3(recent version)	
VI. Stakeholders environmental and social concerns of this project			
1.	- List out all environmental and social concerns of all stakeholders at Federal level (implementing agencies, environmental organs, project affected persons and beneficiaries) related with this project	*Pollution of the environment if the necessary precautionary measures are not taken; crop damage, economic losses, health problem on the sprayers and other operational staffs are among the impacts mentioned by the key informant.*	
VII. Recommendations			
1.	Please forward your recommendations to be used as an input for realizing this project's (Project Development Objective) PDO and	*Continues communication is crucial for the campaign so community should be informed regularly and participated, operational staff*	

	sustainable development. With emphasis of Environmental and Social management of this project	*should have appropriate quality and number of PPEs, and the necessary precautionary measure should be taken for environment, people, crops and pasture during spraying are among the recommendation provided by the federal key informant.*	

Annex 10. Questions Related to Environmental Issues for KII (Regional and Woreda Levels Stakeholders)

S/N	Issues to be assed	responses	Remark
I. Assessment on existing locust control using pesticides			
1.	As an organization with Regional or City Administration perspective, do you think IPM will have a room to reduce the application of pesticides? How? Please describe it with tangible evidences. **N.B:** Please attach published documents, if any.	*The key informant from regions agreed that IPM helps to reduce the use of chemical application through use of other methods including biological, mechanical, and manual which are not toxic. For instance, the use of cultural or traditional method of control make use of hitting with stick, smoking, making noise can reduce the use of the pesticides.* *Key informants from SNNP confirmed that IPM begins with attitude and learning the behavior of the desert locust. It helps to make use of agronomic practices which reduce the use of pesticides.*	
2.	Evaluate and discuss the nature of proposed pesticides for Locust control: Malathion 50% EC, Malathion 95% ULV, and Chlorpyrifos 24% ULV in terms toxicity & efficacy referring the national regulation and registry; FAO; and the WHO and other standards.	*The key informants from almost all regions agreed that if appropriately used it is effective. The key informant from Oromia further explained the effectiveness of the pesticides on average could range between 80-90%. He went on saying if the spray is conducted while the desert locusts are moving the effectiveness could be up to 50%. However, factors like wind direction, time of spray should be taken into account.* *Regarding the toxicity, the regional key informants confirmed that these pesticides are registered in the country and among the recommended by the FAO. Accordingly, their toxicity level is less compared other chemicals. In this regard key informant from Somali reported that the chemical can only remain on pasture, crops and plants etc limited time not more than 48 hours. In addition, key informant from Oromia said as the pesticides lists are annually renewed and are less toxic.* *Key informant from SNNP said that the Malathion 50% EC is water dilute and administered with equipment on the back of a person and less toxic. Whereas* Malathion 95% ULV, and Chlorpyrifos 24% ULV are used for aircraft and vehicle mounted spray and are toxic. The latter two are not water dilute.	
3.	As an organization do you have any pesticide alternatives which have less toxicity but high efficacy for locust control? If any, please list out	*No, the region have no mandate to do this. In such cases it is the federal government in charge of administer*	
4.	As an organization in your Region or City Administration, do you have proper storage facilities? Where and how is it being properly stored in terms of bulk pesticide storage? Please describe it in detail	*The key informants confirmed that the for this operation purpose we have not prepared pesticide storage center as the operation of spraying is coordinated and lead by the federal government. But, for the regional purpose the storage regional and zonal and woreda bureaus are used to store chemicals.* *Regarding storage the key informant from SNNP confirmed that there storage. However, some facilities are lacking such as showering and shelf.*	
5.	-As an organization, in your Region/City Administration do you have solid waste management plan? Especially pesticide containers. Please describe it in detail.	*All most all regional key informants reported that, they have solid waste management system and institution for solid waste management their region and the city administration. However, is not realistic for pesticides container.*	

