The Federal Democratic Republic of Ethiopia

Ministry of Peace

Lowland Livelihood Resilience Project (LLRP)

Environmental and Social Management Framework (ESMF)

(Final Report)

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Acronyms

AGP	Agricultural Growth Program
ASAL	Arid and Semi-Arid Land
BMP	Best Management Practices
BoA	Bureau of Agriculture
BoPA	Bureau of Pastoral Affair
BoPAD	Bureau of Pastoral and Agricultural Development
CAHWs	Community Animal Health Workers
CBO	Community Based Organization
CC	Commune Center
CDP	Commune Development Program
CRC	Compensation and Resettlement Committee
DA	Development Agent
DRSLP	Drought Resilience and Sustainable Livelihoods program
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ESMF	Environmental and Social Management Frame Work
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSF	Environmental and Social Screening Form
GoE	Government of Ethiopia
FPCUs	Federal Project Coordination Units
HoA	Horn of Africa
IAs	Implementing Agencies
IGAD	Intergovernmental Authority for Development
IPMP	Integrated Pest Management Plan
KDCs	Kebele Development Committees
KPCRC	Kebele Physical Cultural Resources Committee
LCRDB	Livestock, Crop and Rural Development Bureau
LLRP	Pastoral and agro-pastoral Livelihood Resilience Project
MoA	Ministry of Agriculture
MoANR	Ministry of Agriculture and Natural Resources
MoLF	Ministry of Livestock and Fisheries
MST	Mobile Satellite Team
NGO	Non-Government Organization
PAD	Project Appraisal Document
PAPs	Project Affected Peoples
PCDP	Pastoral Community Development Program
PDP	Pastoral Development Bureau
PIM	Program Implementation Manual
PMP	Pest Management Plan
PSNP	Productive Safety Net Program
PVC	Property Valuation committee
RAP	Resettlement Action Plan
RLF	Rural Livelihood Fund
RPCUs	Regional Project Coordination Units
RPF	Resettlement Policy Framework
RTC	Technical Committee
RUSACOO	Rural Saving and Credit Cooperatives
SA	Social Assessment
SLM	Sustainable Land Management
SNNPR	Southern Nations and Nationalities People Region
WSC	Woreda Steering Committee

Executive Summary

The “Lowland Livelihood Resilience Project (LLRP) is aimed to enhance livelihood of pastoral and ago-pastoralists to external shocks with particular focus on the Arid and Semiarid land (ASAL) communities by implementing capital investment and rural livelihood subprojects. Environmental and Social Management Framework (ESMF) is developed for this project to ensure that adverse environmental and social impacts are minimized, mitigated and appropriately compensated for the asset and land that may be lost due to the implementation of the sub-projects. The ESMF details agreed policies, guidelines and procedures that should be followed in implementing the Sub- projects under LLRP in 100 selected Woredas and Kebeles of the project regions. The proper implementation of the ESMF will ensure compliance with applicable laws and regulations of the Government of Ethiopia (GoE), relevant World Bank Operational Policies and Procedures and the International Fund for Agriculture Development (IFAD) Social, Environment and Climate Assessment Procedures (SECAP). In addition, Resettlement Policy Framework (RPF) and Social Assessment (SA) documents have also been prepared to deal with specific concerns related to land acquisition, property losses, restriction of access to natural resources and other social issues related to vulnerable groups and underprivileged communities. Since the physical environment and the project nature of the Pastoral Community Development Program (PCDP) are similar to that of LLRP, the ESMF Document of PCDP has been referred to when preparing the ESMF for LLRP. Reference was also made to the Agricultural Growth Project (AGP) when preparing this framework.

The objective of the proposed project is to improved Livelihood Resilience of Pastoral and Agro-Pastoral Communities in Ethiopia. The Project would help improve livelihoods of people living in pastoral and agro-pastoral areas, contributing to the Sustainable Development Goals (SDGs) 1 (no poverty); 2 (zero hunger); 3 (good health and well-being); 5 (gender equality); 6 (clean water and sanitation); 8 (decent work and economic growth); and 13 (climate action).

The PDO-level indicators include:

- Number of direct project beneficiaries (disaggregated by gender and age);
- Percentage increase in yield of selected crop and livestock commodities;
- Increased land area (in ha) under sustainable natural resource management practices;
- Number of people with improved access to economic and social services (disaggregated by service type and gender);

Project Components

LLRP has four components that aim to address issues related to range land development and management, livelihood improvement and diversification, improvement of basic services and capacity building, project management, monitoring and evaluation. The project will focus on building and strengthening linkages between regional and national institutions to address the issues that affect communities as a result of LLRP implementation. LLRP will be implemented in 100 woredas of Oromia, the Southern Nations Nationalities and Peoples (SNNP), Gambella, Benshangul-Gumuz, Afar and Somali regional States. Woredas selected to implement LLRP are prone to droughts and desertification, water shortages and land degradation.

LLRP has the following four project components:

Component 1: Integrated Natural Resource Management

This Component will support management of the overall natural resources under which the pastoral and agro-pastoral production systems operate. This should encompass the management of all-natural resources, in particular rangelands, including dry season, wet season and drought reserves; cattle corridors; wetlands; forest/woodlands; water sources for livestock and people; settlements and areas reserved for crop/fodder production, in addition to small-scale irrigation and water conservation schemes.

Component 2: Livelihood Improvement and Diversification: will enhance Pastoral and Agro-Pastoral Production Systems. This Sub-component aims at improving productivity of the pastoral and agro-pastoral production systems (cattle, camels, small ruminants, poultry[1]; and crops including maize, sorghum and vegetables) in the targeted project areas. It will also promote Livelihood Diversification and Market Access. This Sub-component will support livelihoods development; strengthening market development and commercialization; and, access to financial services. Priority value chains of the Project will include: (a) live animals and livestock products[2]; (b) dairy; (c) crops (maize, sorghum, etc.) and vegetables, feed and forage. Other related livelihoods could be bee keeping, poultry, handicraft; natural gum, tourism etc.

Sub-Component 3.1 Provision of Basic Social Services and Infrastructure.: This Subsub-component will support improving access to and utilization of basic social and economic services among the target communities, using a CDD approach. Sub-component 3.2 Institutional Capacity Building. The objective of this Sub-component is to improve the service delivery capacity of public institutions. Sub-component 3.3 Knowledge Management, Research and Policy Support. One of the weak links in past programs and projects was the lack of documentation and dissemination on lessons learnt and best practices. Therefore, the project will support continuous learning, adaptable knowledge management and communication on innovative technologies. decentralized Community-Driven Development (CDD) approach. It will adopt a spatial orientation to infrastructure development and finance investment at various levels in the community, inter-community, Kebele and Woreda. Community-based committees used to implement the CDD approach would be federated at higher levels with the objective of involving them as interlocutory advisory bodies at a scale compatible with the larger geographical scope of PAP landscape interventions.

Sub-component 3.2 Institutional Capacity Building: Considering the weak institutional environment and limited implementation capacity, significant investment will be made to build capacity on the ground. This will be done at five different levels: federal, regional, woreda, kebele, and community level. This will involve physical capacity, human capacity and system capacity building. The process would start by identifying key institutions (but also others as deemed necessary) that would be involved in the implementation of the project, including research and academic institutions, and undertaking a capacity needs assessment followed by developing a capacity building plan and subsequent financing of the capacity building plan. This shall include capacity-building support for key public service delivery institutions. Stakeholder institutions will be strengthened to enable them meaningfully engage with public and private partners, for market access, disease control, and other services for their members.

Sub-component 3.3 Knowledge Management, Research and Policy Support: One of the weakest links

[1] https://www.ifc.org/wps/wcm/connect/26baaf004886581fb43ef66a6515bb18/Final%2B-%2BPoultry%2BProduction.pdf?MOD=AJPERES

[2] https://www.ifc.org/wps/wcm/connect/e2cfd90048855333ae04fe6a6515bb18/Final%2B-%2BMammalian%2BLivestock%2BProduction.pdf?MOD=AJPERES

in past programs and projects was lack of documentation and dissemination on lessons learnt and best practices. Therefore, the project will support continuous learning, adaptable knowledge management and communication on innovative tools and approaches. In addition, this sub-component will identify various indigenous knowledge and customary institutions, which are expected to play pivotal roles in further strengthening various development activities among pastoral and agro pastoral communities. Documentation of indigenous knowledge and promotion of technology on wide ranging program will be part of this initiative. Different best practices and success stories will be identified and shared for all concerned stakeholders. Furthermore, any studies, reports and other related materials which directly relate to the pastoral and agro pastoral communities in Ethiopia will be properly gathered and documented by establishing a strong data base.

Component 4. Project Management, Monitoring and Evaluation. The purpose of this component is to ensure that the Project is managed and implemented efficiently, on time and in accordance with the PDO and Financing Agreement, and its performance and effectiveness are tracked. As part of a Grievance Redressal Mechanism (GRM), the component will also support cellphone supported short text message application to enhance citizen engagement and address any grievances that may arise in the course of the project plaining and implementation.

This ESMF identifies and describes in detail national environmental and social legal requirements that have to be considered when implementing the Sub- projects. The following World Bank Safeguard Operational Policies are triggered as part of implementation of the LLRP: OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.09 Pest Management, OP 4.10 Indigenous People /Underserved Groups, OP 4.11 Physical Cultural Resources, OP 4.12 Involuntary Resettlement, OP/BP 4.36 Forests, OP/BP 4.37 Safety of Dams and OP 7.50 Projects on International Waterways.

LLRP will be beneficial to the pastoral and agro-pastoral communities and to the environment. The project is expected to enhance the livelihood resilience of the pastoral and agro-pastoral community. However, it will also adversely affect the socio-economic and biophysical environment. Such impacts may result from construction activities, misuse of agrochemicals and pesticides, site clearance, soil erosion and contamination, water and air pollution and, salinity due to water logging. Increased use of livestock pesticides, drugs and vaccines other chemicals which may be toxic to non-target organisms and hazardous to humans and the environment. Antibiotic resistance may occur from poor management of livestock drugs and inappropriate disposal of animal waste. Multi-drug resistant microbes of zoonotic diseases can be transmitted through food and Environment. Livestock (meat and milk) food products may be contaminated by Zoonotic disease transmitting microbes and/or agrochemicals posing human health risks. There could also be occupational health and safety hazards such as disease transmission, and chemicals (pesticides and drugs) and other work-related injuries and accidents. Water pollution may arise from inappropriate disposal of manure and application of fertilizers for forage production. Livestock production could account for air pollution from de-nitrification, production of methane, ammonia volatile organic compounds, hydrogen sulfide and carbon dioxide. Poorly managed manure could emit greenhouse gases such as Methane and nitrous oxide.

These impacts could be managed by applying mitigation measures proposed in this ESMF. The mitigation measures include among others the application of an integrated pest management approach (as identified by WHO and WBG[3] Environmental, Health and Safety guidelines); applying integrated

[3] https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES

waste management system that includes recycling of animal wastes into compost and biogas; managing and disposing wastes according to the guidance for hazardous and nonhazardous waste provided in WBG Environmental, Health and Safety guidelines; awareness creation about the hazards and safe handling of insecticides, preparation and implementation of integrated vaccine and drug waste management plans, apply the RPF to address land acquisition and other social related issues.

The ESMF emphasizes that subproject planning should involve for plans and designs that avoid or minimize creating adverse environmental and social impacts. It also provides guidance as to how the sub-project will be managed in an environmentally sound manner. The LLRP is a category 'B' project and the sub-projects may not require a full scale environmental and social impact assessment (ESIA). The selection, planning, design and implementation of the subprojects under LLRP have to be consistent with the relevant national environmental and social management requirements as well as the World Bank safeguards policies and IFAD/ SECAP applicable to the project and its subprojects. In each sub-project, national regional, zone, Woreda Appraisal Team/MST and local community will have to be actively involved in screening, preparation of ESMP/ESIA, implementation of ESMP and monitoring of sub-projects that are identified by communities.

Ministry of Peace and the respective regional Bureaus and Woreda offices will be responsible for implementing Environmental and Social Safeguard requirements of the project. Depending on the scope and significance of sub-project impacts, safeguard assessments, documentations and approvals can be undertaken at Federal, regional or Woreda levels. Federal and regional Project Coordination Units (PCUs) will recruit Environmental and Social Safeguard experts to oversee ESS planning, implementation, monitoring, evaluation and reporting activities of the project. Each Woreda will assign relevant expert who will be responsible for the implementation of environmental and social safeguard issues. Woreda level implementation structures will include WATs to appraise and review sub-projects, particularly from the perspective of environmental and social safeguard aspects, technical soundness, gender equity, consistency with the Woreda Development Plan, compliance with rules, and any issues raised by the community audit and supervision committees. Other responsibility of WAT is to check readiness of community institutions for implementation of sub-projects, and as implementation proceeds, the achievement of milestones at different stages of sub-project implementation. Approval of ESS procedures and documents as well as conducting annual environmental and social audits will be the responsibility of Environment, forest and climate change offices or equivalents at all levels.

The field assessment revealed that there is lack of technical capacity to implement ESMF especially at the woreda and kebele level. The LLRP will therefore need to hire one environmentalist and one social safeguard specialists at the federal level to supervise implementation of the mitigation measures. Each regional PMU are also required to recruit or assign one environmental and one social safeguard specialists with the responsibility of preparing and implementing site specific safeguards instruments, at least for the high-risk subprojects (small scale irrigation schemes, large scale water supply systems, rural road construction, livestock market development, rangeland management, etc.) However, management of safeguard issues in relation to implementation of the low risk subprojects will be the responsibility of and Woreda Appraisal Team (WAT). Experts that will assigned to implement the sub-projects at the Zonal, woreda and kebele level will have to understand the social and environmental issues related to the sub-projects. It is therefore important to provide them with training on how to minimize impacts by incorporating appropriate mitigation measures. Environmental and social safeguard experts and implementing agencies will be trained to enhance their capacity to supervise proper implementation of the ESMF.

Environmental and social monitoring will be carried out thought out project cycle. FPCUs and RPCUs will conduct monitoring of all safeguard policies, including those that were not triggered. The purpose of this monitoring is to identify the emergence of any unforeseen safeguard issues, to learn lessons from project implementation; to provide recommendations for improving future performance and to signal an early warning about potential cumulative impacts. Quarterly and annual reports should be prepared at Woreda, regional and federal levels. These quarterly and annual reports should capture the major performance on environmental and social safeguards, experiences and lessons learnt and any other issues related to the challenges faced during sub-project implementation. At Woreda level, quarterly and annual report forms will be completed by the Woreda Appraisal Team and sent to the Regional Project Coordinating Unit (RPCU) for compilation. Regional PCU will compile and send quarterly and annual ESMF implementation reports to the Federal Project Coordinating Unit (FPCU). The safeguard specialist at the FPCU will compile all regional ESMF reports for onward submission to the World Bank. Annual review workshops will be conducted at regional and federal level with the objectives to: assess project performance in complying with ESMF procedures, learn lessons, and improve future performance; and assess the occurrence of, and potential for, cumulative impacts due to the sub-projects and other development activities.

For effective implementation of the ESMF, RPF and SA, technical assistance is required at region, Woreda and local (Kebele) level to build the capacity of DAs, Woreda, and zone and region government staffs and discharge their responsibilities as per the requirements set out in this ESMF. To this effect general technical assistance will be given to experts at federal, regional, zone, MST levels. This assistance includes training on the preparation of site-specific safeguards instruments, effective implementation of the mitigation measures set out in the ESMP, RAP, PMP and monitoring and supervision of the ESMF implementation. Besides the general technical assistance, a specific training tailored for the community at the grass root level on the principles of environmental management should be provided. Budget for the implementation of the ESMF and other safeguard instruments for capacity building training and general technical support has been included in this ESMF document. However, budget for the implementation of specific mitigation and compliance actions such as entitlements and compensation payments have not been included, the reason being lack of clarity of the type and scope of subprojects at this stage. The estimated budget for safeguards related capacity building and reviews is 1,260,000 USD.

1. Introduction

1.1 Background of the project

The Pastoral and Agro-Pastoral Livelihoods Resilience Project (LLRP) is an integrated and comprehensive development program planned to be implemented by the Federal Democratic Republic of Ethiopia, the International Development Association (IDA) and the International Fund for Agricultural Development (IFAD) by using both a top down and CDD approach along pastoralist routes targeting selected woredas of Afar, Somali, SNNRP, Oromia, Benshangul Gumuz and Gambella regions based on woreda-selection criteria. The objective of the project is to improve Livelihood Resilience of Pastoral and Agro-Pastoral Communities in Ethiopia. The LLRP will contribute to a number of focus areas and strategic objectives including Promotion of Structural and Economic Transformation through Increased Productivity and broad-based economic growth, reduction of vulnerabilities and improved environmental sustainability and is also expected to contribute to the development of policies of the country's Arid and Semi-Arid Lowlands (ASALs.)

The proposed project is expected to benefit approximately 2 million male and female Pastoralists and Agro-pastoralists (PAPs) through implementing basic tasks of each of the project components. As a result of this project communities will have access to improve economic and social services and a significant proportion of the targeted PAP communities will benefit from value addition and sales of agricultural products. The principal beneficiaries of LLRP are selected individuals, households, and communities residing in pastoral and agro-pastoral (PAP) areas of Ethiopia.

The project areas are pastoral and agro-pastoral areas of six regions, namely Afar, Somali, Oromia, Southern Nations, Nationalities, and People's Region (SNNPR), Gambella and Benishangul-Gumuz. Within these regions, the project would intervene in clusters of Woredas covering targeted rangelands. LLRP is envisaged as a five-year project and is the first phase of a Multi-Phase engagement in pastoral and agro-pastoral area. The total cost of this Project is US$ 550 million, consisting of a US$ 350 million loan from the International Development Association (IDA, WB), a US$ 90 million IFAD loan, as well as contributions from the Government of Ethiopia, the project beneficiaries and private sector.

1.2 Purpose and Objectives of the ESMF

This Environmental and Social Management Framework is prepared for the LRP in order to avoid, minimize and mitigate the environmental and social issues that are likely to arise during the planning, design and implementation of sub-project level activities. It analyzes and will facilitate the compliance with relevant National Environmental policy, the World Bank, IFAD and other agencies' requirements in a coherent manner. The principal purpose of preparing this ESMF is that: (i) most LLRP subprojects is likely to have potential adverse impacts, both on the physical & human environment or vice versa, (ii) the exact number and specific sites of subprojects cannot be known before project appraisal, and (iii) the ESMF is one of the guiding instruments to help achieve sound environmental and social planning, design, implementation as well as monitoring and evaluation of projects. The objective of preparing ESMF is to minimize the adverse environmental and social impacts resulting from the implementation of LLRP by incorporating appropriately mitigation measures.

The specific objectives of the ESMF are to:

- Establish clear procedures and methodologies for integrating environmental and social planning, approval and implementation of sub-projects s under LLRP;

- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social issues related to LLRP activities;
- Guide the training, capacity building and technical assistance needed to successfully implement the sub-projects; and
- Establish the budget required to implement the ESMF requirements.

The ESMF will help to ensure that activities under the Project will (a) protect human health, (b) enhance positive environmental and social impacts, and (c) avoid, minimize or remedy negative environmental and social impacts resulting from individual subprojects or projects already implemented by other development programs in the project.

The ESMF will also examine and apply the World Bank Operational Policies that will be triggered as a result of the implementation of sub-projects, ensure compliance with IFAD's SECAP and check if national environmental and social legal requirements are also fulfilled during the planning phase and ensure, preparation, review, approval, implementation, and monitoring of sub-projects are done as per the guidance indicated in the ESMF. The ESMF document is complemented by a separate Resettlement Policy Framework (RPF) and Social Assessment (SA) prepared to address specific concerns related to land acquisition, property losses, restriction of access to natural resources and other social issues such as exclusion of vulnerable and under-served communities. This ESMF will be disclosed at the World Bank's external website, IFAD website and at the Government's website to make it accessible to any person interested to refer this document. This ESMF shall be disclosed via the World Bank's external website. The Ministry of Federal Affairs (now Ministry of Peace) will also distribute this document to relevant government institutions for any feedback.

1.3 Methodology

Various pertinent documents such as the ESMF of Pastoral Community Development Project & Agricultural Growth Project (AGP), World Bank safeguards policies, relevant national legal frameworks, The World Bank Group Environment, Health and Safety Guidelines were reviewed while preparing this framework. In addition, a range of stakeholders namely the elderly, poor and destitute households, female headed households, people with disabilities and outcast groups and other relevant stakeholders in the beneficiary regions were consulted. Community consultation meetings have been conducted in the pastoral and agro pastoral areas of Afar, Gembella, Oromia, SNNP and Somali Regional States. The purpose of the consultation is to discuss on the ways and means of enhancing the positive impacts and minimize the adverse effects expected to result from the implementation of the LLRP. Two weredas from each region and two kebeles in each woreda have been selected for the Community consultation meetings. Selections of the kebeles have been made in consultation with the woreda administration and when selecting the kebeles for consultation effort was made to have fair representation of the pastoralist and agro-pastoralist communities and while at the same time considering ago-climatic/agro- ecological and socio-economic variability.

Community consultation meetings with the selected communities were conducted from 26 to 30 October 2018 in the Afar Region, from 1 to 3 November 2018 in the Gambella Region, 14 to 17 November 2018 in SNNP Region, from 5 to 8 December in the Oromia Region and from 14 to 16 December 2018 in Somali Region. However, due to security reasons it was not possible to conduct community consultation in Benshangul Regions. Woredas and kebeles at which community consultation meetings were conducted within the project area are shown in the table. The table below also shows critical issues raised by the community during the consultation meetings. Detail findings of the stakeholders' consultation meetings are annexed.

Table 1. Specific locations of community consultations

Region	Woreda	Kebele	Critical Issue Raised During Consultation
Afar	Dupti	Debelina Halebiri	Scarcity of animal feed
		Hankasina Aredo	
	Teru	Guyah	Critical shortage of potable water for human and animals
		Gulubule	
Gambella	Itang	Dorong	Lack of veterinary clinic Lack of basic services such as water supply, clinic and road
		Pokumu	
	Lare	Nip-Nip	Lack of market outlet for animal products such as meat and milk
		Magok	
SNNP	Hamer	Kolakeja	Poor basic services such as clinics, schools and water supply
		Angude	
	Bena Semay	Kobo Telbana	
		Sheba Arshemja	
Oromia	Fentale	Benti	Security problem Shortage of potable water
		Gelcha	
	Boredede	Kontre	
		Obensa	
Somali	Harshin	Harshin Kebele 01	Shortage of animal fed
		Ferah Liben	
	Gursum	Gin Aseni	

2. Project Description

Project ‘s Development Objective is to improve Livelihood Resilience of Pastoral and Agro-Pastoral Communities in Ethiopia.

PDO Level Indicators

The Project would help improve livelihoods of people living in pastoral and agro-pastoral areas, contributing to the Sustainable Development Goals (SDGs) 1 (no poverty); 2 (zero hunger); 3 (good health and well-being); 5 (gender equality); 6 (clean water and sanitation); 8 (decent work and economic growth); and 13 (climate action). The PDO-level indicators include: Number of direct project beneficiaries (disaggregated by gender and age); Percentage increase in yield of selected crop and livestock commodities; Increased land area (in ha) under sustainable natural resource management practices; Number of people with improved access to economic and social services (disaggregated by service type and gender); Building resilience of livelihood systems is a central consideration under this Project.

In general, “resilience”, refers to a heightened system capacity to anticipate, respond to and recover from hazards. Resilience-building, as described by the World Bank, involves strengthening three specific capacities. This Project seeks to strengthen these capacities in a number of ways, including: (i) absorptive capacity, through rangeland and natural resource management interventions, strategic investments and improved basic social service delivery, which will help communities and pastoral and agro-pastoral system to absorb drought shocks and reduce asset losses, (ii) adaptive capacity, through livelihood improvement and by helping beneficiaries adopt climate smart agriculture and investing in research systems will contribute towards better adapting to changing climate; and (iii) transformative capacity, through market linkages, small scale irrigation, and livelihood diversification, that provide a basis for more fundamental socioeconomic changes and help beneficiary reduce their dependence on

rainfed agricultural system. All of these will be assessed through different PDO and IR indicators. The project components are:

Component 1. Integrated Rangeland Development and Management (US$213 million)

This Component will support management of the rangelands under which the pastoral and agro-pastoral production systems operate, conflict management and ensuring pastoralits's secure to key natural resources. This should encompass all rangeland resources, including dry season grazing, wet season grazing and drought reserves grazing lands; cattle corridors; wetlands; forests and woodlands; water sources for livestock, crops and humans; settlements and areas reserved for crop and fodder production. The objectives is to prevent and reverse degradation, manage encroachment, rehabilitate rangelands, enhance improved forage production, enhance conflict prevention and resolution capacities, and improves and ensure pastoralists aces to key natural resources. The improved productivity of rangelands will lead to improved livestock productivity and production and hence contribute to improved livelihoods and resilient rangeland ecosystems. It will also integrate strategic investments around infrastructure as integral part of broader rangeland development. The component will have the following three sub components; Sub-component 1.1. Integrated Rangeland Management Planning, Sub-component 1.2. Supporting Strategic Investments and Sub component 1.3. Conflict Management and Secure Access to key resources.

Sub-component 1.1. Integrated Rangeland Management Planning: The Sub-component would support five sets of activities: (i) regional assessments of rangelands and associated pastoral and agro-pastoral communities, institutions and governance structures, (ii) assessment and inventory of existing investment plans (such as Disaster Preparedness Strategic Investment Plans, Woreda-level investment plans) to ensure full alignment with existing plans; (iii) formulation of participatory Rangeland Management and Investment Plans (RMIPs); (iv) setting-up a rangeland monitoring system; (v) capacity building for stakeholders in planning and implementation of RMIPs. The RMIPs will comprise five components: a) natural resource and pasture development; b) water resource development; c) small scale irrigation schemes development, d) market infrastructure, and e) other economic infrastructure. The Project will provide the required technical assistance, capacity building and facilitation support.

Sub-component 1.2 Supporting Strategic Investments: This Sub-component will finance two types of strategic investments identified and prioritized in the RMIPs: (i) Rangeland Management and Pasture Improvement initiatives, based on approved RMIPs. These initiatives have more of a natural resource management objective, such as pasture development, water resources development, soil and water conservation, etc.; they will be implemented through a participatory community approach by considering some elements of the CDD sub-project modality known from PCDP; (ii) Public Economic Infrastructure, financing larger strategic infrastructure (feeder roads, markets, small-scale irrigation, etc.).

Sub component 1.3 Conflict Management and Secure Access to Key Resources: Conflict, loss of key grazing lands and water resources and restricted access to key natural resources are among the key factors that undermine the resilience capacity of the pastoral systems in Ethiopia. Conflict in pastoral areas is caused by a range of interrelated factors, such as insecure tenure rights, ethnic politics, restrictions on mobility that limits access to water and pasture, competition for dwindling natural resources, cattle rustling, spread of small arms, lack of public investment, and exclusion of pastoralists from decision-making process, etc. Conflict can cause loss of human lives, constrains implementation of developments, erodes development gains; restricts movement of people and livestock, disrupt markets, children education and public services deliveries, enhance localized land

degradation as animals are concentrated in a limited area. All these add up to increase vulnerability of pastoralists and agro-pastoralists and degrade the resilience capacity of the pastoral and agro-pastoral livelihoods.

Component 2: Livelihood Improvement and Diversification (US$154 million)

Sub-component 2.1 Enhance Pastoral and Agro-Pastoral Production Systems. This Sub-component aims at improving productivity of the pastoral and agro-pastoral production systems (cattle, camels, small ruminants, poultry; and crops including maize, sorghum and vegetables) in the targeted project areas. The Project will enhance delivery of livestock and crop production[4] extension services and animal health services in the targeted woredas and complementary to the strategic investments under component 1.

The support to public extension services will consist of (i) strengthening the extension system by upgrading Pastoral Training Centers (PTC) or Framers Training Centers (FTC); (ii) strengthening the mobile outreach extension delivery system through pastoral and agro-pastoral field schools (P/APFS); and (iii) supporting research through pastoral and agro-pastoral research and extension groups (PAPREGs), managed by universities and research centers. To support livelihoods improvement through the extension system, the Project will promote: (i) feed and forage technologies; (ii) breed improvement for cattle, camels and small ruminants mainly through community-based breed improvement initiatives; (iii) good pastoral practices through on-farm/pasture land demonstrations, (iv) improved crop husbandry practices through on-farm demonstrations for dryland agriculture, irrigation and water conservation schemes; (v) nutrition, which will be incorporated in pastoral field schools, will incorporate nutrition curriculum and provision of inputs/seeds, high value vegetable, biofortified varieties etc. ; (vi) gender equality by ensuring equal participation of women and men in extension activities and that all parties receive key information to improve the production and productivity of their activities.

The Project will strengthen availability of animal health services in the selected communities, as well as outreach functions of the system. This will include (i) upgrading and equipping of Animal Health Posts; (ii) supporting, establishing and/or strengthening networks of animal health services and/or PPP arrangements aimed at ensuring medicine availability; and (iii) training and equipping Community Animal Health Workers (CAHW).

Sub-component 2.2: Promoting Livelihood Diversification and Market Access. This Sub-component will support livelihoods development; strengthening market development and commercialization; and, access to financial services. Priority value chains of the Project will include: (a) live animals and livestock products; (b) dairy; (c) crops (maize, sorghum, etc.) and vegetables, feed and forage. Other related livelihoods could be bee keeping, poultry, handicraft; natural gum, tourism etc.

- Livelihood diversification may happen through different avenues, depending on each region, each rangeland and for the different target groups. Activities will include: (i) Business development services, which may be outsourced to local service providers; (ii) Entrepreneurial, financial literacy and carefully selected vocational training to individuals implemented through relevant agencies and bureaus at regional and woreda levels, as well as through existing Technical and Vocational Education and Training Centers (TVETs), management institutes and similar; (iii)

[4]https://www.ifc.org/wps/wcm/connect/c6f002804c3c4596bb44bfd8bd2c3114/Annual+Crop+Production+EHS+Guidelines_2016+FINAL.pdf?MOD=AJPERES

formation and support to common interest groups (CIGs). Those activities are expected to target mostly women as well as young men and young women with no productive assets.

- Strengthening market linkages requires a high level of private sector engagement and PPP investment. To promote livelihoods diversification, the Project will finance market assessments and rapid market appraisals to identify business opportunities, to plan support and to guide the preparation of business plans for large investments. The Project will support: (i) Mainstreaming of productive partnerships. (ii) Innovative market arrangements. Contractual arrangements with private sector actors would be sought that would, whenever possible and appropriate for the envisaged target groups. This would be relatively new approach and would require substantial additional work during implementation (to be inspired by 'making markets work for the poor' approaches); it is also likely to require well-qualified TA during implementation. This sub-component will help support group enterprises as well as individual micro and small enterprises. This set of activities would be outsourced to a service provider or institutions such as the Agricultural Transformation Agency (ATA).
- Access to financial services. The Project strategy for providing improved access to financial services builds on rural SACCOs (RUSACCOs) being vicinity-based institutions with generally small loan and voluntary deposit sizes. At the next layer and for higher loan sizes to micro and small entrepreneurs with investment requirements, existing microfinance institutions (MFIs) will be technically supported. An assessment of the existing RUSACCOs will allow classifying them as strong; intermediate; weak or dormant. A specific support package for each category, building on PCDP and RUFIP experiences, would be provided. Strong RUSACCOs will pilot creating unions in order to credit-link with the Ethiopian banking sector and mobilize financing. A partnership with the Federal Cooperatives Agency (FCA) and RUFIP III is envisaged to ensure quality of training materials and coordinate all support to financial cooperatives. Microfinance Institutions will be technically supported and assisted in linking up to existing sources of financing. In addition to capacity development, the Project will also technically support regional knowledge transfer in support of a faster adoption and dissemination of digital financial services in the Ethiopian lowlands, where they can significantly reduce transaction costs and create new profit centres for participating MFIs.

Component 3: Improving Basic Services and Capacity Building (US$103 million)

Sub-component 3.1 Provision of Basic Social Services and Infrastructure. This Sub-component will support improving access to and utilization of basic social and economic services among the target communities, using a CDD approach. It will adopt a spatial orientation to infrastructure development and finance investment at various levels, inter-community, kebele and woreda levels. The Sub-component will build on the PCDP experience but prioritize woredas which did not benefit from PCDP. The Project will incorporate prioritization mechanisms within the CDD approach which will ensure that investments which directly benefit women (for example drinking water points and health facilities, identified through a participatory community process) will be prioritized.

Sub-component 3.2 Institutional Capacity Building. The objective of this Sub-component is to improve the service delivery capacity of public institutions. Considering the weak institutional environment and limited implementation capacity, significant investment in capacity building will be made at five different levels: federal, regional, woreda, kebele, and community level with emphasis on the institutions and implementation partners directly involved in project-related activities and service provision. The process will start by identifying key institutions and partners, including research and academic institutions, and undertaking a capacity needs assessment followed by a capacity building plan and subsequent financing of the capacity building plan. Stakeholder institutions

will be strengthened to enable them to meaningfully engage with public and private partners, for market access, disease control, and other services for their members. Capacity building will involve physical, human and system capacity building.

Towards enhancing and sustaining the project interventions on livestock production, veterinary and agricultural extension services, the Ministry of Agriculture will play a pivotal role in the implementation of the project. Among others, MoA will provide high level technical assistance and quality assurance supports on institutional capacity building for improved rural service deliveries. With some fund allocation from the project, the MoA will be a focal institution in identifying service delivery capacity constraints, preparation of strategic institutional capacity building plans, providing technical support and supervision on the implementation of the plans. In coordination with MoP, MoA will provide strategic technical support on selected agriculture and livestock production and productivity related project interventions, including to liaise with specialized local and international service providers, UN agencies and other partners. The detail roles and responsibilities of the MoA will be detailed at the PIM.

Sub-component 3.3 Knowledge Management, Research and Policy Support. One of the weak links in past programs and projects was the lack of documentation and dissemination on lessons learnt and best practices. Therefore, the project will support continuous learning, adaptable knowledge management and communication on innovative technologies. Various indigenous knowledge and customary institutions will be identified, which expect to play pivotal roles in strengthening various development activities among pastoral and agro pastoral communities. The Project will also support research and capacity building in thematic priority areas of pastoral and agro-pastoral systems. MoUs will be signed with research, academic and higher learning institutions (HLIs) to do research on topics such as rangeland management, breed improvement, rain fed and irrigated agriculture in arid and semi-arid areas, socio-economic research in pastoral areas, and also to pilot innovative approaches including specialized business development service provision as appropriate.

In addition, the Sub-component will pilot innovations to solve core bottlenecks in the pastoral and agro-pastoral value chains (for example, integrated pastoral decision support system, certification and traceability of livestock products, the use of drones to seeding and monitoring of afforestation and grazing). Priority will be given to the promotion of external innovative technologies that enhance the competitiveness and sustainability of rangeland management and which (i) provide low-cost climate proof solutions, (ii) are adapted to the needs of youth and women, (iii) contribute to improved nutrition and food security. Core bottlenecks in pastoral and agro-pastoral systems will be identified and requests for proposals will be organized. Innovative pilot projects will be identified, prioritized and vetted. Proposals would come from private sector, public sector and specialized actors in the targeted value chains.

Considering the need to strengthen the policies on land-use, pastoral mobility, community land certificates and community ownership of rangeland, this Sub-component will also finance technical assistance for evidence-based policy making and community engagement in policy dialogue. It will inform government on pastoral-friendly policies consistent with the existing constitution that facilitate improved and resilient P&AP livelihoods.

Component 4. Project Management, Monitoring and Evaluation (US$44 Million)

The purpose of this component is to ensure that the Project is managed and implemented efficiently, on time and in accordance with the PDO and Financing Agreement, and its performance and effectiveness are tracked. As part of a Grievance Redressal Mechanism (GRM), the component will

also support cellphone supported short text message application to enhance citizen engagement and address any grievances that may arise in the course of the project plaining and implementation.

3. Legal, and Institutional Framework

In this section, the Lowland Livelihood Resilience Project (LLRP) related national environmental and social legal requirements, and the World Bank Safeguards Policies that will be triggered by the project are described. Reference is also made to IFAD's SECAP and the applicable guidance statements.

3 .1 National Policy and Institutional Framework

The National Constitution

Adopted in 1995, the Ethiopian Constitution provides the framework for environmental protection and management in Ethiopia. The concept of sustainable development and environmental rights are presented in Articles 43, 44, and 92 of the Constitution:

Article 43: The Right to Development identifies citizens' right to improved living standards and sustainable development and participates in national development and to be consulted with respect to policies and projects affecting their community.

Article 44: Environmental Rights stipulations that all citizens have the right to a clean and healthy environment; and those who have been displaced or whose livelihoods have been adversely affected as a result of state programs have a right to commensurate monetary or alternative means of compensation, including relocation with adequate state assistance.

Article 92: Environmental objectives state that the government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment. The design and implementation of programs neither shall not damage nor destroy the environment. Citizens also have a right to full consultation and to expression of views in the planning and implementation of environmental policies and projects that directly affect them. Government and citizens shall have the duty to protect the environment.

The Ethiopian Constitution also recognizes the rights of pastoral groups inhabiting the lowland of the country. The Constitution under Article 40 (4) stipulates 'Ethiopian pastoralists have a right to free land for grazing and cultivation as well as a right not to be displaced from their own lands'. The Constitution under Article 41(8) also affirms that "Ethiopian pastoralists have the right to receive fair prices for their products, that would lead to improvement in their conditions of life and to enable them to obtain an equitable share of the national wealth commensurate with their contribution. This objective shall guide the State in the formulation of economic, social and development policies."

The environmental policy of Ethiopia, approved in 1997, is aimed at guiding sustainable social and economic development of the country through the conservation and sustainable utilization of the natural, man-made and cultural resources and the environment at large. The policy lists specific objectives encompassing a wide range of environmental issues to be addressed through the adoption of the policy. It also provides overarching environmental guiding principles to be adopted to harmonize the environmental elements in sect oral, cross-sect oral and other policies. The policy clearly outlined the sect oral environmental policies, relevant to environmental management among others are: (i) Soil Husbandry and Sustainable Agriculture; (ii) Forests, Woodlands and Trees; (iii) Genetic, Species and Ecosystem Biodiversity; (iv) Water Resources; (v) Energy Resources; (vi) Human Settlement, Urban Environment and Environmental Health; and (vii) ESIA.

The National Conservation Strategy

It was enacted in 1995 and takes a holistic view of natural and cultural resources and seeks to present a coherent framework of plans, policies, and investments related to environmental sustainability. The Strategy consists of five volumes: Natural Resource Base, Policy and Strategy, Institutional Framework, Action Plan, and Compilation of Investment Program.

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.

Environnemental Impact Assessment Proclamation, NO. 299/2002

The Environmental Impact Assessment Proclamation was decreed in December 2002 in order to make ESIA a mandatory procedure for projects to be undertaken by the government, public or private entities that require environmental impact analysis. The Proclamation elaborates on considerations with respect to the assessment of positive and negative impacts and states that the impact of a project shall be assessed on the basis of the size, location, nature, cumulative effect with other concurrent impacts or phenomena, trans-regional context, duration, reversibility or irreversibility or other related effects of a project. Based on directives or guidelines pursuant to this proclamation, projects will be categorized as:

-Projects that are not likely to have negative impacts, and thus do not require environmental impact assessment; and

- Projects those are likely to have negative impacts and thus require environmental impact assessment.

As per the procedures in the proclamation, a proponent is required to undertake a timely environmental impact assessment, 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 ESIA reports be prepared by an expert that meets the requirements specified under any directive issued by the Authority (regional/federal). 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 and Social Impact Assessment Guidelines and Directives

The former Ministry of Environment and Forestry (formerly known as FEPA) has published a 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. Some of the guidelines are generic and applicable in different sectors and there are also sector specific guidelines prepared for key environmental and social issues to adhere during the ESIA analysis in those specific sectors.

Environmental Impact Assessment Guideline, May 2000: The guideline provides the policy and legislative framework, the general ESIA process and key sect oral 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 management plan (e.g., identified impacts, mitigation measures, monitoring, capacity building, etc) and structured formats for mitigation measures, monitoring and institutional arrangements.