	- Do you have procedure and practices in disposal of expired or leftover pesticides? What standard experience of disposal of pesticide do you have? Please describe it in detail.	*The key informants said that there is a procedure, but not realistic. As per the report from the regional key informants the mandate for disposal of expired or leftover pesticides is not regional governments`. The Federal government is responsible for their disposal.* *In this regard key informants from the Amhara region said that it is not their mandate to dispose expired or leftover pesticides.* *The key informant from SNNP in his part confirmed that they once it was disposed in Finland and the it is very expensive.*	
6.	Describe actual measures and precautionary measures being carried out not to pollute the natural habitat in general and non-target species in particular during Arial pesticide spraying activity	*The regional key informants confirmed that the safe spray not to spray in sensitive areas rather to chase or use cultural method when feasible. Take in to account the wind direction, use of better spray equipment* *The key informant from Oromia also emphasized the taking GPS Coordinated in at night to effectively execute the operation.*	
II. Assessment of traditional or agronomic practices of locust control			
1.	- List out best traditional and agronomical practice of the locust control in your Region/ City Administration. And at which stage of Locust life cycle is these practices being effective. **N.B:** Please attach published documents, if any.	*Regarding traditional practices locust control practice the regional key informants confirmed that traditional method is one the most used methods. Among the traditional method mentioned by key informants include creation of noise using different material and disturbing the locusts, plough areas when eggs are lied to crush the eggs before hatching, hitting with stick hopper stage before it grow wings, digging trenches for hoppers to fall into or beating hoppers with sticks, smoke etc.*	
III. Assessment on existing institutional and capacity building efforts			
1.	- Describe capacity building efforts made related with locust control	*All regional key informants agreed that awareness creation for the community using different communication channels has been made so far. They also emphasize the role of community in the campaign to control and prevent the desert locust infestation. Previously mass mobilization of students, security staffs and the community was done; but currently due to COVID-19 and SOE the approach have been changed and is based on the direction of the command post. Accordingly, to reach the farmers and create awareness the use of communication channels such as community elderly, local Radio, devolving government structure from region to kebele and mainly development agents and extension workers in the locality are used.* *The woredas trained by the regions and zones. After receiving the necessary information or Training the zone will reach all their woredas and the woreda will reach all their kebelles and DAs and EAgricultural extension workers and community representatives (elders).* *A key informant from Harari reported that committees have been established from regional to kebelle level and these committees at all level are responsible for awareness creation for the community.* *A key informant from Amahara also reported that the agricultural extension workers at the kebelle level are providing information keeping their social distance from the audiences.*	
2.	- Describe capacity building efforts made with safe use and application of pesticides on locust control	*As per the regional key informants capacity building on safety and spraying of pesticides on the locusts control has been provided for spraying teams, farmers, scouts, experts and officials at different levels or sensitization campaigns for community/village leaders. The capacity building efforts made*	