Similar guidelines for the different sectors include the following:

- Environmental and Social Impact Assessment Guidelines for Dams and Reservoirs, 2004
- Environmental Impact Assessment Guideline for Fertilizer, 2004
- Guidelines for Social, Environmental and Ecological Impact Assessment and Environmental Hygiene in Settlement Areas, 2004
- Environmental Impact Assessment Guidelines on Irrigation, 2004
- Integrated Environmental and Social Impact Assessment Guidelines for Livestock and Rangeland Management, 2004
- Environmental Impact Assessment Guideline for Mineral and Petroleum Operation Projects, December 2003
- Environmental Impact Assessment Guideline on Pesticides May 2004
- Environmental Impact Assessment Guidelines on Road and Railway, 2004
- Environmental Impact Assessment Guidelines on Forestry, 2004

Rural land Administration and Use Proclamation, No.456/2005

The main aim of the Proclamation is to conserve and develop natural resources in rural areas by promoting sustainable land use practices. In order to encourage farmers and pastoralists to implement measures to guard against soil erosion, the Proclamation introduces a Rural Land Holding Certificate, which provides a level of security of tenure. The MoANR is tasked with implementing the Proclamation by providing support and co-coordinating the activities of the regional governments. Regional governments have an obligation to establish a competent organization to implement the rural land administration and land use law. Accordingly, the REPAs are responsible for rural land administration. The Proclamation states that if a land, that has already been registered, is to be acquired for public works or for investment, compensation commensurate with the improvements made to the land shall be paid to the land use holder or substitute land shall be offered. The Proclamation imposes restrictions on the use of various categories of land, for example wetland areas, steep slopes, land dissected by gullies, etc.

The Proclamation addresses the right to hold and rural lands; rural land measurements, registration and holding certificate; duration of rural land use right; transfer of land use rights distribution of rural lands; rural land use restrictions; and other related miscellaneous provisions.

Proclamation 455/2005 (Expropriation Landholdings for Public Purposes & Payment of Compensation)

Expropriation of Landholdings for Public Purposes and Payment of Compensation Proclamation' was established in 2005. Prior to this, no specific legal framework existed relating to expropriation and compensation. As a result, there have been serious shortcomings in the processes associated with land

expropriation, resettlement and associated compensation payments in Ethiopia. The proclamation address issues related to Public domain Entitlement, Property laws, Land asset classification and valuation, customary laws, Procedures for expropriation, Procedures for grievance redress

Regulation No. 135/2007 (Expropriation Landholdings for Public Purposes & Payment of Compensation

It addresses Regulation for the payment of Compensation for property Situated on Landholdings Expropriated for public purposes. It describes the detail implementation procedures in when settling issues related to Public Domain Entitlement, Property laws, Land asset classification and valuation, customary laws, Procedures for expropriation, Procedures for grievance redress.

Ethiopian Water Resources Management Policy (1999)

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.

Ethiopian Water Resources Management Proclamation (Proclamation No. 197/2000)

The purpose of the Proclamation is to ensure that the water resources of the country are protected and utilized for the highest social and economic benefits for 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. The Proclamation provides that all the water resources of the country are the common property of the Ethiopian people and the state.

Pesticide Registration and Control Proclamation (Proclamation No. 674/2010)

This Proclamation:

- Covers agricultural, household, public health, and industrial pesticides;
- Provides registration and control responsibilities to MoA;
- 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 organo-chlorines); and
- Obliges that all pesticides must display labels that meet specific Ministry of Agriculture label requirements.
- The proclamation also includes requirements for consideration for acceptance, testing procedure and the content of report and information for recommendation to be filled by the researcher.

Environnemental Pollution Control Proclamation, No. 300/2002

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 513/2007

The 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.

Directive Issued to Determine Projects Subject To Environmental Impact Assessment, Directive No.1/ 2008 17

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

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. Some of these conventions include the following:

-Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Done at Aarhus, Denmark, On 25 June 1998

- Cartagena Protocol on Bio-Safety to the Convention on Biological Diversity
- Convention on Biological Diversity, Rio, 5 June 1992
- Kyoto Protocol to the United Nations Framework Convention on Climate Change
- United Nations Convention to Combat Desertification
- UN Framework Convention on Climate Change
- Convention for the Protection of the World Cultural and Natural Heritage Paris, 23 November 1972.

Public Health Proclamation (200/2000)

This proclamation prohibits discharging of untreated liquid waste generated from septic tanks, seepage pits and industries into water bodies, or water convergences Prohibits the disposal of solid or liquid or any other waste in a manner which contaminates the environment or affect the health of the society, etc.

3.2 International Agreements

Ethiopia is signatory to a number of multilateral agreements that have bearing on the sustainable development efforts of the country. Ethiopia has signed and/or ratified many of the international conventions and protocols and some of the important MEAs are briefly discussed below:

The United Nations Framework Convention on Climate Change (UNFCCC) (1994):

The UNFCCC was signed by Ethiopia during the 1992 Rio Conference in Brazil and was ratified on 31 May 1994 and Proclamation 97/1994 was put in place to provide a legal basis for its implementation. UNDP has supported Ethiopia to prepare its First National Communication in Response to its Commitments to UNFCCC. As stated earlier Ethiopia has now embarked on an ambitious climate resilient green economy. Under the UNFCCC, the UNDP supported the preparation

of the National Adaptation Programme of Action (NAPA), Coping with Drought and Climate Change and Climate Change Enabling Activity (additional financing for capacity building in priority areas), and Promoting Autonomous Adaptation at the community level in Ethiopia. UNEP supported the conduct of the Climate Change Technology Needs Assessment (TNA) of Ethiopia. The IBRD also supported the Renewable Energy Project under the UNFCCC.

The Convention on Biological Diversity (1994);

Ethiopia ratified the Convention on 31 May1994 through Proclamation 98/1994. UNDP supported Ethiopia to prepare the National Biodiversity Strategy, Action Plan, and its participation in Clearing House Mechanism for CBD, including the preparation of the Country Report to the COP of UNCBD. Under the UNCBD, the UNDP also supported a Dynamic Farmer-Based Approach to the Conservation of African Plant Genetic Resources, Sustainable Development of the Protected Area System and Mainstreaming Agro-biodiversity Conservation into the Farming Systems of Ethiopia. UNEP provided support for Capacity Building for Access and Benefit Sharing and Conservation and Sustainable Use of Medicinal Plants. IBRD also supported a project on the Conservation and Sustainable Use of Medicinal Plants.

The United Nations Convention to Combat Desertification. The Government of Ethiopia signed the Convention to Combat Desertification (CCD) in October 1994 and ratified it in June 1997. As a first step in the implementation of the Convention, the Government of Ethiopia designated the Environmental Protection Authority (EPA) as the Focal Point to coordinate the implementation of the Convention in Ethiopia. To carry out this mandate, EPA established a National Steering Committee (NSC) for the formulation of a National Action Program to Combat Desertification and Mitigate the Effects of Drought (in short, NAP) as well as formed a task force for the formulation of a National Desertification Fund (NDF). the Bio-safety Protocol

UNEP provided support for the Implementation of Cartagena Protocol on Bio-safety through a conduct of a study on Effective Implementation of National Bio-safety Framework. Ethiopia has now developed a bio-safety law and a number of directives to implement it. Rio+20, National Assessment Report **2012**

3.3 World Bank Safeguard Policies

Project activities funded under the LLRP have triggered the following World Bank Safeguard Operational Policies:

- OP 4.01 Environmental Assessment
- OP 4.04 Natural Habitats
- OP 4.09 Pest Management
- OP 4.10 Indigenous/Underserved People
- OP 4.11 Physical Cultural Resources
- OP 4.12 Involuntary Resettlement
- OP 4.36 Forests
- OP 4.37 Safety of Dams
- OP 7.50 Projects on International Waterways

The Bank's operational policies i.e. Environmental Assessment, Pest Management, Natural Habitat, Forests, Physical and Cultural Resources, Indigenous People, Safety of Dams and Involuntary Resettlement are addressed at subproject level, whereas OP 7.50 is addressed at the Project level.

Environmental and Social Safeguard Policies Triggered by the Project

The ESMF will be required to comply with not only the relevant national policy and legal Frameworks but also with the applicable environmental and social safeguard policies of the World Bank. The safeguard policies that will be triggered by the *LLRP* (specifically by the project component I, component II and component III) are described below.

Environmental and Social Assessment (OP 4.01): This policy requires environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making. Environmental assessment should be conducted for projects which fall under World Bank category A & B. These are also schedule 1 & 2 according to EIA guideline of the GoE. *However, it has to be noted that any subprojects considered as category A will not be financed under LLRP.*

LLRP will finance small scale community driven sub-projects some of which will require environmental management. These can include small scale water resource development for irrigation, livestock, water supply; implementation of watershed based natural resource management activities; construction of market centers; provision of chemicals, vaccines, drugs and consumables to veterinary laboratories; implementation of forage development and range land management subprojects; and others. Thus, investments under *LLRP* will be subject to environmental and social screening during the planning stage, and appropriate steps will be taken based on the results of the environmental and social screening process outlined in this document**.** This project has been categorized as B.

Natural Habitats (OP 4.04): This policy is triggered by any sub-project and household-based livelihood intervention with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project). Pastoral areas in Ethiopia encompass some natural habitats which are protected by law, such as the Awash and Yangudi Rasa National Parks (Afar), Yabello Sanctuary (Borena) and the Babile Wildlife Sanctuary (Somali). It is obvious that *LLRP* may operate in Woredas that border upon areas such as those mentioned above. Though *LLRP* will not finance any activities in natural habitats or those in the periphery likely to negative affect these ecological systems, *LLRP* will take appropriate steps, as per this ESMF, to prevent and/or mitigate any potential impacts to these areas.

Pest Management (OP 4.09): The policy supports safe, effective, and environmentally sound pest management. It promotes the use of biological and environmental control methods. Rural development projects have to avoid using harmful pesticides. A preferred solution is to use Integrated Pest Management (IPM) techniques and encourage their use in the whole of the sectors concerned.

Although *LLRP* funds will not be used to manufacture, or directly purchase or distribute agrochemicals for crop production, it is likely that support through the *LLRP* will encourage farmers to use more pesticide especially as a result of intensified agriculture both irrigated and rain-fed; development of veterinary facilities, cattle dip; weed control; diversification into new agricultural crops, particularly if these tend to receive high usage of pesticide; new land use development or changed cultivation practices in an area; and expansion of agricultural activities. *LLRP* will adopt safe practices regarding pest management in its agricultural sub-projects and vector management in its animal health sub-projects to ensure that these investments are environmentally and socially sustainable. In this regard, a Guideline for Pest Management Plan (PMP) has been annexed to this ESMF (Annex 10). Also, the *LLRP* finances the purchase of vector and disease control drugs,

chemicals, vaccines to improve the productivity of the livestock. The project will also finance the upgrading and strengthening of veterinary laboratory services through provision of laboratory chemicals, consumables and reagents. Vector and Disease Control/Prevention Plan will be prepared when implementing subprojects involving the control of vector and diseases on animals in veterinary clinics and laboratories. A Vector and Disease Control/Prevention Framework is annexed to this ESMF (annex 11).

Indigenous People ((OP 4.10): In Ethiopia this policy is called Underserved People Policy. The objective of this policy is to (i) ensure that the development process fosters full respect for the dignity, human rights, and cultural uniqueness of vulnerable and historically under-served communities and peoples; (ii) ensure that they do not suffer adverse effects during the development process; and (iii) ensure that such communities and peoples receive culturally compatible social and economic benefits.

The Project triggers OP 4.10 because it will operate in areas where the vast majority of people meet the criteria of this policy. Ethiopia has adequate constitutional provision to cover the needs of vulnerable and historically under-served nations, nationalities and peoples. The Project has conducted an enhanced social assessment that was carried out under extensive consultation in the selected project areas. The assessment revealed that there are undeserved, very vulnerable and some groups are out casted and have their own, language, unique culture and practices, identity. During the implementation of the project care should be taken to safeguard them, and the potential implementation risks and challenges, and mitigation measure highlighted in the Social Assessment must be implemented by the project.

Physical Cultural Resources (OP 4.11): The objective of this policy is to assist countries to avoid or mitigate adverse impacts of development projects on physical cultural resources. For purposes of this policy, "physical cultural resources" are defined as movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above ground, underground, or underwater.

LLRP subprojects would be unlikely to involve large scale excavation or inundation and are thus not likely to significantly affect physical cultural resources. Furthermore, activities will be carried out only in areas selected by local citizens who would give great importance to safeguarding their cultural resources and properties. The policy is triggered because under the *LLRP* small scale infrastructure sub-projects such as small-scale water resources development; market centre construction, watershed-based soil natural resources management subprojects will be provided, and these may involve land clearing and excavations that may potentially affect physical and cultural resources. The policy is triggered in case chance finds are encountered during project civil works. No sub-project that might have negative impacts on cultural resources will be funded without acceptable mitigation measures prepared prior to execution of any such subproject. There are national procedures and guidelines for reporting chance finds to be followed and a national entity for coordinating and facilitating the archiving, safekeeping and documentation of physical cultural resources is in place. Also, necessary steps of public consultations, engagement of cultural or religious leaders, local authorities will need to be conducted before decision on a subproject is made.

Involuntary Resettlement (OP 4.12): This policy covers not only to physical relocation, but also any loss of land or other assets resulting in: (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location. This policy also applies to the involuntary restriction of access to legally

designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.

The *LLRP* will endeavor to avoid undertaking any sub-projects that will displace people. However, it would support small-scale rural infrastructure that may affect land holdings and/or assets of individual pastoralists/agro-pastoralist. While individual sub-projects are not yet identified, there will be support for activities such as small-scale infrastructure to improve productivity as well as other rural infrastructure such as water resource development subprojects. Therefore, OP/BP 4.12 has been triggered. A separate RPF has been prepared to guide the implementation of preventive and mitigation measures related to land acquisition and restriction of access to natural resources. For subproject, which require land acquisition and property losses, based on guidance provided in the RPF, a Resettlement Action Plan (RAP) will be prepared and implemented accordingly prior to commencement of works on that subproject.

Forests OP/BP 4.36: This policy is triggered to avoid any anticipated potential impacts that may affect the natural forests found in the project regions.. The ESMF will provide mechanism of screening to identify potential impacts of the project on forests.

Safety of Dams OP/BP 4.37: LLRP is not expected to finance any investments aimed at rehabilitating or constructing large dams. Although there could possibly be construction of small dams under LLRP, particularly for small scale irrigation, they may not be large (more than 4.5 meters high) and therefore may not require special procedures that are normally applied for large dams to follow. This notwithstanding, the Project will trigger OP 4.37 (Safety of Dams). In cases of small dams construction (less than 4.5 meters). The Project will use the FAO[5] 'Manual on Small Earth Dams, a Guide to Siting, Design and Construction'. In addition, the guideline for small dam construction prepared by the MoA will be used to ensure safety of small dams, please refer Annex 12 of this ESMF for further informations..

Projects on International Waterways (OP 7.50): The policy seeks that if a project activity adversely impacts on the quality and quantity of water of international waterway shared with one or more countries, a negotiated agreement should be established. LLRP would abstract significantly less water from any of the shared rivers or drainage systems. The project has triggered OP 7.50, and the notification letter to the riparian countries, together with responses, will be provided when it is received.

Projects in Disputed Areas (OP 7.60): This policy is not triggered because the program will not finance any activity in disputed areas.

Climate Change Related Risks and Proposed Mitigation Measures

Drought, which is a recurrent phenomenon in PAP areas, affects the livelihoods of the PAP communities in the form of degradation of natural resources (rangelands and water resources) and thereby weakening the resilience of PAP communities ultimately propelling them to migration. It also results in loss of assets by PAP communities, including for some household's total loss, thereby forcing them to opt for alternative forms of livelihoods. Similarly, due to flooding some structures built by the project such as water infrastructures, social services, natural resource management structures etc. may be destroyed either totally or partially, and rangelands and crop lands may be flooded.

[5] http://www.fao.org/docrep/012/i1531e/i1531e.pdf

Although irregular in its distribution and (both spatially and temporally), and vary in intensity of severity, drought related risks are common in the moisture stress areas of Ethiopia. The threatening consequence of drought is reduced food availability as crops fail and animal productivity (in terms of milk, blood and meat yields) declines, and thereby forcing inhabitants to get displaced from where they are attending in project implementation activities. While drought is a climatic incidence and readily described by meteorological data, drought related risks perceived by pastoralists may bear little relation to the resultant effects on development projects left behind.

In general, Climate change related risks are bounded to global phenomenon and sometimes beyond the capacity of localized efforts and therefore is rated as critical. However, it is possible to minimize potential impacts through the establishment of strong tie with national meteorological agency whereby up to date early warning data base management could be used as basic inputs throughout the project cycle. Climate change related risks of the sub-projects under LLRP some of which are highly dependent on climate change induced factors, should be supported by up to date early warning climate data. Moreover, application of the existing project experiences will also be very useful.

3.4 IFAD/ SECAP Policies

Social, Environment and Climate Assessment Procedures (SECAP)

SECAP endeavors to ensure that IFAD's goal of enabling poor rural people to improve their food and nutrition security, increase their incomes and strengthen their resilience, particularly to climate change, is done in an environmentally and socially responsible manner. The procedures set the minimum standards for the assessment of social, environmental and climate change risks of IFAD projects which apply throughout the project cycle. The procedures aim to:

".. (i) Provide information and analysis that strengthen the social, environmental and climate dimensions of projects and programmes; (ii) maximise social, environmental and climate change adaptation benefits and avoid or minimize negative impacts; and (iii) increase the consistency, transparency and accountability in decision making concerning these dimensions...".

SECAP provides a step-wise description of the processes to assess risk at each phase of the project or programme cycle, namely: Environmental and Social Categorization and Criteria, Environmental and Social Impact Assessment (ESIA); Climate Risk Analysis; ESIA Review and Recommendations; Loan Negotiations; Executive Board Approval, Project Supervision and Implementation, and Project Completion and ex-post ESIA. Based on the SECAP, LLRP is categorized as B illustrating the project may have some adverse environmental and/or social impacts on human populations or environmentally significant areas; are site-specific and few are-irreversible in nature; and can be readily remedied by appropriate preventive actions and/or mitigation measures. While no formal ESIA is required for Category B programmes/projects, further environmental analysis could be undertaken during project preparation.

The SECAP requires a Climate Risk Classification for projects. LLRP has a moderate classification as most of the activities will be in climatically heterogeneous areas albeit track record of extreme weather events such as droughts may have resulted in rural development projects experiencing weather-related losses and damages in the past. IFAD requires that projects classified as moderate risk undertake a basic climate risk analysis to articulate the climate change adaptation measures that will be incorporated in the project design to support the target beneficiaries in coping with climate change.

Policy related to Indigenous People

Policy on Engagement with Indigenous Peoples aims to enhance IFAD's development effectiveness in its engagement with indigenous peoples' communities in rural areas. It sets out the principles of engagement IFAD will adhere to in its work with indigenous peoples, and the instruments, procedures and resources IFAD will deploy to implement them. In its engagement with indigenous peoples, all IFAD supported projects are guided by the following fundamental principles:

- Building upon cultural heritage and acknowledging cultural identity as assets;
- Ensuring free, prior and informed consent;
- Enhancing community-driven development;
- Ensuring equitable access to land, territories and resources;
- Valuing indigenous peoples' knowledge and practices;
- Enhancing resilience of ecosystems in which indigenous people live and developing innovative adaptation measures to address environmental issues and climate change;
- Exploring opportunities to enable indigenous people to value their products and facilitating access to markets;
- Empowering indigenous peoples to secure and manage their resources and lead their own development processes; and
- Ensuring gender equality, with commitment to improve the well-being of indigenous women.

Policy on Improving Access to Land and Tenure Security

IFAD's land policy provides a conceptual framework for the relationship between land issues and rural poverty and identifies the major implications of this relationship for IFAD's work. The policy acknowledges the complexity and dynamics of evolving rural realities and articulates guiding principles for mainstreaming land issues in the Fund's main operational instruments and processes. It also provides a framework for the subsequent development of operational guidelines and decision tools. The main principles of the policy are:

- Align with national priorities and support to poverty reduction strategies
- Adhere to the "do-no-harm" principle at all times;
- Appreciate the diversity and dynamic nature of existing agrarian structures and tenure systems;
- Support the centrality of the empowerment of poor rural people and the organizations that represent them;
- Forge complementary partnerships with like-minded actors;
- Focus on the gender dimension of land rights;
- Adhere to the principle of free, prior and informed consent;
- Support to production services and market linkages to maximize the positive effects of access to land and tenure security.
- Anchored in this policy are the tenets of Free Prior and Informed Consent (FPIC).

Comparison of the World Bank Policies, IFAD SECAP and National Polices

The Bank's operational policy OP 4.01, the SECAP and the Ethiopian legislation are compatible as all essentially require the preparation of environmental assessments based on the nature and significance of impacts associated with a proposed development. However, there are some gaps between the national environment related policies, policies legislations and guidelines and legislation and the procedures of the SECAP and the World Bank. One of such difference is the climate risk analysis and

the approach that should be followed to minimize such risks. The national legislation and guidelines related to ESIA is observed to have the following weakness:

- Little attention is given to the social issues especially to involuntary resettlement and the indigenous peoples
- The need to prepare Resettlement Action Plan is not clearly stated
- Preliminary screening is not a mandatory
- Public disclosure of the EIA is not specified in the government law or guidelines
- When the Government legislation is found less stringent in addressing issues such as the ones indicated above, procedures and the safeguard policies of the World Bank will be applied.