		include provision of training on when, where, how and what pesticide to use; factors to be considered during use of pesticide use (wind direction, topography, time, spraying , calibration of machines),proper Use of PPE; communication with community need to be taken before, during and after the spray are among efforts made. *They raised that training cascaded from MoA to Regional, Regional to Zonal, Zonal to Woreda and DAs and kebelle and to the community.*	
	- Describe capacity building efforts made on the environmental and social management instruments such as ESMF, SA, SEP, LMP, ESCP and GBV Action Plan. -At Regional/City Administration level, in your organization are you familiar with the above mentioned environmental and social management instruments? If yes please describe some. If no please suggest some interventions	*During the training environmental, health and safety components are incorporated. They all confirmed they did not receive capacity building on instruments such as ESMF, SA and other instruments for this campaign.* *The key informants confirmed that they are familiar with Environmental and social managements such as ESIA and RAP*	
3.	Describe Existing Regional/ City Administration level institutional arrangement on Locust control program/project	*Regional Bureau of Agriculture, Zonal Agricultural Bureau and Plant protection; Woreda Agricultural Bureaus, Kebele level DAs and Agricultural extension workers*	
4.	- Describe the Regional/City Administration institutional arrangement on Environmental, Social and Health and safety organs - At Regional/City Administration level for this and related program and/or projects, do you have Environmental and Social safeguard specialist/s? please state the existing condition	*As per the key informant interview the regional government has body in charge of environmental issues though the structure varies from one region to the other. Accordingly, some regions have Environment, Forest and Climate change Authority/Agency; While the other Environmental Protection and Land Use Administration Authority (EPLUA). With regard to the safety and social issues the Regional, zonal and woreda Bureau of Labor and Social Affairs are in charge of the social and safety issues. But at regional Agricultural Bureau or Zonal or Woreda have no Environmental and Social expert. Hence, the plant protection experts at the regions are also covering this vacuum.* *Regional key informants confirmed that they do not have Environmental and Social Safeguard Specialist*	
IV. Assessment on communication means for surveillance of the occurrence of paste and control efforts			
1.	Describe technical support and communication means with bottom up approach, that is with Woredas and Federal in terms of locust surveillance and control	*The regional key informants made clear that they provide training, including technical assistances to regional and woreda based on the Technical support they received from the Federal.* *They communication on the locust surveillance and control the woreda exchange information with the kebele and zonal staffs. Whereas Zonal exchanges information with the Woreda and Regional government and the region exchange information both bottom up from the zonal to Federal and top down from federal to zones. The communication means email, telephone, letter and*	

		face to face etc *They further explained that the communication also exists between the neighbouring regions and between zones and woredas with in a region. In this regard, the key informant from Tigray informed that they are coordinating and working with Afar region on areas where the desert locust, its stage, coverage and distribution. The key informant from Dire Dawa also confirmed that they are working with Somali and Oromia regions. Like with key informant from Harari also confirmed that they communicate with Oromia region.*	
2.	Describe technical support and communication means with your respective Special Woredas in terms of locust surveillance and control	See the above	
V. Assessment of technical support and communication with international organization dealing on locust control			
1.	Describe technical support and communication means with Federal Implementing Organ/s, FAO, and East African Locust Control Program, in terms of locust surveillance and control	*According to information from the regional key informants, the Federal government provide the regional governments with information on areas where the desert locust, its stage, coverage and distribution and the resources used to prevent and control desert locust. The communication channels used include email, and RAMSAS and telephone, letter. However, the tablet used for RAMSEs are limited to federal and regions such as Afar, Somale, and Oromia regions.*	
VI. Stakeholders environmental and social concerns of this project			
1.	- List out all environmental and social concerns of all stakeholders at Regional/City Administration level (implementing agencies, environmental organs, project affected persons and beneficiaries) related with this project	*The environmental impact mentioned by the key informants include environmental pollution if not well administered or potential spillage of pesticides, improper disposal of empty containers, potential lack of or less quality PPE, etc.* *The impacts include loss of yield, food insecurity and loss of means of their livelihood, migration of family including women and children in search of pasture for their livestock and employment away from home, and potential conflict on resources such as water and pasture mainly among pastoralists and agro-pastoralists.* *Key informant from Oromia also added the potential for family disintegration. Key informant from Amhara also raised the psychological impact of the infestation. The Key informant from Tigray in his part added the increase in labor coast to harvest as a result of demand raise and urgency to harvest to harvest.*	
VII. Concerns and Recommendations			
	Concerns	*The fact that the locust can travel 42km2/hour ;the desert locusts are beyond the controlling capacity of the regions; Budget and logistic(cars/transportation, motor bicke,) related challenges; favorable/conducive condition i.e, temperature and presence green vegetation, rain for desert locust; limited praying apparatus compared with the scale of invasion ;Climate change(which has made conducive environment for the locust); the Covid-19 pandemic; lack of spraying machine which fits to the topography of the country(e.g. Drone) in areas difficult for the aircraft; PPE compared to the massive force engaged in the campaign, pesticide impact on the health of operational staffs and community. Are among the concerns mentioned by key informants; 100% substitution of all pesticides with ULV might affect the campaign; lack of elocust;*	
1.	Please forward your recommendations to be used as an input for realizing this project's (Project Development Objective) PDO and sustainable development. With emphasis of	*The key informants provided the following recommendations. These include* *Allocation of sufficient budget, ongoing information provision ,awareness creation and sensitization for all parties with different means; provision of appropriate quality and number of*	

	Environmental and Social management of this project	*PPE; use of drones for topographic areas difficult to use air craft and traditional methods; making available vehicle, vehicle mount sprays, motor bikes; extensive media coverage with different language about the Desert locust infestation and scale and magnitude of damage; Information linkage between regions, zones and woredas and provision of latest information from WHO/DLCO; provision of training based gap and need assessment for experts, scouts and DA and extension workers;*	

Annex 11. List of professionals consulted with Telephone interview

Name	Organization and Title	Mobile number
Mr. Tamiru Kebede	MoA, Plant Protection Director (Delegated)	09200229951
Mr. Abebe Anegaw	Amahara Region, Crop Protection Expert	0918710715
Mr. Ketema Zeleke	Dire Dawa, Senior Pest Management Expert	0935649122
Mr. Amare	Benishangul Gumuz , Plant Protection Directorate Director	0917857831
Mr. Welega	Gambella, Crop Protection and Productive Directorate , Director	0922950982
Mr. Mulugeta Adugna	Harari Plant protection and Extension Directorate Director	0986336417
Mr. Mengistu Oli,	Oromia Region Expert	0991077207
Mr Abdi Adem	Somali Region PPD Director	0915769696
Mr. Mulualem Mersha	SNNPR, Arbaminche Plant Health Clinic	0911855240
Mr. Zenebe Keberet	Tigray Region, Pest Control Expert	0914749304
Dr.Mohammed Nure Mohammed, 0913080959	Afar Region, Plant protection Head	0913080959(not interviewed)
Mr. Mohamednure 0910660961	Afar Region, Expert	0910660961(not interviewed)

Annex-12: Environmental and Social Code of Practice to be considered in the construction process of the three early warning and disaster monitoring bases by the MOA.

ESCOP provisions provides standard measures which may be incorporated in ESMPs of the identified sub-projects of the stated plan

Annex __: Environmental and Social Code of Practice (ESCOP) to be considered in the construction process of the three early warning and disaster monitoring bases by the MOA.

Topic	DO	DON'T
Code of Conduct	Ensure that contractor's personnel are briefed and acknowledge their understanding and consent with this Code of Conduct covering environmental and social risks related to works, including the occupational health and safety and the risks of sexual exploitation, sexual abuse and sexual harassment As well	▪ Do not allow contractors engaged for works to commence works prior to acceptance by the Project's Code of Conduct.
Construction materials supply	● The construction materials that are required to construct the three disaster monitoring and early warning bases shall be purchased from licensed and/or renewed licenses of legal/lawful suppliers	▪ Building materials, such as sand, cement, metals, etc., to be used in constructing the three disaster management bases shall not be purchased from illegal/ unlicensed suppliers
Community Health and Safety	● Construct the planned buildings using the Ethiopian Building Code of Standard to ensure structures are designed and constructed in accordance with sound architectural and engineering practice. ● Secure worksites with physical separation through buffer strips, fencing and walls, as appropriate. ● Inform relevant authorities immediately in case of damages on public utilities such as underground and above ground electricity lines, water lines, infrastructure such as roads, etc. ● Incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, wind, flooding, landslides and fire. ● Demarcate open trenches and hazardous areas with luminous temporary fencing and/or signage. ● Establish appropriate site boundary and access controls to prevent unauthorized entry to construction or activity sites especially by children or animals Protect water sources, quality and access.	● Do not implement any activities without assessing the potential impacts to the community's health and safety during establishment and operation. ● Do not leave any holes and openings without secure fencing provided with fixed, clearly marked covers.
Community Engagement	● Engage community members in an inclusive, participatory manner in all activities and the associated impacts and risks related discussions and their reduction. ● Provide special measures for inclusion of vulnerable groups in deliberations and decisions. ● Establish and maintain grievance mechanism accessible to all local communities and all workers, including volunteer community workers.	● Do not make exclusive agreements that do not respect broad community sentiments. ● Do not retaliate against those raising concerns or grievances.
Cultural heritage	● Map cultural and physical heritage and intangible heritages to avoid damages as a result of construction activities. ● If any human remains or archaeological remains (e.g. fossils, bones,	● Do not disturb heritages, and /or graves. ● Do not disturb or impact cultural heritages importance.