4. Environmental and Social Baseline Conditions

The proposed project is planned to be implemented in the lowlands of Afar, Oromia, Somali and the Southern Nations, Nationalities and People's (SNNP), Gambella and Benishangul regional states where pastoral and agro-pastoral communities reside. The project is expected to be implemented in 18 woredas in Oromia, in 9 woredas in SNNPR, in 20 woredas in Afar, in 36 woredas in Somali, in 8 woredas, in Gambella and in 9 woredas Benshangul-Gumuz. The following criteria were used to select Woredas that will be included to the Pastoral and Agro-Pastoral Livelihood Resilience Project.

- Adjacent to borders/marketing routes with implications for management of trans-boundary resources
- Preference in adapting a "cluster approach" if and when appropriate (optimize financial, logistics, impact)
- most vulnerable Woredas based on key indicators of vulnerability (e.g. data/assessments on vulnerability, food insecurity, hunger, malnutrition, household incomes
- Accessibility to the project sites
- Scope and coverage to ensure complementary with other projects, and avoid overlapping with similar interventions
- Willingness of the community (demonstrated interest in the project interventions
- It is important to assess the biophysical and socio-economic environment prior to project implementation.

Information/data such as agro ecological, rainfall, temperature, growing periods, socioeconomic and biophysical environments has been gathered from field observation of the selected regions and woredas and from secondary information sources to assess the socio-economic and biophysical status of the project areas. At this stage the specific locations of the sub- project sites are unknown, and it will be difficult to assess in detail the biophysical and socioeconomic environment of these sites. However, for the purpose of preparation of the ESMF report, it will suffice to conduct general assessment of the biophysical and socio-economic environment of the project areas where LLRP is going to be implemented.

Physical environment: Generally, the physical environment of the pastoral and agro pastoral areas of Ethiopia are mostly arid and semi-arid sometimes intersected by large rivers such as the Baro, Awash, Wabe-Shebelle, Omo-Gibe and Genale-Dawa. These areas are lowlands less than 1,500 above masl. Rainfall is erratic and mean annual rainfall is generally less than 900mm and annual mean temperatures are above 18^0C and these areas are mostly faced with recurrent drought. The main geologic unit of one of the Afar region for example, includes volcanic rocks of the Afar Group and sedimentary of the quaternary age. Outcrops of the Afar group which are dominantly basaltic are

found exposed in many areas of the region. Sand, silt, clay and reef limestone of Holocene age cover larger part of the region. The geologic formation of the other Somali, Oromia and SNNPR and Benshngul –Zumuz later dominated by alternating limestone, shale, anhydrite, dolomites and marble and are sandy and often coated with reddish soil and calcareous crust typical of desert area. Minerals like edible salt, gold and natural gas also occur in most of the regions.

Biological environment: Generally, vegetation cover of the regions where LLRP is proposed to be implemented is savanna type (bushed grassland with patches of woodland), and the predominant plant species in these areas are Acacia spp., Albizia spp., Erythrina spp., Cordia, Ficus, Belanites aegyptica, Euclea schimperi, Grewia tembensis, G. bicolor, Indigofera spicata, Commiphora, Prosopis juliflora and various species of grasses including Chloris pycnothrix, Hyparrhenia anthistiriodes, H. dregeana, Cenchrus ciliaris, Heterpogon spp., Setaria acromelaena, Aristida kenyensis, Cyondon dactylon, Panicum atrosanguineum, Microchloa kunthii, etc. Natural habitats and national parks that are found in the project areas of these regions include the Awash and Yangudi Rasa National Parks (Afar Region), Yabello Sanctuary in Borena (Oromia Region) and the Babile Wildlife Sanctuary (Somali Region) and Gambella National Park (Gembella Region). In these parks there are number of mammals, birds, reptiles, amphibians, fishes and invertebrates uniquely adapted to the arid and semi-arid conditions. Wildlife animals include lion, hyena, leopard, fox, hunting dogs, crocodiles and various types of snakes. Wild animals that are used for hunting include: Bicids, Balango, Goodir, Dabatag, Zebra, Baboon, Hippopotamus, Ostrich, Monkey and Elephant. There are also a number of birds such as, degodi lark, little winged dove, Somali short billed crombec, Jubaland weaver, little brown bustard and white winged collared dove.

Socio-economic environment: The pastoral and agro-pastoral population in the project area is estimated to be 12 million to 15 million. The main economic stay of the pastoralist and agro-pastoralist in the arid and semi-arid lowlands is livestock rearing and to some extent farming and these activities have in the long term resulted rangeland degradation and encroachment by invasive weeds such as Prosopis juliflora. In these areas feed and water supply are getting scarce from time to time due to over grazing and exploitation of ground water in unsustainable manner. For instance, in the large areas of the Borena zone overexploitation of groundwater has led to dropping groundwater levels and wells running dry. Similarly, overgrazing coupled with the invasion of noxious weeds in some place of the project areas have led to the loss of indigenous plant species and biodiversity loss in pastoral areas.

The regions of the project areas are characterized by water shortage, frequent drought, shortage of grass/fodder, outbreak of human disease (particularly, malaria), livestock disease and gender disparities in accessing to productive assets are the main sources of vulnerability. Besides, they are characterized by poor infrastructure developments, very limited social services (and therefore low education and literacy levels), susceptibility to natural hazards, poor resource endowments, increasing competition for scarce resources and limited livelihood opportunities. Pastoralists in all the regions of the project areas are nowadays facing various challenges due to climate change and displacement due to the implementation of projects by government and private investors and change in lifestyle. For example, in Bale, the proportions of mobile pastoral communities have already been diminished due to change of life style from pastoralist to agro-pastoral lifestyle. These have resulted in the disruption of their social networks.

Pastoralist/agro-pastoralist livelihoods systems are becoming increasingly vulnerable in all project woredas and are characterized by poor infrastructure developments, very limited social services (and therefore low education and literacy levels), susceptibility to natural hazards, poor resource endowments, increasing competition for scarce resources and limited livelihood opportunities. There

has also been a loss of productive assets and increasing household food insecurity due to drought, whereas high population growth and climate change are negatively affecting their resilience capacity and stretching the capacity of local institutions and customary practices to cope with shocks and deal with resource management/sharing.

The pastoralist and agro-pastoral communities of the project areas are known to have complex social relations, are prone to conflicts and are located in the arid and semi-arid regions of the country where the environment is fragile. The main factors that induce conflict include competition over resources. Recurring conflicts between ethnic groups over the use of rangelands has been common phenomenon in most pastoral areas of the country. Pastoral communities have rich customary laws useful for political and social administration of the rangelands and the community. They have developed traditional institutions and networks that have been serving their people for centuries in solving their various economic, social and political matters. The dominant social capital or customary institutions provide social support mechanisms, natural resources management, social security, and conflict resolution systems.

The pastoral and agro- pastoral areas of Ethiopia have rich customary laws that have been used for many centuries for political and social administration of the rangelands and their people. Building on such laws, pastoral communities have developed traditional institutions and networks that have been serving their people in solving their various economic, social and political matters. The dominant social capital or customary institutions involve social support mechanisms, natural resources management systems, social security systems, and conflict resolution systems. The traditional institution is known for its democratic political and social governance rich with different customary laws to administer and manage the range resources and the population. Besides, there are various informal social protection mechanisms. Madda Walabu woreda and Liban woreda there are the system of social security named as Hirpha, Buusaa, Gonnofaa and Dabbaree. These are systems of mutual help for households that have lost their belongings through different shocks.

The Dagu and Liela are other forms of social networking where community members share different information among the Afar and Argoba people. Somali communities tend to live in extended families, sharing resources for basic subsistence. In this region support for needy individuals is either obligatory (religious duty Zakat or clan obligation) or voluntary (helping others out of benevolence). These traditional relationships within the community that entirely depend on kinship ties, marriage relationship and other social obligations were most important social risk sharing mechanisms. In SNNPR an indigenous institution called ‘Denb’ is used to solve conflicts. In Afar and Somali region clan and religion leaders took the main responsibility to end the conflicts through norms and traditional laws.

A lot of researches, reports, conferences and workshops have widely documented and discussed about the growing environmental challenges of pastoral system in Ethiopia. Among the major difficulties the system has been facing is the recurrent drought with its devastating effects on the rangelands, livestock, and the general livelihood of pastoralists. In some areas of the pastoralist communities, on the other hand, floods have been disastrous. In fact, drought being a natural shock that have been occurring in the past, the aggravating factor for drought incidence in Ethiopia has been lack of proper management of the natural resources, and lack of disaster-oriented development strategy and policy in the areas which are prone to such natural shocks like drought.

Pastoralist systems are praised for maintaining the livestock wealth under environmental conditions of risk and uncertainty using traditional adaptation and management strategies. The systems add important value by using the resources effectively. Pastoral communities are quite appreciated for

their indigenous institutions and their management. Before they were weakened by external interventions, they use to serve the purpose of planning, enforcing and managing the rules of resource and land use, mobility and settlement patterns, disaster and risk mitigation, conflict management and resolution. These indigenous institutions and their knowledge bases are valued for its contribution to the very survival of the pastoral system, adaptation, resilience, under difficult ecology and environment conditions. Pastoralists have, over generations, developed a good natural resources and livestock management systems. These practices are governed by complex and interesting local institutions which develop laws and rules that should be obeyed by the community. The knowledge and skill acquired pass to generations through such local institutions. For instance the deep-well water resources management and grass lands conservation, wet and dry season grazing and settlement rules and the institutions in Borana pastoralists in Ethiopia are commonly appreciated, documented and acknowledge.

Mobility is the prime feature that characterizes Pastoralist in Ethiopia. Mobility is the art of rangelands management, and adaptation to temporal and spatial resource dynamics in the system. By moving from place to place between seasons pastoralists effectively utilize resources and maximize the productivity. By moving from place to place searching for water and feed, pastoralists make it possible for year-round livestock supply to market while the highland livestock production systems largely constrained by feed shortages during dry seasons. It is also a way of coping with the risk and variability in resource bases due to weather variations in space. The value-add of mobility of pastoralists may be captured by looking at their contribution to the livestock and product supply during the different months of the year as compared to the relatively immobile highlands livestock agricultural system. For instance, Pastoralist should be recognized for supplying livestock for export markets as well as the domestic beef industry during the year. Unfortunately, there is no adequate database that provides the seasonal/monthly livestock market data differentiated by the lowlands and highlands.

The global climate change and resulting unfavorable weather pattern is also a great worry for the sensitive pastoral ecologies. The increasing population and livestock pressure coupled with the disruption of the traditional management system and alternation of land uses has also lead to significant rangelands degradation. Other major cause of the rangelands degradation and loss of productivity is the impact of bush encroachment that reduced rangelands utility. For instance, an estimate by ILCA (1993) shows area affected by bush encroachment in the Borana rangelands is about 40%. The prevalence of conflicts among the Ethiopian pastoral communities also characterizes Pastoralism. Conflicts largely stem from resource competition where the traditional tolerance, sharing and conflict resolving mechanisms fail to mediate the competition. Not only do conflict lead to disasters that include loss of life and asset, they also contribute to inefficient range lands resource use by hindering the traditional management and mobility. The socio-environmental features of the beneficiary regions are described below.

(a) Afar Regional State

The Afar National Regional State is situated in the North-eastern part of Ethiopia and has an area of about 94,760 square kilometers. This area of the regional state accounts for 8.4% of the area of country Ethiopia. Afar National Regional State is found in the Great Rift Valley System of Ethiopia. It shares borders with Eritrea in the north-east, with Tigrai National Regional State in the north-west; Oromia in the south; Somali Regional State in the south-east; Amhara National Regional State in the west; and with the Republic of Djibouti in the east.

The Afar pastoral community is leading a communal life (using natural resources communally) moving from place to place in search of water and grazing. The life of the people of the region, as indicated in the above indicated study, depends on its animal wealth and the natural resources like grazing and water. However, the animal production and husbandry practice in the region is not properly managed in line with the availability of grazing and water distribution. This poor natural resource management practice has contributed to the degradation of the natural vegetation, the loss of the fertile top soil through wind and water erosion; and intensification of desertification.

The region exhibits a physical feature that is mostly plain and an altitude of less than 1500 meters above sea level, an altitude that further falls from west to east.The lowest point in the Country, Dallol depression that is 126 meters below sea level is found in this region. The lowland areas of Afar are generally below 1600 meters above sea level. The highest peak, mount Mussa-Alle is just 2063 meters above sea level. Climate in this is arid and semi-arid. Temperature o varies from 25°C during the rainy season (September-March) to 48°C during the dry season (March-September). The average annual rainfall registered for 11 years at Dubti station was 187.9mm.

According to the land use study of 2008, about 7.0% of the total area of the region is suitable for crop production; and 22.4% of the total area of the region could be developed for agricultural activity. However, only about 1.2% of the total area of the agricultural potential has been used. The land use study also indicates that about 25.7% of the total area of the region is suitable for grazing purposes. On the other hand, about 70.9% of the region land mass is denuded and devoid of vegetation. In the rainy season that is usually scarce, about 54.9% of this denuded part of the region gets little rainfall. The grasses that are grown as a result of the little rains in this area are used for grazing purposes, though, for a short period of time.

The land use study also shows that there about twelve soil types available in the region; and out of these soils types 49% is sandy and rocky. This has resulted in making 70.9% of the total area of the region unproductive; and only about half of this area is used for grazing for a short period of time during the scanty short rainy season. The climatic condition of the region is mostly hot, desert type and partially dry. As a result, the region exhibits high temperature, and low rainfall that is not distributed uniformly

The Awash River, Mille and Logia which are tributaries of the Awash River traverse the region. Abbe Bil, Afambo and Adebel lakes which are connected to the last section of the river Awash, are found in the region. They form an important habitat for river and Lake Fauna. Salt, Potash, Sulfur, Manganese, Bentonite, Aluminium, Marble, Gypsum and Petroleum are possible major resources of the region. Tendaho geothermal energy is the most promising power source for electricity. The state has also a plausible source for solar energy.

Most of the land in the Afar region is used for grazing. However, some of the land in the Awash Valley is used for irrigation and 150,000 hectares of land is reserved for future development of large-scale irrigation. The Afar pastoralists are suspicious of any externally driven project since previous irrigation developments have displaced them to the surrounding rangelands. Such displacement of the Afar pastoralists has been compounded by the spread of Prosopis spp., from the farms into the surrounding rangelands. This plant originally introduced to stabilize the banks of irrigation channels has now infested about 700,000 hectares

Yagundu-Ras national park and the Dallol depression are some of the tourist attraction sites in the Afar region. Some of the wild animals in the park include Abyssinian wild ass, Grevy's zebra, beisa oryx, crocodiles, lions, grater kudu, wild (bat eared) fox, wild cat, cheetah, Grant's gazelle, and warthog. Besides, Hadar, which is 4.4 million years old humanoid is found in this region.

In Argoba special woreda of Afar region there are tombstones and funeral sites that have unique and vivid artistic engraving and old-age mosques with unique early Islamic architecture. These sites are located in Medina, Gacheni, Sherifoch and Chenokebeles of the woreda. Similarly in Mesgido Kebele of Chefra Woreda, a Mosque established in 1880 by Haji Amin Kebir has remained a center of religious festive and prayer.

Afar pastoralist livelihoods systems are becoming increasingly vulnerable. Human populations are rising, the climate is changing, and international markets are setting ever-higher barriers for access. Infrastructure is poorly developed; education and literacy levels remain very low and competition for scarce resources is increasing. At present the pastoral population of Afar is faced with the following challenges:

- Loss of productive assets (livestock/farming/irrigated land) due to drought, floods, disease and theft of livestock
- Declining sustainability as livestock holdings decrease and the human population grow
- Declining livestock and agricultural productivity due to poor husbandry practices
- Environmental degradation and deterioration of natural resources to the point that production may decline below recovery levels
- Breakdown of traditional institutions and social relations
- Inability to access markets and achieves maximum prices for livestock products
- Low socio-economic empowerment of women and youth
- Geographical isolation due to lack of infrastructure, communications and basic services
- Increasing impoverishment of communities and households.

(b) Somali Regional State

The State of Somali has a very large area size ranking second next to Oromia At present the state comprises 9 administrative zones and 49 woredas. This Region is located in the eastern and south eastern part of Ethiopia. The State has common boundaries with Afar and the Republic of Djibouti in the north, Kenya in the south, the State of Oromia in the west, and Somalia in the east and in the South. It has an estimated area of about 250,000 square kilometers.

Somali Region has Region is the largest pastoral area of all the regions. The Regional Disaster Prevention and Preparedness Bureau (DPPB) of the Somali State divide the region into 17 ‘food economy zones’. Of these, eight are categorized as ‘pastoralist’ and six are ‘agro-pastoralist’ and three are agricultural zone. Most of the people of the state of Somali mainly earn their livelihood by rearing livestock. Some people in the region also practice crop production as well. The major crops cultivated in the region are sorghum and maize. Wheat and barley are also harvested in a smaller amount each year. Commercial activity is another occupation that is significantly exercised in the region.

The majority of the region has an altitude of 900 meters above sea level and in some areas the altitude reaches 1600 meters. Of the total area size of the State approximately 80% is flat & 7% mountainous. Regarding climate, 80% of the region is classified as "Kolla" (lowlands), 5% highland ("Dega"), and 15% of the area fall under temperate ("Woyna Dega") category. The maximum temperature reaches 32-40°C. In the temperate ("Woyna Dega") areas the temperature is within 20-28°C. The mean annual rainfall of the State is estimated to be 300-500 mm.

The topography, agro climatic and agro-ecology of Somali Region similar to that of Afar except that in Somali Regional State, land is relatively fertile and water availability is not scarce compared to Afar. Similar to Afar region most of Somali Region is arid and semi but unlike Afar Somali region have many rivers (Wabeshebele, Genale and Weybe Rivers) that can be harnessed to expand irrigation

and sustainably produce food crops to pastoral and agro-pastoral communities of the region. The state of Somali is known for its livestock resources from which most of the Somali people earn their livelihood. The region is estimated to have about 15.2 million domestic animals out of which sheep constitute 53%. Goats and cattle are the second and third most important domestic animals in the region accounting for 20% and 15% respectively. Camels are actually the most important animals in day to day life of Somali pastoralists, and they constituted about 9% of the livestock.

(c) Oromia Regional State

Oromia Regional State consists of 12 administrative zones and 180 woredas. The region borders Afar, Amhara and the State of Benshangul/Gumuz in the north, Kenya in the south, Somali Regional State in the east, the Republic of the Sudan and the state of Benishangul/ gumuz in the west, the State of Southern Nations, Nationalities and Peoples' and the state of Gambella in the south..

Oromia is a region of great physiographic diversity. Its landscape includes high and rugged mountain ranges, undulating plateaus, panoramic gorges and deep incised river valleys, and rolling plains. Mt. Batu 4607 high is the highest peak of the region. Oromia is endowed with varied relief features which in turn accentuate varied climatic condition and other rich natural resource bases. The climatic types prevailing in the region may be grouped into three major categories: the dry climate, tropical rainy climate and temperate rainy climate. The dry climate is characterized by poor sparse vegetation with annual mean temperature of 27°Cto 39°C, and mean annual rainfall of less than 450 mm. The hot semi-arid climate with annual temperature varying between 18°Cand 27°C is area of pastoralist and agro- pastoralists where the proposed project is planned to be implemented. It has a mean annual rainfall of 410-820 mm with noticeable variability from year to year.

Awash, Wabe-Shebele, Genale, Gibe, Baro, Dedessa and Guder are major rivers in the region. The crater lakes such as Green Lake, Bishoftu, Kuriftu, Bishoftu-Gudo, Hora-Kilole, Horsa Arsedi, and the rift-valley lakes of Ziway, Abiyata, Shala, and Langano are found in this region. They have immense potential for recreation and fishery development.

Oromia is also rich in wild animals. There are around 800 bird species and more than 100 wild animals in the region. Endemic wild animals such as Red Fox and Menelik Bushbuck are found in the Bale mountains national park. The Awash National Park is home to the Oryx, Kudu, Caracal, Aardavark, Colobus Monkey, Green Monkeys, Baboons, Leopard, Klipspringer, Hippo, Seemering's

Gazelle, Grevy's Zebra and Cheetah. The Awash National Park has also bird sanctuary some of which include Limburger, Wattle Crane, Anger Buzzard, Verreaux Eagle and long eared owls. Water Fowls, Shore Birds and the colorful Ruddy Shelled Duck as well as the endemic Blue-winged Goose are common in the marshy areas of the park.