Topic	DO	DON'T
	artefacts etc.) are disturbed, exposed or uncovered during excavations, all work shall stop immediately. ● The incidence need to be immediately informed reported to authority for Research and Conservation of Cultural Heritage (ARCCH)for appropriate course of action.. ● The environmental officer shall arrange for a palaeontologist/archaeologist to inspect, and if necessary, excavate the material, subject to acquiring the requisite approval from ARCCH. ● Should any findings be made by ARCCH, then no work shall recommence until written permission has been received from the concerned body	● Do not disturb religious properties. ● It is illegal to destroy, damage, excavate, alter, deface or otherwise disturb any archaeological site or archaeological material.
Dust and Air	● Precautions should be taken to limit the excessive dust emissions during construction activities, to the satisfaction of the environmental safeguard expert or any appropriate representative of the MOA ● Dust from exposed soil surfaces shall always be minimised, only using water spray during very windy conditions Reasonable measures must be undertaken to ensure that any exposed areas and material stockpiles are adequately protected against the wind.	● Do not store cement, sand, excavated material without cover sheets or shelters. ● Do not clear the vegetation cover if it's not required. ● Do not burn construction waste materials.
Employment and Labour Rights	● Implement a fair and transparent employment engagement process ● Provide construction workers with clear and understandable information regarding rights via contract documents in local languages. ● Ensure that all volunteer community workers are engaged without coercion. ● Maintain diligent labour records in accordance with ESMF which includes: o Name of employer(s). o Employee details: ▪ Name, Kebele identification, date of birth, contact details, location of residence o Date of employment commencement, Hours of work, probation period, notice period o Acknowledgement of knowledge of labor procedures: ▪ Wage agreement: Remuneration, Frequency of wage payment, Method of payment, Mandatory deductions, as relevant (taxes,), Other benefits, if any ● Acknowledgement of terms of the voluntary services employment	● *Do not discriminate any workers or job applicants on the basis of their gender, marital status, nationality, ethnicity, age, religion or sexual orientation.* ● *Do not recruit or engage children (under 18 years old).* ● *Do not use forced labour.*
Fire Prevention and Control	● Identify fire risks and their sources. Burning waste is shall be managed under the guidance of the environmental safeguard officer ● Store flammable materials in a situation that will limit the potential for ignition and the spread of fires. Keep relevant fire-fighting equipment on all work sites and maintain firebreaks around buildings site. Smoking can only be allowed in designated smoking area	● Do not throw your cigarette butts on the ground. ● Do not burn trash unless in a managed way
Flora and Fauna	● Care shall be taken to preserve all vegetation and animals in the immediate area of temporary stockpiles, site clearing and construction ● Construction and/or maintenance activities shall be confined to the demarcated areas to avoid accidental injury of animals and vegetation's.	● Do not hurt any animal or trees as a result of storage site clearance of construction