The hot springs in Walliso and Sodere (about 114 km south west and east of the capital respectively) are popular attraction sites for tourists. The Sof-Omar caves in central Bale, with their galleries of polished white cone and chamber of columns are the incredible natural phenomena of great interest and beauty. The palace of Aba Jifar in Jimma is another historical attraction in the region. Two project Woredas of Oromia region are endowed with different tangible and intangible cultural resources. Madda Walabu woreda Madda village (inhabited by an agro- pastoral community) where LLRP is planned to be implemented has significant importance in history of Oromo people. Traditionally, it is believed to be the home and origin of Oromo people. It has thus been serving as a center of the Oromo traditional governance. The place has also served as the center of Gumiigayyoo and the seat for a number of abbaagadaas and abbaamuuda (spiritual leaders) at the time. Even if the Islamic religion is

expanding and dominating the area, still today the same ritual and gadaa ceremonies are held annually by all Oromo people from the whole of Borana and Arsi rangeland in this village.

Karjul is another sacred and religious place found in MaddaWalabu at 33 kms west of Bidire town. Karjul is equivalent to the monastery and religious place of Shek Hussein in eastern part of Bale administrative zone. In addition to these historical physical resources, the natural bridge under the Welmal Falls is a wonderful site for its aesthetic value. In Liben woreda, there are 16 different sacred places where the gadaa ceremonies take place. These places are located in 10 different kebeles. They are believed to be sacred and thus protected from any intrusion by customary law. In addition to these places, there are a number of natural and cultural sites including waterfalls, elephant sanctuaries, natural caves and endemic birds. In these woredas there are also historically underserved groups having their own boundary, language, identity, unique culture and practices. These groups are undeserved, very vulnerable and some groups are out casted. The above-mentioned groups in these Woredas are different from the wider communities because they are minorities and historically disadvantaged groups.

Agriculture is the basis of livelihood for the majority of the population in the region. The region is also endowed with livestock resources, although quality and productivity is very low. Traditional range management practices have deteriorated, and development in the water sector for various purposes has led to the degradation of some wet season grazing areas. Grazing land has been taken away from pastoralists for irrigation and for resettlement. Bush encroachment to the grazing lands is also a serious problem the naturalist and agro pastoralist is currently facing threatening their livelihood.

(d) SNNP Regional State

The State of Southern Nations, Nationalities and Peoples' comprise 10% of the total area of the country that is administratively divided in to 9 zones, 72 woredas and 5 special woredas. There is a total of 77 woredas and 149 towns in the State. The rural part of the State had 3804 farmers' association at the time of the 1994 census. The State lies in the southern part of the country. It has common borders with Kenya in the south, the Republic of the Sudan in the South west, the State of Gambella Peoples' in the North West, and the State of Oromia in the North and East. The rural population of the Region accounts to about 93.2% of the total population. North Omo, Sideman, and Garage are the three zones with the highest number of populations. The population is concentrated mostly in eastern, northern and central part of the Region while the western and southern part of the State is sparsely populated. There are about 45 ethnic groups in the Region. Sidamigna Gruagigna,Wolayitagna, Hadiyigna, Keffigna,and Kembatigna are widely spoken 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.

The mean annual rainfall ranges from 500 - 2,200 mm. Its intensity, duration and amount increase from South to Northeast and Northwest. The mean annual temperature in general ranges from 15°C to 30°C.

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. 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. 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.

(e) Gambella Regional State

Gambella National Regional State has three administrative zones and 13 weredas. The three zones in this region are Anyuak zone, Mejeng Zone and the Nuer Zone. Gambella National Regional State is one of the 11 administrative regions. It is located in the south-western part of Ethiopia and borders with two other regions namely; Oromia to the North and east and the Southern Nations, Nationalities and Peoples' Regional State (SNNPRS) to the South Sudan and d north Sudan to the west. Wild animals such as Gosh, monkey, elephants and *Bekeken* are available in the region.

The Gambella economy depends largely on farming, fishing, animal rearing and mineral resources. Most people in Gambella earn their living by producing crops. Foreign investors such as Karuturi Global are also producing crops for commercial purposes. Most farmers in Gambela grow maize but few grow sorghum along the Gilo and Baro rivers. Farmers sell some of their produces and transport them to urban markets in exchange for cash. Livestock rearing is predominantly practiced in Akobo, Jikawo, Lare, Mattaar, and Wanthoa weredas and some farmers in Gog, Jor and Abobo weredas also practice animal rearing.

Farmers in Gambella used to have cattle in huge number. But y the number of cattle has gradually been declining due to shortage of animal fodder during dry season. Another important factor are the Mure cattle rustlers of South Sudan who from time to time are crosses border to Ethiopia and violently confiscate cattle while indiscriminately killing owners. Gambella is rich in minerals some of which are yet to be extracted. An open pit and alluvial gold mine have been in existence for decades in Dimma wereda. The Dimma gold mines continue to provide invaluable income to the people of Gambella as well as miners from Southern Nations Nationalities and People's State. Oil field has also been explored.

Gambella is rich in water resources. Major rivers in the region include Akobo, Baro and Gilo Rivers in addition to numerous tributaries and lakes. Fishing in this region becomes a vital source of income to many people in Gambella. The Lake Tata in Gog attracts many fisher men in Gambella. Similarly, the lakes in Gilo sub-basin particularly Tata Lake and Gilo River are rich in fishery resources and the livelihood of the communities in this sub-basin depends on fishing. However, the fish resources in the area are gradually diminishing due to over fishing using small size nets.

Gambella Region is endowed with abundant water resources. But it is not properly used to to improve the livelihood of the people of Gambella Region. Similar to Oromia region Gambella Regional State has abundant land and Water resource that can be harnessed to improve the livelihood of the community in region general and the pastoral and agro pastoral community in the lowlands in particular. However, these resources could not be easily accessed and sustainably exploited to improve the livelihood of the pastoralist and agro-pastoralist due to lack of adequate in road infrastructure. Gilo River is the home for different fish species that supports the communities residing along the river as a source of food to the community and also generation additional income by selling fish to the people in other towns. Some of the common fish species in Gilo River and other water bodies of Gambella Barbus, catfish, Nile perch, electric fish and other types of fish locally known as Gur, Jer, ulwok, Oguwela, Udella, Uret, Puro, Ukura, Chuwo, Abali, Ukok, Aduwere, and Apido.

The two important lakes in the sub basin are “Bishan waka” which is in the upper Gilo sub basin in Mengeshi district of Mejengir zone and “Tata Lake in the lower sub basin of Gog district of the Agnya zone. Fish production capacity of Tata Lake is very significant and fishing is the daily activity of the communities near and around the lake. Farming by the side of Gilo River banks is common among Agnua people. But they do not normally produce sufficient crops and they always look for alternative sources of income. Fish resources in the region is abundant and can support the population of the Gambella Region if technical back up is provided to harness these resources in a sustainable manner.

(f) Benishangul Gumuz Regional State

Benishangul-Gumuz (BSG) is located in the north western part of the country. Benishangul-Gumuz region is sub divided in three zones and twenty one woreda administrations i.e. Kemashi zone (5 woredas), Assosa zone (9 woredas) and Metekle zone (7 woredas). The ethnic groups include Berta, Amhara, Gumuz, Oromo), Shinasha and Agaw-Awi . Main languages are the Berta, Amharic, Gumuz, Oromo, Shinasha and Awngi. 44.98% of the population is Muslim, 33.3% Orthodox Christians, 13.53% Protestant, and 7.09% practice traditional beliefs. The economic activities in the region are predominantly agricultural with livestock being of limited importance. Although there is high potential for agricultural development, traditional farming practices and inadequate involvement of women in all aspects of development compounded with other factors have considerably affected the performance of the region’s agricultural production and productivity. Subsequently, abundant rural households have been subjected to food deficit and challenges in feeding their family. Besides agriculture, other means of livelihood are trade and traditional gold-washing in some rivers.

Even though there were inspiring developments there is still inadequate infrastructure and logistical constraints in terms of transportation and communication. The limited development of infrastructure is reflected in the region's healthcare, and education system among other social services. Unemployment, lack of knowledge and access to alternative on-farm and non-farm income generating opportunities, poor access to improved health services and limited social and economic infrastructure, broadening the vulnerability of rural households in general and women headed households in particular. In general, chronic food insecurity has remained a critical development challenge for the region for many decades.

Benishangul Gumuz is one of the nine regional states in Ethiopia, located in the most western section of the country bordering Sudan. The region is endowed with fertile land suitable for high value crops, livestock, apiculture, fishery, minerals like gold and marble, and economically important trees like bamboo and incense. Livestock production is important means of livelihood in the region next to crop production. It is important sources of food, cash income, and assets to buffer against shocks. The people of Benishangul Gumuz practice mixed farming system, involving both crop production and livestock rearing activities. According to the Central Statistical Authority (CSA) 2007) report the region had about 0.4 million cattle, 0.3 million goats, 0.1 million sheep, and nearly one million poultry.

The five largest ethnic groups in Benishangul-Gumuz are the Berta (27%), Gumuz (23%), Amhara (22%), Oromo (13%) and Shinasha (7%). Berta is spoken in the Sherkole woreda and Gumuz is spoken along the western boundary of Guba and Dangur woredas and in the Sirba Abbay woreda. About 44.1% of inhabitants in this Region are Muslim, 34.8% Orthodox Christians, 13.1% traditional religions and 5.8% Protestants.

The Gumuz practice shifting cultivation and their staple food is sorghum. The Gumuz also hunt wild animals, such as duikers and warthogs, and gather honey, wild fruits, roots and seeds. Gumuz clan are

organized in clans and dispute between clans are usually resolved by means of customary institutions called mangema. Hunting as source of food supply are common practices among the Gumuz community. There are two refugee camps and 1 transit center hosting 36,440 refugees from Sudan and South Sudan.

About 77.4 percent of the region's land mass is bushes and shrubs land and 11.4 percent of forest land. Cultivated land and grazing land constitutes about 5.3 percent, 3.2 percent and 2.3 percent, respectively. The vegetation in this region can be classified into eight types, namely: dense forest, riverine forest, broad-leaved deciduous wood lands, acacia woodland, bush land, shrub lands, Boswellia wood land and bamboo thickets (INBAR, 2010). About 0.2 percent of the total land of the region is covered with vegetation. Evidences in the region revealed that the lowland bamboo forest grows between 1000 and 1800 m.a.s.l and on poor soil in dry vegetation formation). Bamboo tree grow in s poor rocky soil with erratic annual rainfall of up to about 600 mm and in high temperature of about e 35°C. The highland bamboo grows in altitudes from 2.200 -3.500 m.a.s.l and the lowland bamboo between 700-1800 m.a.s.l,

The region is rich in minerals such as blue-marble found in Gumuz area. The region is gaining importance due to the ongoing construction of the he Grnad Renaissance Dam aimed to alleviate the power shortage of the country and its neighbors such as Sudan and Djibouti. Gold mining is common in Gumuz area. This is because of their access to areas which are rich in alluvial gold. Environmental and natural resource degradation is the major concern in this region consequently affecting the livelihoods of the people. The problem of deforestation, particularly bamboo degradation is serious problem in Benishangul Gumuz region. A significant decline in lowland bamboo is mainly associated with human interference. The forest cover change was induced by factors such as traditional agricultural production system, improper grazing system, illegal logging and wild fire.

5. Environmental and Social Impacts & Mitigation Measures

LLRP is designed to operate in pastoral and agro pastoral areas of the country where internal conflicts were more or less prevalent. Moreover, the likelihood of the project activities being affected by conflict might also increase in association with expansion of interventions to all pastoral and agro-pastoral areas of the country. The crossing of physical boundaries by one pastoral community in search of pasture and water is a recurrent source of conflict. Even though these conflicts might not deter implementation of project activities, they may cause delays. The other sources of risks might be associated with the dynamic social, economic and environmental changes taking place in LLRP implementation areas. There will be changes in livelihood pattern and social norms in the pastoral areas that came along with various interventions undertaken in the areas by this project. The causes of the change include, among others, investment initiatives taken by public and private sectors and exogenous factors like climate change. Below is the summary of potential social and environmental impacts associated with implementation of LLRP components.

5.1 Positive impacts

It is expected that LLRP will be beneficial to communities and the environment since environmentally and socially sound natural resource management activities (including rangeland), small scale and micro irrigation water resource development and management, water development for rural water supply and for livestock, market center development, livelihood development, pasture rehabilitation

and incorporation of forage crops into pastures; development and compliance with grazing land management rules will be implemented.

The LLRP is expected to have the following positive impacts:

- Infrastructure facilities are to be shared by different ethnic groups and this can help achieve peace among the ethnic groups in the pastoral and agro-pastoral communities by increasing interaction and fostering cooperation;
- The sub projects will create better and hygienic environment in trading livestock and livestock products;
- The subprojects will bring about employment opportunities for people in the community;
- The construction of micro- dams will provide sources of water for the pastoral communities which in the long run can bring change in lifestyle from pastoral to sedentary agriculture;
- The cattle markets once constructed will be sources of income for the local governments through collection of fees;
- The projects planned to support appropriate alternative income generating enterprises for the households will bring e positive impact in terms of socio- economic empowerment of the households and in creating food security at household level;
- Training of local veterinary staff, Community Animal Health Workers (CAHWs), local leaders, and overall veterinary staff will enhance skills for livestock health management in the communities. Therefore, the capacity building in the project will help to develop skill for modern agriculture in the districts and the communities for better delivery of services and social and economic transformation;
- The project areas will have better information on the status of the natural resources especially on range lands which will help pastoralists adapt to changing and harsh climatic risks there by minimize loss of livestock;
- The new facilities including water points, markets, and rehabilitation of rangelands will improve their pastoral livelihoods and access to market;
- Distribution of drought tolerant crops will help overcome repeated famine frequently occurring in the pastoral and agro-pastoral communities. The community in the project area will be benefited from the extension services aimed to realize sustainable food production;
- Conflict management with particular focus on cross-border issues is likely to promote peaceful coexistence that has existed amongst pastoral communities in the project area;
- Upgrading of existing regional veterinary laboratories will further improve delivery of veterinary services and better management of disease in the project area;
- The project will put in place better pesticide management facilities which will assist environment from pollution due to the use of agrochemicals;

5.2 Negative impacts and mitigation measures

Notwithstanding to its positive impacts, LLRP can also have potential negative impacts which in fact most of them are site-specific and reversible in nature. These impacts will be minimized by incorporating mitigation measures. The following environmental aspects highlight those potential impacts likely to occur, prior to mitigation: (i) water source development in arid and semi-arid areas, like for example in the case of Afar and Somali regions, results unmanaged in-flux of livestock that can cause overgrazing with irreversible ecological consequences. Moreover, because of the critical water supply shortage, development of a new water supply scheme could be source of conflict among the water users, (ii) water quality could also be an issue because of possible anthropogenic and natural

contamination of drinking water sources, (iii) possible over discharging coupled with the recurrent drought in most of the project areas could cause possible groundwater depletion and malfunctioning of pumps, (iv) invasion of the grassing land by an invasive plant species called prosopis in some project participating regions, and (v) chemical management in animal laboratories, veterinary and health posts. Environmental issues in livestock productions can also among other things include greenhouse gas emissions, hazardous materials management, ecological impacts and animal diseases. Besides, possible introduction of exotic/invasive species and genetic materials; safety issues due to increased use of livestock pesticides, drugs, vaccines & other chemicals, ex. disposal of animal drugs, pesticides, fertilizers and their packing materials; potential impact on biodiversity, mainly as a result of expansion of pasture and farm lands at the expense of forests, introduction of new breed, species of crops, seeds or animals may have adverse and significant environmental impacts; OHS hazards such as disease transmission during animal dips and in the veterinary laboratories (ex: Anthrax); competition over land, water and pasture (intra and inter woredas),; antibiotic resistance from poor management of livestock drugs; use of hazardous laboratory chemicals in animal health services; handling and disposal of obsolete chemicals, medical wastes, possible failures of small dam structures, etc. are also among the potential environmental and social concerns as part of implementation of the LLRP.

The overall potential negative impacts are expected to be site-specific and reversible. These impacts will be minimized by incorporating the required mitigation measures. The potential negative impacts and mitigation measures are also summarized in the table below.

The complementary Social Assessment has a dedicated section and analysis on issues Gender-based violence (GBV) and sexual abuse and violence including a dedicated grievance redress mechanism. Further, there is also a detail analysis of the conflict situation and drivers of such conflicts in the pastoral and agropastoral areas. Mitigation measures for such potential issues, risk and impacts is included in the Social Development Plan.

Table 2: Potential Mitigation Measures

No	Potential negative impacts	Mitigation Measures	When	Responsible unit
1	**Ecological Impacts** Livestock with access to, rivers, and other natural water sources may cause environmental damage by contaminating the water with animal waste, destroying riparian habitat, and eroding the stream banks. In addition, overgrazing may contribute to soil losses because of severe erosion, and a reduction	Prevent animals' access to surface water bodies using fences, buffer strips or other physical barriers; Prevent overgrazing of pastureland through use of rotational grazing systems based on seasonal and local ecosystem resilience (e.g. riparian zones) and se of livestock trails to reduce soil trampling and gully formation / erosion near streams Ensure that any natural or modified habitat to be	Throughout the project cycle	Project implementation units from federal to operational level

	in soil productivity caused by alteration of the vegetation composition and associated organisms in rangelands.	converted to livestock production does not contain critical habitat, including known habitat of critically endangered or endangered species, or important wildlife breeding, feeding, and staging areas; Check of the presence of critically endangered or endangered species in the areas already used for livestock production and consider them during management processes; Provide for minimum disturbance to surrounding areas when managing livestock.		
2	Environmental and human health impacts of insecticides. Pesticides may be applied directly to livestock or to structures (e.g. barns and housing units) and to control pests (e.g. parasites and vectors) using dipping vats, sprayers, and foggers. Pesticides can also be used to control predators. The potential pollutants from pesticides include the active and inert ingredients, diluents, and persistent degradation products. Pesticides and their degradation products may enter ground water and surface water in solution, in emulsion, or bound to soil particles. Pesticides may, in some instances, impair the	If pesticides are used, identify in the IPM plan the need for the pesticide and evaluate their effectiveness, as well as potential environmental impacts, to ensure that the pesticide with the least adverse impact is selected (e.g. non-leachable pesticides). Train beneficiaries to apply pesticides according to planned procedures, while using the necessary protective clothing. Where feasible or required, pesticide application personnel should be certified for this purpose Review the manufacturer's instructions on the maximum recommended dosage and treatment, as well as published experiences on the reduced rate of pesticide applications without loss of effect, and apply the	Before the implementation of subprojects necessitating application of pesticides and throughout the project cycle	Project implementation units from federal to operational level

	uses of surface waters and groundwater. Some pesticides are suspected or known to cause chronic or acute health hazards for humans as well as adverse ecological impacts	minimum effective dose Avoid the use of pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Classes 1a and 1b Avoid the use of pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Class II if the project host country lacks restrictions on distribution and use of these chemicals, or if they are likely to be accessible to personnel without proper training, equipment, and facilities to handle, store, apply, and dispose of these products properly Avoid the use of pesticides listed in annexes A and B of the Stockholm Convention, except under the conditions noted in the convention; Use only pesticides that are manufactured under license and registered and approved by the appropriate authority and in accordance with FAO's International Code of Conduct on the Distribution and Use of Pesticides; Use mechanical controls (e.g. traps, barriers, light, and sound) to kill, relocate, or repel pests; Use predators to control pests. Protect natural enemies of pests by providing a favorable		

		habitat (e.g. bushes for nesting sites and other indigenous vegetation) that can house pest predators; Use only pesticides that are labeled in accordance with international standards and norms, such as the FAO's Revised Guidelines for Good Labeling Practice for Pesticides; Select application technologies and practices designed to reduce unintentional drift or runoff, only as indicated in an IPM program, and under controlled conditions Maintain and calibrate pesticide application equipment in accordance with the manufacturer's recommendations; Store pesticides in their original packaging, and in a dedicated location that can be locked and properly identified with signs, with access limited to authorized persons. No human or animal food should be stored in this location Mixing and transfer of pesticides should be undertaken by trained personnel in ventilated and well-lit areas, using containers designed and dedicated for this purpose Used pesticide containers should not be used for any other purpose (e.g. drinking water) and should be managed as a hazardous waste Disposal of containers contaminated with		

		pesticides also should be done in a manner consistent with FAO guidelines and with manufacturer's directions Purchase and store no more pesticide than needed and rotate stock using a "first-in, first-out" principle so that pesticides do not become obsolete. Additionally, the use of obsolete pesticides should be avoided under all circumstances; A management plan that include measures for the containment, storage and ultimate destruction of all obsolete stocks should be prepared in accordance to guidelines by FAO and consistent with country commitments under the Stockholm, Rotterdam and Basel Conventions Maintain records of pesticide use and effectiveness.		
3	**Animal disease** Disease causing agents can spread rapidly, especially in intensive livestock operations. Animal diseases can enter a facility with new animals, on equipment, and on people.	Identify and segregate sick animals and develop management procedures for adequate removal and disposal of dead animals. Control farm animals, equipment, personnel, and wild or domestic animals entering the animal production sites (e.g. quarantine periods for new animals, washing and disinfecting crates, disinfection and coverage of shoes before entry into bird housing zones, providing protective clothing to personnel, and	Throughout the project cycle	Project implementation units from federal to operational level

		closing holes in buildings to keep out wild animals); Sanitize animal housing areas;		
4	**Air Emissions** Air emissions from animal production include ammonia (e.g. management of animal waste), methane and nitrous oxide (e.g. animal feeding and waste management), odors (e.g. animal housing and waste management), bioaerosols, and dust (e.g. feed storage, loading, and unloading, feeding, and waste management activities) Ammonia gas (NH3) has a sharp and pungent odor can act as an irritant when present in high enough concentrations. Ammonia gas deposition into surface waters may contribute to their euthrophication. Release of ammonia gas also reduces the nitrogen content and, therefore, the fertilizer value of the manure. The livestock account for 9 percent of anthropogenic CO2 emissions (mostly from deforestation / land use changes for grazing and pasture for feed crops), 37 percent of anthropogenic methane emissions, mostly from	**Ammonia and Odor** Consider the siting of new facilities taking into account distances to neighbors and the propagation of odors; Control the temperature, humidity, and other environmental factors of manure storage to reduce emissions; Consider composting of manure to reduce odor emissions; Reduce emissions and odors during land application activities by applying a few centimeters below the soil surface and by selecting favorable weather conditions (e.g. wind blowing away from inhabited areas); Green House Gases Improve the productivity and efficiency of livestock production (thus lowering the methane emissions per unit of livestock) through improvements in nutrition and genetics (which is already planned under LLRP); Supplement livestock diets with nutrients, as necessary (e.g. increasing the level of starch and rapidly fermentable carbohydrates, use of urea supplements). Production of feed supplements, may also, however, result in	Throughout the project cycle	Project implementation units from federal to operational level

	enteric fermentation by ruminants, and 65 percent of anthropogenic nitrous oxide emissions, the majority of which from manure. Methane has 23 times the global warming potential (GWP) of CO2, while nitrous oxide has 296 times the GWP of CO2. Methane can also be produced from microbial action in manure. Air emissions from poultry production include primarily ammonia (e.g. management of animal waste), odors (e.g. animal housing and waste management), and dust (e.g. feed storage, loading and unloading, and waste management activities). There could also be odor production during poultry processing[6]. Major process odor sources include scalding, live bird handling, wastewater treatment, and rendering. Other sources of odors include by-products, blood collection tanks, manure piles, and fat traps.	production of GHGs. Increase the carbon to nitrogen ratio in feeds to reduce methane and nitrous oxide production; Implement balanced feeding (e.g. optimizing proteins and amino acids to correspond to requirements of animal groups) Consider various techniques to manage methane emissions from manure including controlled anaerobic digestion (to produce biogas), flaring / burning, use of biofilters, composting, and aerobic treatment. Use of anaerobic digestion may also reduce emissions of nitrous oxide; Minimize the amount of manure production through the implementation of animal waste management approaches; Control the temperature, humidity, and other environmental factors of manure storage to reduce methane and nitrous oxide emissions. This may involve use of closed storage tanks or maintaining the integrity of the crust on open manure storage ponds / lagoons. Implement pasture / grazing management techniques to reduce nitrous oxide and methane emissions, including not overstocking		

[6] https://www.ifc.org/wps/wcm/connect/2abd40004885549bb38cf36a6515bb18/Final%2B-%2BPoultry%2BProcessing.pdf?MOD=AJPERES

		pastures, avoiding late fall and winter grazing, improving soil drainage, and avoiding soil compaction from grazing to maintain the anaerobicicity of the soil. **Dust** Install dust-collection systems at dusty operations, such as feed grinding; Prevent overgrazing of pastureland; Implement fugitive-dust-control measures, such as wetting frequently traveled dirt roads, as necessary.		
5	Environmental pollution by vaccine and drug waste products (expired vaccine/drugs, vaccine containers, vials, etc)	• Improve procurement (expiry dates), transportation, storages, handling and disposal of drugs and vaccines • Preparation and implementation integrated vaccine and drug waste management plans	Throughout the project cycle	Project implementation units from federal to operational level
6	Environmental and human health effects of laboratory chemicals and reagents	Have a plan in place for the use, handling, storage and disposal of hazardous materials and waste; Maintain an inventory of the types and locations of hazardous materials and waste; Each laboratory need to have health and occupational safety guideline; Have safety requirements in place for the handling, storage, and response to spills or exposures; Clearly segregate and label hazardous materials and waste; Treat and dispose hazardous materials and	Throughout the project cycle	Project implementation units from federal to operational level

		waste in accordance with applicable laws and procedures		
7	Occupational Health and Safety Hazards Exposure to physical hazards; Exposure to chemical hazards from disinfecting agents, antibiotic, hormonal products to control parasite; Exposure to biological agents (bacteria, fungi, mites, and viruses transmitted from live animals, manure, animal carcasses, and parasites and ticks).	Instruct in correct livestock care, to reduce the incidence of bites and kicks; Avoid and control exposure to any pesticide/chemicals; Train beneficiaries that apply chemicals/pesticide; Inform beneficiaries of potential risks of exposure to biological agents and provide training in recognizing and mitigating those risks; personal protective equipment to reduce contact with materials potentially containing pathogens.	Throughout the project cycle	Project implementation units from federal to operational level
8	Solid Waste Solid waste includes waste feed, animal waste, and carcasses. Other wastes include various kinds of packaging (e.g. for feed and pesticides), used ventilation filters, unused / spoilt medications, used cleaning materials, and sludges from wastewater treatment if present (which may contain residual amounts of growth enhancers and antibiotics, among other hazardous constituents). Waste feed, including additives, may contribute to the contamination of storm water runoff, primarily because of its organic	Consider mixing of waste feed with other recyclable materials destined for use as fertilizer, or else consider incineration or land disposal options, based on an assessment of potential impacts of each option to air, soils, and surface water / groundwater. Implement a comprehensive nutrient and waste management plan that takes into account the potentially harmful constituents of this waste including potential phytotoxicity levels, potential concentration of hazardous substances in soils and vegetation, as well as nutrient limits and groundwater pollutant limits; Observe internationally	Throughout the project cycle	Project implementation units from federal to operational level

	matter content. Manure contains nitrogen, phosphorus, and other excreted substances which may result in air emissions of ammonia and other gases and may pose a potential risk of contamination to surface or groundwater resources through leaching and runoff. Manure also contains disease-causing agents such as bacteria, pathogens, viruses, parasites, and prions which may also potentially affect soil, water, and plant resources (for human livestock, or wildlife consumption).	recognized guidance, such as that published by FAO, on land requirements for livestock production for livestock units (LU) per hectare (ha) to ensure an appropriate amount of land for manure deposition; Match feed content to the specific nutritional requirements of the animals in their different production and growth stages; Grind feed to increase utilization efficiency by the animals, allowing the use of less feed and thereby reducing the amount of manure generated (as well as increasing the production efficiency); Use low-phosphorus diets with highly digestible inorganic phosphates; Use quality, uncontaminated feed materials that contain no more copper, zinc, and other additives than is necessary for animal health; Ensure production and manure storage facilities are constructed to prevent urine and manure contamination of surface water and groundwater (e.g. use concrete floors collect liquid effluent from pens, and use roof gutters on buildings to collect and divert clean storm water) Keep waste as dry as possible by scraping wastes instead of, or in addition, to flushing with water to remove waste; Minimize the surface area		

		of manure in storage; Locate manure stacks away from water bodies, floodplains, wellhead fields; or other sensitive habitats; For feedlots, ensure that solid waste (e.g. bedding and muck) is gathered regularly and is not permitted to lie on the ground for long periods of time; Conduct manure spread only as part of well-planned strategy that considers potential risks to health and the environmental due to the presence of chemical and biological agents as well as nutrient balance in an agricultural setting. Ensure that manure is applied to agricultural land only during periods that are appropriate for its use as plant nutrient (generally just before the start of the growing season); Manure storage facilities should have capacity for 9–12 months of manure production or as necessary to avoid over application; Design, construct, operate, and maintain waste management and storage facilities to contain all manure, litter, and process wastewater including runoff and direct precipitation; Reduce mortalities through proper animal care and disease prevention; Collect carcasses on a regular basis to prevent putrefaction;		

		Compost only disease-free carcasses and ensure that the composting process is managed to prevent leachate and odors (e.g. sufficient cover material, proper temperature and moisture content); Use reliable commercially available options approved by local authorities that dispose of carcasses by rendering or Reduce mortalities through proper animal care and disease prevention;		
9	Biodiversity erosion mainly because of expansion of pasture lands at the expense of forests and other land use types	Avail adequate livestock feeds to prevent overgrazing Adopt rotated grazing activities Afforestation programs to compensate degradation	Throughout the project cycle	Project implementation units from federal to operational level
10	Forced labor, child labor and poor safety and health measures	Awareness creation about legal implications of forced and child labor, importance of child education, women participation	Throughout the project cycle	Project implementation units from federal to operational level
11	Competition over water and pasture aggravated by absence of feeds with good quality	Establishing communal bylaw	Throughout the project cycle	Project implementation units from federal to operational level
12	During construction loss of vegetative habitats will occur, while physical site disturbance and noise from construction activities will cause the temporary displacement of most fauna from the vicinity of the construction site and adjacent areas.	Site selection to avoid sites of nature conservation value ensuring adequate survey of flora and fauna of the proposed infrastructure location and surrounding area and include consideration of potential impacts from new access roads. Good site design and good management during construction to minimize	Throughout the project cycle	Project implementation units from federal to operational level

		pollution potential. Provision of wildlife corridors and buffer zones		
13	Impact on cultural and historical places (protected areas, religious sites, traditional places, archeological and historical sites – old buildings and houses, graveyards, religiously enclosed areas, religious leaders houses)	Cognizance must be taken of any cultural resources or artefacts within close proximity of a proposed infrastructure site Reference should be made to the results of social assessment document of LLP and public consultation findings to be conducted for each infrastructure	Throughout the project cycle	Project implementation units from federal to operational level
14	Marginalization of the poor, landless, minority groups, women, old and youth	Improve access to critical inputs for poor and landless farmers Refer to the social assessment findings so as to identify potentially marginalized groups during beneficiary selection at each Woreda	Before the implementation of the subprojects	Project implementation units from federal to operational level
15	Potential impacts in relation to construction of small/micro dams	Strictly follow and apply the small dam safety guidelines, please refer annex 12 of this ESMF; and as well the Ethiopian Environmental and Social Impact Assessment Guidelines for Dams and Reservoirs, 2004	Starting from its planning stage to decommissioning of the subprojects	Contractors, consultants and implementing entities at all levels

6. ESMF Implementation and Monitoring Process

The ESMF process is consistent with the applicable national Environmental assessment procedures and the World Bank safeguard policies. The type and location of the sub-projects are not identified at ESMF preparation stage and their impacts cannot be fully determined until project planning is started. Therefore, each sub-project and business plan should pass through environmental and social screening process to identify project specific and site-specific impacts, the sub-project category and the level and type of environmental and social work required for avoiding minimizing and compensating for adverse impacts.

6.1 Subproject Screening and Approval Process

The objective is to assess any potential safeguard issues early in the design and preparation process and classify the sub-projects either as B or C, depending on the level and nature of potential detrimental environmental and social impacts. The screening of LLRP subprojects will be conducted by completing the designated subproject screening checklist as indicated in Table 3 below & in Annex 1, and 2.

Step 1: Sub-project Identification

The initial step will be sub-project or business plan identification. Sub-projects and business plans will be identified by the beneficiaries at community and Kebele level for those sub-projects that will be implemented at the kebele and woreda level and by the Regional Coordination Office for the capital-intensive investment projects that will be implemented at the regional level. The sub-project identified at the regional, woreda or kebele level will then be integrated into the region and woreda development plans.

The project staffs at *Woreda* level will initiate and facilitate the sub-project identification and planning processes at community level. The plans at Woreda level has to be reviewed and checked for appropriateness by the technical committees of the project (at woreda, zone, region federal) before approved by steering committees at different levels. In the case of capital-intensive investment sub-projects, sub- project identification will be done by the regional project coordination office.This process of identification, planning and endorsing of sub-projects/business plans will be repeated every year.

The following are some of the sub-projects to be financed under LLRP:

- Rangeland management,
- Construction of small and medium scale water supply schemes,
- Small Scale Irrigation (SSI) and rain feed agriculture,
- Watershed or natural resource management,
- Rural road development,
- Market center development,
- Construction of animal health service centers,
- Introduction and management of improved animal and plant breed through the support of IGA and other relevant research centers,
- Small scale beekeeping, fisheries, mining, production of natural gums,
- Small-scale dairy/small ruminants fattening cooperatives,
- Chicken cooperative of small scale,
- Small/medium size commercial infrastructure

Step 2: Checking Eligibility of subprojects

Once the local communities identified small scale subprojects and prepare basic business plans; DAs and KDCs screen these subprojects against the following environmental and social screening checklist to check their eligibility for LLRP financing. Eligibility of some sub-projects with wider scope such as SSI, rural roads, water supply, rangeland management, market centers, new breed development, etc. will be checked by WAT at woreda level using the same screening checklist displayed below.

Table 3: Checklist to check subprojects eligibility for LLRP financing

Will the sub-project or business plan:	Yes	No
Cause significant involuntary displacement of people or social disturbances, involuntary loss of assets? The Bank does not provide specific categorization criteria relating to OP 4.12, Involuntary Resettlement. Generally, projects with significant resettlement-related impacts should be classified as Category A. Application of judgment is necessary in assessing the potential significance of resettlement-related impacts, which vary in scope and scale from project to project. Projects that would require physical relocation of residents or businesses, as well as projects that would cause any individuals to lose more than 10 percent of their productive land area, often are classified as Category A. Scale may also be a factor, even when the significance of impacts is relatively minor.		
Involve removal or conversion of forests and other natural resources? A project with the potential for significant conversion or degradation of natural forests is classified as Category A. Natural forests are forest lands and associated waterways where the ecosystem's biological communities are formed largely by native plant and animal species and where human activity has not essentially modified the area's primary ecological functions.		
Disrupt the quality or quantity of water in waterways shared with other nations		
Cause degradation of critical natural habitats Cause any loss of biodiversity? Cause any large-scale physical disturbance of the site or the surroundings The project is classified as Category A if the screening indicates the potential for significant conversion or degradation of critical or other natural habitats. *Significant conversion* is the elimination or severe diminution of the integrity of critical or other natural habitats caused by a major, long-term change in land use or water use. Significant conversion may include, for example, land clearing; replacement of natural vegetation; permanent flooding; drainage, dredging, filling, or channelization of wetlands; or surface mining. Conversion can result directly from the action of a project or through an indirect mechanism (e.g., through induced settlement along a road). *Degradation* is modification of a critical or other natural habitat that substantially reduces the habitat's ability to maintain viable population of native species.		
Affect important physical and cultural resources (historical, religious, archaeological sites and monuments) Physical Cultural Resources, as defined under OP 4.11, are movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. A project that will likely have significant adverse impacts on PCR is classified as Category A.		

Affect any vulnerable or underserved groups The Bank does not provide specific categorization criteria relating to OP 4.10, Indigenous Peoples. Though the policy applies whenever a group meeting the Bank's definition of Indigenous Peoples is present in the project area, categorization typically reflects the potential significance of any adverse impacts upon such groups. Projects that would require relocation of Indigenous Peoples, that would restrict their access to traditional lands or resources, or that would seek to impose changes to Indigenous Peoples' traditional institutions, are always likely to be classified as Category A.		
Likely to use pesticides or other agro-chemicals Projects that include the manufacture, use, or disposal of environmentally significant quantities of pest control products are classified as Category A. Environmental significance takes into account the impacts, including benefits, on human health.		

If the answer to any one of the questions indicated in the table above is 'Yes', then the subproject or business plan should be rejected unless the features can be avoided by change of design or location. If on the contrary the answer is 'No' for all of the above questions, then proceed to the next step. Once subprojects or basic business plans screened at kebele level, the subproject will be sent as part of the woreda development plan and sent to Woreda relevant IAs such as Office of Agriculture, cooperatives office, Office of Water/Irrigation development, etc. for further screening. If the eligibility screening is done for advanced business plans at Woreda level, then it will be sent to the regional IAs or RPCUs for further Environmental and social screening at regional level.

If there is a live commune development program being undertaken in LLRP target areas, federal and regional ESS experts should collaborate and check the viability of all CCs located within or in proximity to the target Woredas. A list of viable and non-viable CCs will be developed in the first year by the safeguard experts to assist project implementation.

Step 3: Environmental and Social Screening

Once the subprojects and basic business plans are designed 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 1. The screening of sub-projects by the implementing agency at the Wereda level should be done using the checklist provided in Annex 3. Similarly, advanced business plans and some of the sub-projects designed and screened at woreda level should pass through a similar environmental and social screening procedure using the same checklist at regional level. The following sections explain the steps that should be followed in screening sub-projects or business plans at all levels. First, the Woreda expert (for woreda level screening) or the safeguard expert in RPCU (for regional level screening) would check the eligibility criteria for all the subprojects as per table above.

If any of the LLRP subprojects or business plans fall under the above category, the Woreda IA (for Woreda level screening) or regional safeguard specialist and/or regional IA (for regional level screening) should include all the necessary measures before approval of the subproject. For example, if the subproject is likely to use pesticides, pest management plan (PMP) should be prepared. Similarly, if the subproject involves land acquisition, or loss of assets, or access to assets on the land, the Woreda IA (for Woreda level screening) or regional safeguard expert (for regional level

screening) should prepare a resettlement action plan (RAP) or Abbreviated Resettlement Action Plan (ARAP). As there may be capacity problem by Woreda IAs in carrying out environmental and social screening, Regional ESS expert would provide the Woreda IAs with technical support on these matters. For difficulties faced in screening at regional level, the federal ESS specialists should provide the required trainings.

For subprojects which require PMP preparation before approval, the main responsible IA is Woreda office of Agriculture. Regional bureau of Agriculture provides technical support regarding PMP preparation and related issues. The regional plant health clinics may also have role on giving technical support in this regard. Integrated Pest Management (IPM) is an integral part of the PMP. Best practices related to IPM found in the country like farmer field schools and others can be explored during PMP preparation and implementation. Further, the potential impacts and significance should be assessed using environmental and social impact rating checklist which provided under annex 2. Go to the relevant section of the checklist and mark (√) each potential impact 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 helps you to determine what to do after filling the impact rating checklist. It also describes further actions need to be taken at this stage before proceeding to the next level based on the results.

Table 4: Rating and classification of potential impacts

For sub-projects with no impact (All impact rating becomes 'None')	These subprojects should also be labeled as '**subprojects of no environmental and social concern'** (category C)**.** Approval by Woreda or Regional EFCCA
For sub-projects with low, medium and/or one high impact	These subprojects should also be labeled as '**subprojects of medium environmental and social concern' (cat B).** Incorporate potential mitigation measures into the design of the subprojects. ESMP should be prepared.
Subprojects cause more than one high potential impact plus more than two unknown impacts	These subprojects should also be labeled as '**subprojects of high environmental and social concern' (cat B)** because changing the design may not avoid the anticipated adverse impacts. ESMP should be prepared and/or additional assessment (partial ESIA) may be required.
Subprojects where it is difficult to predict the potential impacts, i.e., subprojects which have two or more unknown potential impacts	These subprojects should also be labeled as '**subprojects of unknown environmental and concern**'**(cat B)** because of the many unpredictable potential impacts. ESMP should be prepared and/or additional assessment (partial ESIA) shall be required.