Topic	DO	DON'T
Incident Reporting	● Serious incidents must be reported to the safeguard officer immediately ● Record and report any hazards, incidents or injuries. ● Where incidents occur, incorporate additional preventive measures to avoid further incidents.	● Do not ignore any hazard, injury or incident whether to community member or workers regardless the level of incident.
Labour Management	● All staff and equipment must always remain within the demarcated construction area. ● Permission should be obtained from the Warden prior to movement of staff and/or	● Do not allow for movement of staff outside work areas & remain at work site after work hours
Occupational Health and Safety	● Conduct risk assessment and define OHS mitigation measures for each activity, ● Make sure that safety and protective equipment, such as safety shoes, gloves and eye protection, etc., are readily available for use ● The records of the application of OHS requirements must be must be available ● All employees working on site should be inducted on health and safety before starting any work and regular updates should be provided during implementation. The health and safety file must include the record of training, ● PPE (safety vests and helmets) should also be provided for visitors ● Prevent slips and falls and other injuries through good housekeeping practices in all worksites, provision of safe equipment and tools, and use of PPE. ● Provide enough drinking water for workforce ● Be prepared to handle accidents and provide first aid, ensure access to basic first-aid kit with bandages, antibiotic cream, etc.	● Do not allow for work to proceed without appropriate PPE for workers. ● Do not allow the use of alcohol or illegal drugs.
Noise	● Noise levels must be kept within acceptable limits ● Construction and demolition activities shall be limited to normal working hours ● Plan activities in consultation with communities so that noisiest activities are undertaken during periods that will result in least disturbance. ● Make efforts to lessen the impact of noise to the living quarters in possible ● Use noise-control methods such as fences, barriers or deflectors (such as muffling devices for combustion engines) if possible	● Do not undertake any noisy activity during night-time. ● Do not induce unnecessary noise. ● Do not allow music on worksites.
Sanitation	● Ensure that all workers have access to adequate ablution facilities. At least one toilet should be made available for every 15 persons at each work location with appropriate gender separation. ● Promote and facilitate correct septic tank design and improvement of septic tank maintenance. Septic tank design should balance effluent quality and maintenance needs. ● Consider provision of systematic, regular collection of faecal sludge and septic waste. ● Use appropriate collection vehicles. ● Facilitate discharge of faecal sludge at storage and treatment facilities	● Do not locate or construct sanitation systems adjacent to water sources. ● Under no circumstances may neighbouring open areas or the surrounding bush be used as a toilet facility.
Soil protection	● Prevent soil erosion through soil protection measures, slope stabilization and provision of proper drainage.	● Do not implement activities without a careful design for soil protection.

Topic	DO	DON'T
	● Take measures that will contribute to the prevention of soil erosion	
Transport and Traffic Management	● Install appropriate signage and mark off areas used in loading and off-loading construction related materials for communities' traffic safety ● The proclaim speed limit of 30 km/h, unless otherwise specified in the PA must be strictly adhered to. ● Equip vehicles transporting construction related materials with reverse signals. ● Use safe routes and limit trip duration appropriately. Avoid routes with blind curves, blind intersections and very narrow roads alongside steep slopes. ● Use local traffic signage and collaborate with the responsible local authorities and communities. ● Keep access roads in good condition and free from deposits, waste, construction material. ● Use visible signage and flagmen where appropriate to provide clear instructions. ● Avoid vehicle traffic in communities during hours that children are travelling to and from school. ● Apply particular caution in areas such as schools, playgrounds, hospitals, market and the like.	● Do not allow drivers to work without a valid driver's license. ● Do not allow for use mobile phones while driving. ● Do not drive beyond designated roads. ● Do not cause endangerment or loss of human or animal life,
Waste Management	● Monitor waste generation and management procedures ● Oversee waste management procedures for workers involved construction activities. ● All waste should be discarded at an agreed upon site/landfill site particularly those waste or materials that could have an impact on surface or groundwater contamination ● Written proof of disposal at the permitted waste landfill site should be filed ● Working sites and eating areas should be maintained in a clean and hygienic ● Store waste far away from rivers, streams, lakes and wetlands, or communities ● Reuse the excavated soil as much as possible for backfilling, landscaping etc., ● Contaminated soil (resulting from oil spills, etc.), unwanted cement bags and water used for washing concrete equipment are regarded as hazardous waste and should be disposed of at a permitted hazardous waste landfill site. ● Collaborate with local authorities to transport and dispose it as per legal requirements.	● Do not smoke close to hazardous materials. ● Do not dump waste at any unpermitted area ● Do not leave any sharp or dangerous objects revealed to children's attention or close to the construction site. ● Do not discharge waste or hazardous substances, chemicals, construction material and wastes into water courses, ponds, and drainage systems or poured into water bodies for dilution or disposal.
Work site management	● Access routes to construction sites must be demarcated by temporary fencing signage to minimise environmental impact. ● Clearly mark "no-go" or prevention of access to areas, such as cultivated lands or fruit trees, grave sites or any sensitive environment or social site/area ● Avoid proximity to schools, health posts and households with vulnerable families. ● Clean up the worksite upon activity completion and rehabilitate the	● Do not enter any worksites and areas without permissions and approvals. ● Do not damage any households and associated structures, cultivated lands, fruit trees or any other potential source of income. ● Do not undertake any activity and park your vehicles outside of the working