Subprojects labeled as 'subprojects of no environmental and social concern', environmental and social clearance (ESC) will be given by Woreda environment, forest and climate change (EFCC) office or equivalent and sent to concerned Woreda implementing agencies which the project refers to, or to Woreda Office of Agriculture or equivalent for financing. Similar ESC will be given at regional level.

For sub-projects labeled as **'unknown'** and/or '**high'** environmental and social concern, the need to conduct additional assessment (partial ESIA) should be decided through discussion among federal and regional safeguard specialists and regional EFCCA. The discussion and final decision should be

guided by project scheduling described under Ethiopian EIA guideline, 2000 and the World Bank OP/BP 4.01.

Review and Approval

Subproject review and approval at Woreda level

Subprojects which are not labeled as 'subprojects of environmental concern', will be cleared by the respective Woreda EFCC office which the project refers to, or to Woreda Office of the LLRP The environmental and social screening reports and ESMP prepared by the Woreda relevant LLRP implementing agencies (or WATs) for those subprojects and basic business plans which are labeled as subprojects of environmental concern should be reviewed by the Woreda EFCC office or by the respective Regional EFCCA.

Desk appraisal of subprojects

The Woreda EFCC office or the regional EFCCAs check the environmental and social screening checklist and impact rating checklist completed by the Woreda implementing agency to see whether or not it is done correctly and as per the requirement of the ESMF guideline. The regional EFCCA or Woreda EFCC office also review the ESMP including PMP and RAP/ prepared to check whether all the necessary information are included; and is done according to this ESMF guideline, and separate RPF document prepared for LLRP.

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. After carrying out desk review and field appraisal, the Woreda EFCC office gives environmental and social clearance (ESC) to the Woreda relevant IAs to which the subproject is to be financed by LLRP. The subprojects should not be financed and implemented by the Woreda IAs before ESC is obtained from the Woreda EFCC office. WAT should verify fulfillment of the ESS requirements and issuance of ESC letter prior to approval of basic business plans. The finance section/unit of the Woreda IAs should not process any payment without the ESC letter is attached with the request for payment.

Sub-project review and approval at regional level

Notification of subprojects

Sub-projects and basic business plans labeled as 'subprojects of high or unknown environmental and social concern' should be communicated from Woreda offices to regional line bureaus which the subproject refers and project coordination office. The RPCU communicates the subprojects with 'high environmental and social concerns' to the regional EFCC. Regional EFCC will handle safeguard review and approval of such sub-projects and business plans together with other wider scope sub-projects already screened at regional level.

Review of subprojects by regional EFCC Authorities

The regional EFCC Authorities should make note of the following points when reviewing/appraising any of the sub-projects. Subprojects which involve the use of pesticides, land acquisition or loss of land assets or access to assets do likely require special arrangements such as the development of PMP

and RAP/ARAP. Under this situation, the regional EFCC Authorities makes sure that these management plans are in place for these kinds of subprojects and give technical support for the concerned implementing agency on the matter. The regional safeguards experts facilitate the process and provide technical support for the regional IAs. For subprojects, which do not involve the use of pesticides, land acquisition or loss of land assets or access to assets, and which do not require partial ESIA, the regional EFCCA ensures that ESMP is prepared by regional PCU and concerned IAs.

The REFCCA may advice the concerned regional implementing agency on the following points:

1. Communicate the decisions for each of subprojects of 'high environmental and social concern' with regard to the need for partial ESIA.

2. If a partial ESIA is required, advice the concerned regional implementing agency and RPCU defines the scope with emphasis on the required skills, areas of focus and duration of ESIA. In other words, the regional EFCCA advice the regional RPCU prepares TOR for partial ESIA and submits to regional EFCCA for review and clearance. Incorporating its comment, the regional EFCCA returns the TOR without delay to the RPCU/IA to carry out the ESIA. In this regard, the regional and federal ESS specialists will prepare the ToR and shall submit to the World Bank and the REFCCA for final review and no objection.

3. If a partial ESIA is not required, the regional EFCCA provides RPCU/IA with guidelines in connection to technical matters, and preparation of ESMP. The concerned implementing agency should prepare and submit the ESMP to regional EFCCA for review. The regional EFCCA review and give ESC as soon as possible to avoid implementation delay. The regional EFCCA may follow both the desk and field appraisal procedure to appraise subprojects submitted to it and which do not require partial ESIA.

Conducting ESIA study

The following types of subprojects may require a full scale ESIA before implementation:

- Labelled as 'subprojects of high or unknown environmental and social concern' plus
- Identified by regional EFCC office that it needs partial ESIA

For sub-projects that require partial ESIA, RPCU is responsible to coordinate carrying out of ESIA. ESIA should be done by an independent consultancy firm which is licensed by EFCCC or regional EFCCA. The responsibility of EFCCA at regional level is to review the TOR for the ESIA study, and later the ESIA reports. The ESIA TOR and reports should also be submitted to the World Bank country office for final review and no objection. The cost of the ESIA study will be part of the project cost. Similarly, the cost of any ESS assessment, screening, field appraisal, report preparation at any level (From kebele to region) will be part of the sub-project cost for which the ESS document is prepared and it should be reflected in the project proposal of each sub-project.

Reviewing ESIA report by REFCCA/REFPA

The final step in this ESMF process is the review of the ESIA reports produced for subprojects of high/unknown environmental concern. This review should be conducted by the regional EFCC office in the shortest possible time to avoid delaying for implementation. The ESMP including RAP/ARAP and PMP prepared by the regional IAs/RPCU should be reviewed by the regional EFCCA/EFPA. Both field appraisal and desk review can be conducted by the REFCCA or REFPA as required. The final draft ESIA shall also be send to the WB for review and no-objection.

Criteria for ESIA approval

The following two decisions can be made by the REFCCAs and the World Bank on the LLRP ESIA documents.

1. If the ESIA is in conformity with the applicable Operational Policies of the World Bank and the environmental and social guidelines of Ethiopia, the subprojects will be granted an ESC

2. On the other hand, if the ESIA does not fulfill the Banks Environmental and social requirements and the country's environmental guidelines, the decision will be one of the following:

- Request for supplementary or new ESIA report; or
- Redesign of the sub-project
- Approval of the implementation of the subproject with condition; or
- Rejection of the sub-project

The RPCUs/IAs should not implement the subprojects unless they get ESC from the regional EFCC and the WB. For subprojects that have high/unknown environmental and social concern and are required to prepare ESMP/ESIA report, the finance unit of each RPCU should not issue any payment unless the ESC is attached with the request of payment.

Disclosure of Subprojects Information

Before the approval of subprojects, the relevant PCUs at all level should prepare the ESIA, ESMP, PMP and RAP, as required, and make available for public review at a place accessible to local people and in a form, manner and language they can understand. The general public will be invited to comment on these reports prior to their approval. The general public should also participate and be consulted at all levels of environmental and social assessments including eligibility checks, screening, scoping, impact identification and rating. The instruments will be available at the relevant institutions at all levels and be publicly disclosed both in country and at the World Bank's external website. The IAs will make copies of the instruments available in selected public places in English and working language of the country in compliance with the World Bank's *Public Consultation and Disclosure Policy*. This will ensure record keeping of all activities implemented under the ESMF and ensure that third party audits, if required, have adequate information when undertaking annual environmental and social audits. It is proposed that the locations of copies are announced through pubic relation sections of relevant IAs, radio announcement in addition to press releases, as applicable.

It should be noted that the following types of subprojects will not be admissible as LLRP

- Cause any large-scale physical disturbance of the site or the surroundings
- Cause significant involuntary displacement of people or social disturbances, involuntary loss of assets
- Involve removal or conversion of forests and other natural resources
- Cause degradation of critical natural habitats
- Affect important physical and cultural resources (historical, religious, archaeological sites and monuments)
- Involve construction of dams more than 4.5 meters
- Cause any loss of biodiversity
- Affect any vulnerable or underserved groups

- Sub-projects that will have adverse and irreversible impacts (Category A) will not be financed by the project.

6.2 Implementation arrangement

MoP and the respective regional Bureaus and Woreda offices will be responsible for implementing Environmental and Social Safeguard (ESS) requirements for the project. Depending on the sub-project level and scope, safeguard assessments, documentations and approvals can be undertaken at Federal, regional or Woreda levels. Federal and regional Project Coordination Units (PCUs) will recruit Environmental and Social Safeguard experts to oversee ESS planning, implementation, monitoring, evaluation and reporting activities of the project. Each Woreda will assign relevant expert who will be responsible for the implementation of environmental and social safeguard issues in this project. Woreda level implementation structures will include Woredal Appriasal Teams (WATs) to be established for each LLRP Woreda with membership from the Woreda Offices of Livestock and Fisheries, Agriculture, Health, Cooperatives, Women and youth, etc. However, WAT will be separate from the technical committee so that its members have no facilitation responsibilities under the project and can maintain a certain measure of independence. WAT will be established to appraise and review sub-projects, particularly from the perspective of ESS, technical soundness, gender equity, consistency with the Woreda Development Plan, compliance with rules, and any issues raised by the community audit and supervision committees. Other responsibility of WAT is to check readiness of community institutions for implementation of sub-projects, and as implementation proceeds, the achievement of milestones at different stages of sub-project implementation. Approval of ESS procedures and documents as well as conducting annual environmental and social audits will be the responsibility of Environment, forest and climate change offices or its equivalents at all levels.

6.3 ESMF monitoring and reporting

Implementation and process monitoring: Environmental and social monitoring needs to be carried out during the construction as well as operation and maintenance of the sub-projects or identification and implementation of household interventions in order to ensure that mitigation measures are implemented, have the intended result, and that remedial measures are undertaken, if mitigation measures are inadequate or the impacts have been underestimated within the environmental and social Assessment.

At woreda level, the Woreda Appraisal Team/MSTs will be responsible for the day to day monitoring and reporting of feedback throughout the whole process. They will supervise and review environmental and social safeguard documents and issues during implementation specifically, the monitoring of the following aspects:

- The environmental and social assessment processes (screening; ESMP preparation including RAP, Pest Management Plan(PMP) including vector and disease control/prevention plan,);
- The monitoring of the implementation of the mitigation measures;
- Monitoring of environmental and social issues and the supervision of the contractor civil works during the construction process;
- Monitoring of environmental and social issues during operations and maintenance of the infrastructure and facilities when handed over to the communities after construction;
- Monitoring the implementation of household-based interventions;

- Submission of monitoring reports to the Woreda Development Committee(WDC) and Regional Project Coordination Unit;
- The monitoring and reporting will be done by members of the (Mobile Satellite Team (MST) and staff representing the respective sector at the Woreda level who will be adequately trained.

At community level, communities, through their representatives will receive both compliance monitoring and effects monitoring. This will be done throughout the sub-project cycle namely:

- During the planning phase, the communities will participate in the identification of indicators for monitoring the mitigating measures;
- During implementation (construction) phase, monitoring the execution of works with respect to environmental and social aspects, e.g. verify the compliances of the contractors with their obligations;
- During operation and maintenance phase, the overall environmental and social impact monitoring and alerting on any emerging environmental and social hazards in conjunction with the ongoing sub-project activities.

Federal and regional PCUs, regional IAs are also responsible for the monitoring and evaluation of the implementation of the ESMF. When peoples and communities are affected, they will be included in participatory monitoring and evaluation exercises.

Result monitoring

The results 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. The M&E system will provide the required information for result monitoring. FPCU and RPCU will conduct result monitoring of all safeguard policies, including those that were not triggered. The purpose of these reviews is to support compliance with safeguard policies, 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.

Annual review workshops will be conducted at Federal, regional, Zonal and woreda levels with the objectives to:

• assess project performance in complying with ESMF procedures, learn lessons, and improve future performance; and

• assess the occurrence of, and potential for, cumulative impacts due to project-funded and other development activities.

The participants of the ESMF review workshop will be LLRP implementing agencies whose subprojects have environmental and social concerns and are responsible for the ESMF implementation at all levels. Regional workshop will be organized by regional RPCUs and federal level workshop will be organized by FPCU. The annual review workshop will be organized at the end of each year. Besides, the World Bank, as necessary, will periodically conduct reviews of the implementation of the ESMF, RPF, supplemental safeguard instruments and on other operational policies under LLRP.

6.4. Pesticide Management

Livestock and livestock fodder are generally infested, attacked and damaged by pests and weeds

to varying degrees, often causing economic loss. The damage from pests and weeds is potentially serious to fodder and livestock. Pest and weed infestation in the small scale irrigated fields could also reduce production substantially which calls proper management of pests. If uncontrolled, or not controlled effectively, livestock and fodder loss can occur as a result of pest infestation, posing serious obstacles to the achievement of the objectives of the LLRP.

It is expected that pesticide usage would be embedded within IPMPs, which stress alternative practices to pesticides as well as safety and decision guidelines for their effective usage. Fodder production will however not use chemical pest control method other than application of fertilizers for boosting productivity. The scope of pesticide definition in this document includes any synthetic compound used to kill or inhibit growth and reproduction of pests (such as insects, microorganisms, invasive species, etc). The term may include livestock insecticides, vaccines, drugs and or additive chemicals used in animal feed. World Bank's pest management policy (OP 4.09) is triggered for LLRP, since the project would promote and/or procure/use insecticides, vaccine and drugs to improve the overall livestock health conditions. On the other hand, project operations may lead to substantially increased pesticide use and subsequent increase in health and environmental risk. The LLRP promoted activities such as household based fodder production and feed formulation are likely to use fertilizers and/or chemicals to increase productivity and improve feed quality. At the same time, livestock health interventions (including quarantine systems, vaccines, drugs etc.) are likely to use pesticides and biological products (vaccines, acaricides) for control of pests normally associated with diseases to livestock. It is therefore a requirement to proactively Identify pesticides, vaccines, drugs, feed additives or any other agrochemicals that may be financed under the project and develop appropriate pest management plan to address potential human health and Environmental risks. Other requirement of the policy includes ensuring that general public is well aware about the potential risks of these pesticides as well as its safe handling, storage, use and disposal methods.

For further information and guidance please refer the Integrated Pest Management Framework (IPMF); Pest Management Framework for Agriculture Sub-Projects; a Guideline for Pest Management plan for Agriculture subprojects; Elements of a Pest Management Plan and Vector and Disease Control/prevention Framework under Annex 10 and 11 of this document.

7. Grievance Redressing Mechanism (GRM)

7.1. Grievance Redress Mechanism during Project Implementation

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, as a result 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 LLRP, there should be a grievance redress mechanism established to allow pastoral and agro-pastoral communities, project beneficiaries and stakeholders to complain/request about any decision of activities regarding inclusion in the census, eligibility and temporary or permanent loss of their land, assets or sources of income and their compensation. It is thus imperative to build up and practice traditional conflict resolution mechanisms during the implementation of LLRP. However, there is a need to consider context dependent format of traditional conflict redress mechanism of the six regions: Afar, Gambella, Oromia, SNNPR, Somali and Benishangul Gumuz.

The traditional forms of managing issues can even be recognized and used by the government structures. In this respect, the lowland communities' traditional conflict resolution mechanisms have acknowledged more than the formal structure by the local communities. Various informants discussed this idea during community consultations, mainly in: Somali, SNNPR, Afar, and Oromia. Relating to this, key informants depicted the *denb* system in Hamar and Benna Tsemai of SNNPR, *odiyash deganka* in Harshin and Gursum *Woredas* of Ethiopian Somali region, *Jarsuma, Aadaa, Safuu, Seera and Sinqee* (which is common in the *Gada* system) in Fentale and Bordode *Woredas* of 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. In order to make use of these traditional conflict resolution mechanisms among PAP communities, it is viable to provide suitable or culturally sensible trainings to respective stakeholders. Organizing or recruiting committees that are trusted and heard by communities of a certain ethnic group is a good precondition. This committee should also play substantial role in resolving conflicts that cross their boundary. They should further work strongly in the protection of conflicts within and outside their border before it intensifies and claim life and property.

In Hamar and Benna Tsemai, many of the conflicts have been solved through the *balabats* who are the main go-betweens in conflict resolution. They play significant role in the daily activities of the community. The problem of participating *balabats* in the LLRP may be their absence during the frequent consultations and meetings in capacity building trainings provided by LLRP. This is because the *balabats* have different roles they are expected to convey in the community. It also requires consultation of the community at large during the implementation of the project in order to see a recognized cultural conflict resolution mechanism. So, what is important in this regard is the selection of *Zarsi*–a collection of *Donnza*/elders committee that might be accountable to the *balabats*. Moreover, selected communities for the implementation of LLRP 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 and forums among PAP communities to strengthen their solidarity and integrity. This should be done by the MOP from the Federal down to the *Woreda* levels in collaboration with World Bank and IFAD. This SA for the future suggests various areas to be studied particularly areas such as the rhetoric relationships, coexistence, interethnic conflicts and its impacts in PAP communities.

7.2. Key Considerations for LLRP GRM Procedure

Disclosure of the GRM: GRM uptake location (assign focal person) need to be established at all levels (Federal, Regional, *Woreda*, and *Kebele* levels). Safeguard focal persons or experts should be responsible to establish the uptake location and work on its disclosure. The existence and condition of access to register (how, where, and when) shall be widely disseminated within the Project implementation areas at *Kebele* and *Woredas* where there may be grievances regarding any Project activities implementation.

Expectation When Grievances Arise: When affected or concerned persons who have a concern present their grievance, they expect to be heard and taken seriously. Thus, the MOP and other respective regional, *Woreda* and *Kebele* levels implementing agencies and stakeholders, particularly safeguard experts or focal persons are requisite to provide adequate information to people that they can voice grievances and work to resolve without fear of retaliation or some sort of social retribution.
Grievance Submission Method: Complaints can use both formal and informal ways: telephone, e-mail, MoP websites, program staff, text message (SMS), in person, or strategically placed complaint boxes as necessary. But, once the complaint is received, it will have to be documented in writing using a standard format containing detailed timeline for resolving conflict/complaint.

Registration of Grievances: complaints will be transcribed, recorded in a log using standard format, examined; investigated and remedial actions will be taken to settle. Any grievance that may arise from the operation will be filed in the first instance settlement procedure.

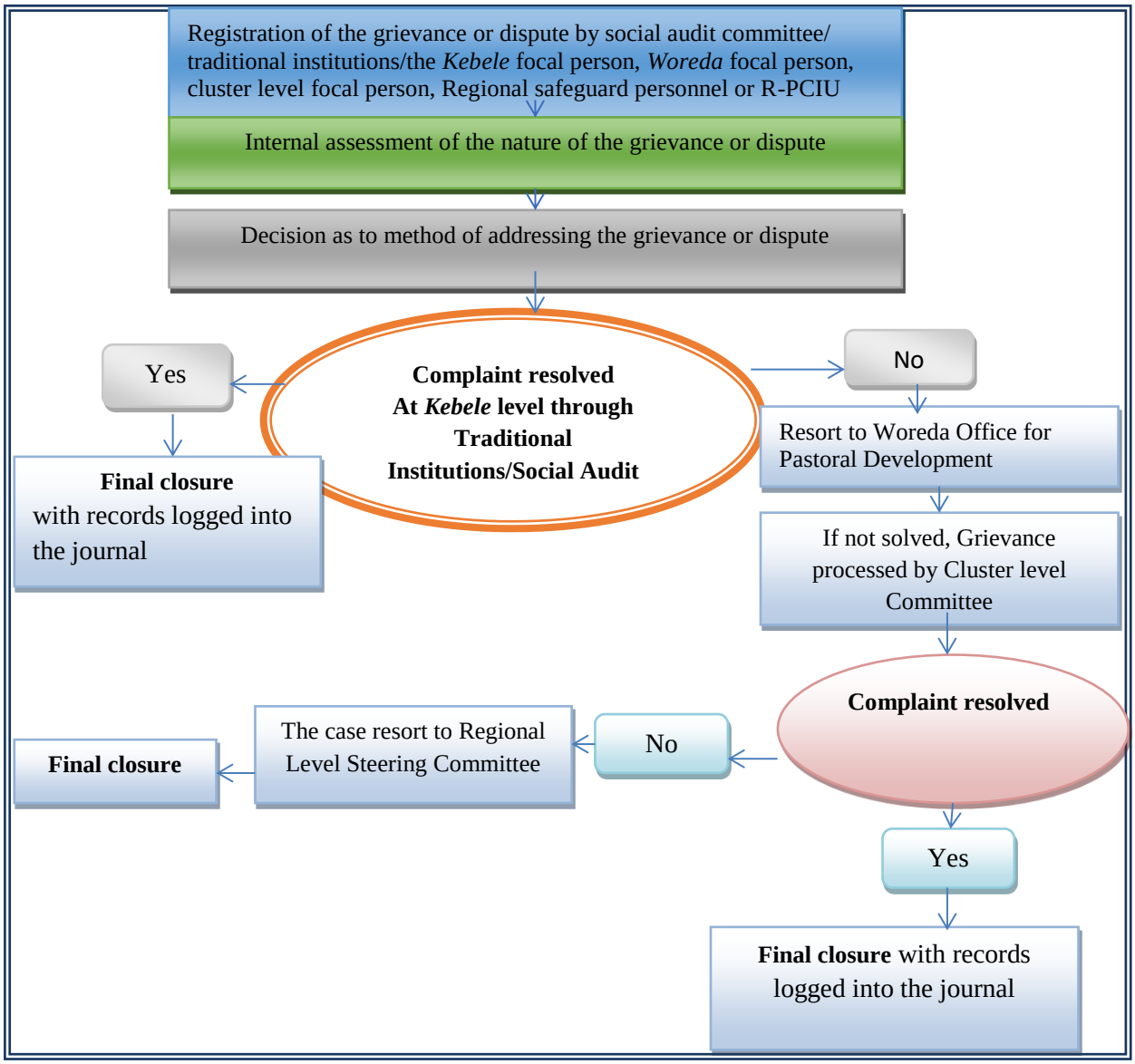
Management of Reported Grievances: The procedure for managing grievances should be as follows:

i. The affected or concerned person files his/her grievance, relating to any issue associated with the LLRP activities and/or environmental and social impacts and risks in writing or phone to the focal person. Where it is written, the grievance note should be signed and dated by the aggrieved person. And where it is phone, the receiver should document every detail.
ii. The safeguard specialist or focal person will act as the Program Liaison with affected persons to ensure objectivity in the grievance process.
iii. Where the affected or concerned person is unable to write, the focal persons or experts will write the note on the aggrieved person's behalf.
iv. Any grievances reported should be documented.
v. At the *Kebele* levels, *Kebele* administrators will play a key role in managing complaints and disputes in close collaboration with the assigned/focal staffs at Regional and *Woredas* environmental and social focal person and PCIUs. To this end, the *Kebele* administrators need to be given awareness rising training on the procedures of grievance redress, documentation, and reporting.