Topic	DO	DON'T
	site to its original condition. ● Refuel the vehicles at least 30m away water courses. ● Fence the construction site adjacent to the sensitive areas such as water courses, ponds, drains. ● Divert the runoff/water the construction sites or disturbed areas, using ditches. ● Materials to be used during construction/demolition/maintenance shall only be stored at demarcated sites. ● If relevant, a method statement should be provided for activities related to the scope of work: o Type and quantity of materials to be stored; o Whether any oil contaminated/containing equipment will be stored; o How (including what type of vehicles will be required) the materials will be delivered on site at the necessary storage area; and o Where there is any risk of spill or runoff of any materials or chemicals and how the risk/spill will be mitigated. ● Concrete and cement preparation activities shall not be permitted in any sensitive environments and no mixing shall be allowed on bare soil/permeable ground surfaces. ● Mixing activities must take place on an impermeable surface and the mixing area should be bonded to contain any liquids to prevent contamination of soil and storm water. ● Used cement bags shall be collected and stored in containers to prevent wind-blown cement dust and water contamination. ● The re-use of discarded cement bags on site is forbidden. ● Water from concrete washing must either be re-used in concrete mixes or must be stored in drums, then removed from the site and disposed of at a licensed municipal dump site. ● Ensure that all temporary structures, materials and waste (including areas contaminated during the project, e.g. oil spillages on soil) should be removed from the PA. ● All disturbed areas should be fully rehabilitated. When landscaping and rehabilitating only indigenous plants from the area where the PA is located should be used. ● Photographic records should be documented of the all access roads and proposed development sites to ensure full rehabilitation following works.	area borders. ● Do not cut trees or remove vegetation outside the construction site. ● Do not store materials on the sides of access roads or among natural vegetation.

Annex-13: List of Desert Locust Breeding and Invasion Project Districts

Region	Districts			
Amhara 28	Kewot	Werebabu	Gubalafito	Woraelu
	Shewarobit	Kalu	Woldeya town	Ansokia
	Bati	Tehuledere	Dawa Chafa	Wuchale
	Dewe Harewa	Raya kobo	Efraratana Gidim	Berehet
	Artuma Fursi	Kobo ketema	Minjar Shinkora	Asagirit
	Jile Timuga	Habiru	Tenta	Meket
	Argoba	Giden	Mekdela	Debresina
Tigray 26	Raya Alamata	Sarte Samire	Tenkua Abergele	Sarti Samiri
	Raya Azebo	Kilite Awulalo	Kola Temeben	Naader adet
	Ofila	Atsibi Wonberta	Mereb Lehe	Titayi Macho
	Enda Mehoni	Hawuzin	Aheferom	Layilayi macho
	Hintalo Wajirat	S/t/Emba	Adewa	Axum
	Enderta	Ganta Afeshum	Kola tenben	Adgirat
	Dega Temben	Gilo Mehida		
Oromia 89	Goro Gutu	Dubluk	Shakiso	Diksis
	Meta	Dire	Adolla	Belee
	Kersa	Arero	Dugda Dawa	Tena
	Kombalcha	Wachile	Bulehora	Girawa
	Chinakisen	Dhas	Guch	Bedeno
	Babile	Guchi	Atoti Bilo	Boke
	Mayu Mulk	Moyale	Galelcho	Kuni
	Fedis	Mio	Merti	Gelemso
	Jarso	Dillo	Robe	Haramaya
	Midihaga Tola	Eliwoya	Aseko	Fentale
	Gursum	Guradamole	ZewayDugda	Boset
	Doba	Harro	Shirka	Dodota Sire
	Meiso	Delo Menna	Lemubilibilo	Shirka
	Ginir	Meda Welabu	Adola town	Adama
	Goro	Goro	Liweya	Lume
	Rayitu	Gasara	Tulo	Liben chukala
	Dawe Kachen	Sinana	Guba Korcha	Goba
	Dawe Sereri	Agarfa	Chiro Zuria	Dinsho
	Gololcha	Gum Eldolo	Gumbi bordode	Adaba
	Sawena	Liben	Amigna seru	Dodola
	Legahida	Goro Dolla	Ticho	Jeju
	Yabelo	Wadara	Dugda	Bora

Region	Districts			
	Teltele			
Somali 86	Ayisha	Qudember	Mubarek	Bohi
	Denbel	Mersin	Yocale	Daratole
	Adgala	Galady	Gunagoda	Harshin
	Shinile	Danot	Birkol	Negob
	Erer	Raso	Qebridehar town	Moyale
	Tulu Guled	Abakero	Degahabur	Legahida
	Awebere	Legehida	Kebribeya	Gode town
	Aroris	Wangay	Meiso	Harshin
	Jigjiga	Gashamo	Babile	Selead
	Harshim	Kelafo	Harawa	Shekochi
	Warder	Mustahil	Fiki town	Adadile
	Kebri Dahar	Firfir	Togo Chale Town	Worder
	Shilabo	Filtu	Garbo	Bekakisa
	Bereano	Dollado	Qubi	Afdem
	Adadile	Chereti	Hargele	Meyumuluk
	Gode	Duhun	Dolobay	Hamero
	Gursum	Ayun	Boqolmayo	Dega home
	Danan	East Imi	Guradhamole	Misirak Gashamo
	Sigag	West Imi	Karsa dula	Filtu
	Yeahop	Hudat	Delasuf	Gudis
	Eliogaden	Bare	Jijiga	Guradhamole
		Elkere		Dawa
Afar -34	Tellalak	Abala	Haruka	Hadilela
	Dewe	Erabti	Awash	Semurobi
	Dalifage	Kuri	Gelealo	Argoba
	Gewane	Afdera	Ambera	Ura
	Mile	Eldar	Dulecha	Awash fantale
	Adaar	Afambo	Bidu	Bure mudayitu
	Chifra	Asaita	Garani	Logiya town
	Ewa	Duffty	Barahale	Dufti town
	Awura	Megale	Kuneba	Yalo
	Gulina	Teru	Dalol	
SNNPR 28	Amaroo	Dasenech	Alle	Martha Garda
	Bena Tsemay	Hammer	Derashe	Bonke
	Damot Pulasa	Ari	Basketo	Zala
	Humbo	Male	Obicha	Uba debretsehay
	Dugina Fango	Karat Zuria	Kindo Koyisha	Zaba
	Badwacho	Colme Cluster	Abela Abaya	Lome
	Egnangatom	Kena	Mirab Abaya	Segen zuria

Region	Districts			
Dire Dawa - 2	Jeldisa Cluster	Aseliso Cluster		
Hareri - 1	Erer and Sofi			

Note: Annex-3 above illustrâtes the total no of target districts that will be addressed during the additional fiance is understood to be 294. To get this no, the five districts from Afar region and the districts from Harari districts that are shaded with yellow will not be counted as targets