Grievance Log and Response Time: The process of grievance redress will start with registration of the grievance to be addressed, for reference purposes and to enable progress updates of the cases. The Register 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. The Kebele, *Woreda* and regions should compliant lodger keep a journal with 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 it should be addressed with efficiency. Accordingly, the grievance at Kebele, Woreda and Regional levels should be addressed with in 20, 20 and 20 working days, respectively.

Grievances Reporting Mechanism: The focal person or responsible body at all levels (*Kebele*, *Woreda* and Regions) will be responsible for compiling submitted and processed complaints/grievances on regular basis and report to relevant stakeholders every quarter. The Kebele should report the complaints registered and addressed to the *Woreda* Office for Pastoral Development every month. Following the structure hierarchical to the *Woredas* will report to the regions within two weeks after they received from the *Kebele*. The regions will report quarterly federal level to MOP safeguard experts. The following steps will be followed in complaints handling and dispute management:

Figure 1: Proposed Grievance Redress Mechanisms



NB. For cases related with gender-based violence, sexual exploitation and abuse, the Woreda Women and Children Affairs office will be the first level reference. The project will allocate adequate resources for awareness creation on this GBV GRM. The Woreda Women and Children Affairs Office will be provided with capacity building and orientation on the basic principles of GBV case management encompassing confidentiality, non-judgmental, service referrals for survivors, etc. The office will have a working procedure regarding the standards for services, referral, data collection, maintaining the best interest of the survivor. The details of the GBV GRM will be further elaborated in the project PIM and defined with the specific contexts of the respective Woreda Women and Children Affairs Office. The LLRP will not provide any resources for the respective Woredas without training/awareness regarding GBV/SEA to the Woreda Women and Children Affairs Office.

8. Chance Finds Procedure for Culturally Significant Artefacts

The Project team and contractors will follow national procedures and guidelines and ESMF procedures for reporting chance finds, in the event of any physical cultural resources are sighted. A national entity for coordinating and facilitating the archiving, safekeeping and documentation of

physical cultural resources, Authority for research & Conservation of Cultural Heritage (ARCCH), has been in existence and operational for a long time and will provide advice to the project, particularly in the event that chance finds are made. PAPs not satisfied with Compensation or with the process or any complaints Appeal to Implementing Committee Reexamination A party not satisfied – settled Appeal to Grievance Resolution Committee Examination Implementing Agency Implementing committee A Party not satisfied to regular court It is required by Ethiopian legislation that ARCCH should be aware of and/or approve any developmental activity which may affect physical cultural resources; such resources are found by chance. In the event that there could be potential impact on a physical cultural resource, the project will take the necessary steps of carrying out public consultations, engaging with cultural or religious leaders and notifying local authorities to seek their consent before any decision on and implementation of subproject is made. The Contractor is responsible for familiarizing themselves with the following "Chance Finds Procedures", in case culturally valuable materials are uncovered during excavation, including:

- Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;
- Protect artefacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts
- Prevent and penalize any unauthorized access to the artefact
- Restart construction works only upon the authorization of the relevant authorities.

Requirements for chance finds are also outlined in the Act. Article 41 which states that: "Any person who discovers any cultural heritage in the course of excavation connected with mining, explorations, building works, road construction or other similar activities shall report to the Authority and protect and keep same intact until the Authority takes delivery thereof". The Authority shall take all appropriate measures to examine, take delivery and register the Cultural heritage so discovered. Where the Authority fails to take appropriate measures within 6 months, the person that discovered the cultural heritage may be released from the responsibility by submitting a written notification with a full description of the situation to the Regional Government official.

9. Capacity building and technical assistance

The implementation of sub projects is expected to fulfill the safeguard policies requirements stipulated in the ESMF, RPF SA documents prepared for this project. However, the woredas and in some case the regions have no capacity to supervise and implement these policies. The staff assigned to implement the sub-projects at the grass root level should therefore receive training on social and environmental impact assessment in order to properly implement the safeguard policies and also carry out proper monitoring. There is also the need to provide specific training to the Development Agents (DAs) and to Kebele Development Committee (KDC) that will be engaged in the identification, selection and approval of sub-projects at the kebele level. Similar training should also be given to experts assigned at the regional level for them to oversee proper implementation of the mitigation measures to minimize project impacts.

Training

Creating awareness among the kebele communities on the impacts and benefits and action that should be taken to minimize impacts of the sub projects is very crucial. To this effect there is a need to

develop a training plan to build the capacity of all development actors who in one way or another will participate in the execution and supervision of the project. Depending on the capacity building needs identified during the Performance Reviews or M&E, refresher courses will also need to be given in the course of sub-project implementation.

Areas identified for training include:

- Training on the role of the community during the screening, planning, reviewing, implementation and monitoring process of the sub-projects;
- Training on environment related national policies, laws, regulations policies that should be respected during the implementation of sub-projects.;
- Training on the World Bank environmental and social safeguards policies triggered by LLRP;
- Training on environmental and social assessment, ESIA approval processes, reporting and monitoring; and preparation of environmental management plan;
- conducting regular awareness workshop with the community to update progress and to create awareness on the institutional arrangement, procedures and process of implementing the environmental and social safeguards;

Technical Assistances

For effective implementation of the ESMF, RPF and SA, technical assistance is required at region, Woreda and local (Kebele) level to build the capacity of the local communities, DAs, Woreda, zone and region government staffs to discharge their responsibilities as per the requirements set out in this ESMF. To this effect general technical assistance will be given to experts at federal, regional and zonal levels. This assistance includes training on monitoring of the effective implementation of the mitigation measures set out in the ESMP, RAP, and PMP and in monitoring and supervision of the ESMF implementation that will be carried out on a regular basis. Besides the general technical assistance, a specific training on the general environmental management principles tailored to lower technicians and to the community at the grass root level principles will be given. The budget on specific and general technical assistance will be part of the subprojects budget and will not be included in budget earmarked to implement ESMF.

The LLRP is planned to be implemented in 5 years. Budget required implementing ESMF, RPF and SA during the 5 years project life is indicated in the table below:

Table 5: Required budget in implementing the ESMF, RPF and SA

No	List of activities	Estimated Budget in US$					Total
		1st year	2nd year	3rd year	4th year	5th year	
1	Training & Awareness creation, launching workshop at project commencement						
1.1	Awareness raising, launching workshop and ToT at federal level	100,000					

1.2	Awareness raising and ToT at regional level	200,000					
1.3	Oversea experience sharing with similar developing countries		50,000				
1.4	Awareness raising and ToT at Woreda level	200,000					
	Sub-project	**500,000**	**50,000**				
2	Training on social and environmental screening of subprojects						
	Federal	50,000					
2.1	Regional	60,000					
2.2	Woreda	150,000-					
	Subtotal	**260,000**					
3	Annual Review Workshops, supervision and monitoring						
3.1	Federal level		25,000	50,000		25,000	
3.2	Regional level		50,000	100,000		50,000	
3.3	Woreda level		75,000	150,00		75,000	
	Sub-project		150,000	150,000		150,000	
	Total	**760,000**	**200,000**	**150,000**		**150,000**	**1,260,000**

The overall budget estimate earmarked for the implementation of ESMF, SA and RPF as indicated in the above table is 1,260,000 US$

10. Disclosure Policies and Procedures

This ESMF will be disclosed at the Info-shop of the World Bank, IFAD website and at the Government's website to make it accessible to any person interested to refer this document. According to the World Bank Operational Policies the ESMF document of the LLRP will be displayed in the Info-shop website of the World Bank for 20 days. The Ministry of Federal Affairs (now Ministry of Peace) will also distribute this document to relevant government institutions for any feedback.

Reference Materials

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17. USAID (January, 2007). Environmental guideline for small scale activities in Africa, environmentally sound design for planning and implementing development activities.
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Annexes

Annex 1: LLRP Target Woredas

	Afar Regional State (20)	**Somali Regional State (36)**	**SNNPR Regional state (9)**	**Benshangul Gumuz Regional state (9)**	**Gambella Regional state (8)**	**Oromia Regional state (18)**
1	Alidear	Harewa	Hamer	Kurmuk	Dima	Guchi
2	Kori*	Bullla	Dasenech	Sherkole	Jor	Wachile
3	Dupti*	Harshin	Gnagatom	Oda Buldigilu	Gikawo	Arero
4	Adear	Guresum	Benetsemai	Agallometi	Wantuwa	Aleweye
5	Dalul	Bulaabur	Malle	Sedal	Lare*	Dillo
6	Berhele	Degahamedo	Selamago	Guba	Makuwie	Gumi Aldillo
7	Afdera	Gashamo	Surma	Wombera	Mengeshi	Agawayu
8	Megale	Aware	Meinit Goldia	Bulen	Etang*	Dugdedawa
9	Eirebti	Shillabo	Meinit shasha	Maokomo		Medewelabu
10	Bidu	Shegosh				Daweserer
11	Geleallo	Gebridehar				Rightu
12	Argoba	elili				Sewenna
13	Dulecha	Adadile				Goleoda
14	Amibara	Lehiyoab				Kumebi
15	Teru	Dannot				Chinaksen
16	Awera	Galadi				Gumbi Boredede
17	Yallo	Gelehmur				Hawi Gudinna
18	Semurebi	Aisha				Fentallle
19	Tellalak	Haigalla				
20	Hadeleala	Dembel				
21	Gerbo	Duhun				
22		Gerbo				
23		Aiun				
24		Lagahida				
25		Salahad				
26		Fik				
27		Dekasuftu				
28		Bokolmayyo				
29		Guradamolle				
30		Gorobebksa				
31		Hudet				
32		Mubarek				
33		Chereti				
34		Bairei				
35		Alkere				
36		Dulobi				

Woredas in Afar that have been part of PCDP Project

S. No.	**Woreda**	**PCDP I**	**PCDP II**	**PCDP III**
1	Dalul			
2	Kneba			
3	Berahele			
4	Awera			
5	Gulina			
6	Argoba			
7	Dulecha			

8	Gewane			
9	Dalifage			
10	Dewe			
11	Telalake			
12	Chifra			
13	Dupti			
14	Afambo			
15	Kori			
17	Abeala			
18	Megali			
19	Aiseata			
20	Adear			
21	Afdera			
22	Arebti			
23	Bidi			
24	Awash Fentale			
25	Alidar			
26	Amibara			
27	Bure			
28	Meditu			
29	Ture			
30	Ewa			
31	Yallo			
32	Mille			

Annex 2: Subproject Eligibility Screening Checklist

Subproject Name: _____
Region: _____; Zone: _____; Woreda: _____; Kebele: _____

Will the sub-project or business plan:	yes	No
Cause significant involuntary displacement of people or social disturbances, involuntary loss of assets? The Bank does not provide specific categorization criteria relating to OP 4.12, Involuntary Resettlement. Generally, projects with significant resettlement-related impacts should be classified as Category A. Application of judgment is necessary in assessing the potential significance of resettlement-related impacts, which vary in scope and scale from project to project. Projects that would require physical relocation of residents or businesses, as well as projects that would cause any individuals to lose more than 10 percent of their productive land area often are classified as Category A. Scale may also be a factor, even when the significance of impacts is relatively minor. Projects affecting whole communities or relatively large numbers of persons (for example, more than 1,000 in total) may warrant classification as Category A, especially for projects in which implementation capacity is likely to be weak.		
disrupt the quality or quantity of water in a waterway shared with other nations		
Cause degradation of critical natural habitats cause any loss of biodiversity? Cause any large-scale physical disturbance of the site or the surroundings The project is classified as Category A if the screening indicates the potential for significant conversion or degradation of critical or other natural habitats. *Significant conversion* is the elimination or severe diminution of the integrity of critical or other natural habitats caused by a major, long-term change in land use or water use. Significant conversion may include, for example, land clearing; replacement of natural vegetation; permanent flooding; drainage, dredging, filling, or channelization of wetlands; or surface mining. Conversion can result directly from the action of a project or through an indirect mechanism (e.g., through induced settlement along a road). *Degradation* is modification of a critical or other natural habitat that substantially reduces the habitat's ability to maintain viable population of native species.		
affect important physical and cultural resources (historical, religious, archaeological sites and monuments) Physical Cultural Resources, as defined under OP 4.11, are movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. A project that will likely have significant adverse impacts on PCR is classified as Category A.		
affect any vulnerable or underserved groups The Bank does not provide specific categorization criteria relating to OP		

4.10, Indigenous Peoples. Though the policy applies whenever a group meeting the Bank's definition of Indigenous Peoples is present in the project area, categorization typically reflects the potential significance of any adverse impacts upon such groups. Projects that would require relocation of Indigenous Peoples, that would restrict their access to traditional lands or resources, or that would seek to impose changes to Indigenous Peoples' traditional institutions, are always likely to be classified as Category A.		
Implemented in or around non-viable community centers (CCs)		
likely to use pesticides or other agro-chemicals Projects that include the manufacture, use, or disposal of environmentally significant quantities of pest control products are classified as Category A. Environmental significance takes into account the impacts, including benefits, on human health.		

Recommendations:

- Sub-project/business plan is not eligible and rejected: _____
- Sub-project/business plan is eligible and approved: _____

Name, telephone and signature of members who did the eligibility check

1_____

2_____

3_____

Annex 3: Environmental and Social Screening Checklist

Subproject Name: _____
Region; _____; Zone: _____; Woreda: _____; Kebele: _____

1. Brief Description of Sub - Project

- Please provide information on the type and scale of the sub-project (area, required land, approximate size of total building floor area, etc.).
- Provide information about actions needed during the construction of facilities including support/ancillary structures and activities required to build it, e.g. need to quarry or excavate borrow materials, laying pipes/lines to connect to energy or water sources, access roads, etc.
- Describe how the sub-project will operate, including support/activities and resources required operating it e.g. roads, disposal sites, water supply, energy requirement, human resources, etc.

2. For sub-projects that need special attention

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

Recommendations
Sub-project needs special attention: _____
Sub-project does not need special attention: _____

3. for subprojects of environmental and social concern

Will the Sub-project or business plan:	Yes	No
located within National Park or other designated wildlife area or buffer zone		
located in a Priority Forest Area		
involve draining of or disturbance to a wetland		
located within a recognized Cultural Heritage site or World Heritage site		
incorporates a dam		
involve use of hazardous laboratory chemicals		
involve pollution of or abstraction of significant volume of water from international waterways		
Effect on vulnerable people and underserved groups (e.g., elderly poor pensioners, physically challenged, women, particularly head of households or widows, etc.) Living in the area?		
Influx of workers may interfere with the culture and values of remote pastoral and agro pastoral communities		
The proposed sub project activity may be implemented in or near commune centers		

Annex 4: Checklist for environmental and social impact identification and rating

Environmental and Social Feature	**Impact Rating**				
Social Issues					
	None	low	medium	high	unknown
reduce other people access to their economic resources, like land, pasture, water, public services or other resources that they depend on					
interference with access routes for people, livestock and wildlife or traffic routing and flows					
Result in resettlement of individuals or families or require the acquisition of land (public or private, temporarily or permanently) for its development?					
Result in the temporary or permanent loss of crops, fruit trees and household infra-structure (such as granaries, outside toilets and kitchens, etc.)? Effect on historical, archaeological or cultural heritage site?					
Effect on historical, archaeological or cultural heritage site? Effect on vulnerable people and underserved groups (e.g., elderly poor pensioners, physically challenged, women, particularly head of households or widows, etc.) Living in the area?					
Influx of workers may interfere with the culture and values of remote pastoral and agro pastoral communities					
The proposed sub project activity may be implemented in or near commune centers					
Environmental Issues					
Effect on river, lake and wetland ecology					

Effect on plant, livestock or fishery or any other aquatic biodiversity					
Effect on protected areas designated by government (national park, national reserve, world heritage site)					
Effect on soil and water (surface or ground water) contamination and pollution					
Effect on aesthetic attractiveness of the local landscape					
Effect on the surrounding background noise level					
result in emission of copious amounts of dust, hazardous fumes					
Generate solid and/or liquid wastes (including human excreta/sewage and/or/ livestock waste)					
Generate air pollutants and/or greenhouse gases					
Human Health Issues					
Occupational Health effects/ accidents and injuries to workers during construction or operation					
Health effects (communicable disease such as Malaria, TB, HIV/AIDS or non-communicable diseases –from toxic chemicals), Specify_____					

Recommendation

Approved without condition Partial ESIA required

Special plans should be prepared independently – mark [√] in the box below

ESMP RAP PMP Others (specify):

If the recommendation is to prepare ESMP or RAP or PMP or others, environmental and social assessment (initial environmental and social examination) is required by the implementing agency/proponent, and reviewed by the regulatory body.

Rejected

Reason for rejection

[Type here]

Completed by: [Name – type here]

Position: [type here]

Date: [typehere]

Annex 5: Typical ESIA Scope of Work

1. The Consultant will develop an ESIA for the following sub-project within the LLRP (include description of the sub-project).
2. In preparing the ESIA, the Consultant will conform with the following set of regulations and policies:

    - Ethiopian environmental regulations,
    - The World Bank's OP 4.01 and other applicable safeguard policies,
    - The LLRP ESMF.

3. The Consultant's scope of work will include:

i. **Initial consultation:**

- with the implementing agency (identify the implementing agency),
- with the EPA at federal level,
- with the REPA,
- with the World Bank's country office.

ii. **Review of the regulatory and policy background:**

- Based on Ethiopian pieces of legislation and regulation identified in the ESMF, the Consultant will identify any relevant changes occurred since the time the ESMF was prepared, and identify the practical implications thereof in preparing the ESIA;
- Based on World Bank policies identified as applicable in the ESMF, the Consultant will review any relevant changes and identify practical implications thereof;
- The Consultant will summarize in the ESIA report the applicable regulatory and policy background with a focus on practical implications in terms of:
- ESIA process, including public consultation and disclosure
- ESIA scope of work,
- Contents of the ESIA report,
- What the implications of the regulatory framework is for the sub-project: for example, what consents or permits will be required, what limit values will apply etc.

iii. **Public consultation:**

The Consultant will implement the following phases of public consultation, in coordination with the implementing agency, which may be willing to participate in this public consultation process:

- Identification of interested parties (beneficiary neighboring communities, communities potentially affected by the sub-project, downstream water users, local authorities, regional authorities);
- Initial step of consultation, before further environmental assessment work is undertaken: one initial meeting with each of the identified parties, presenting the sub-project and seeking input on the scope of work for further environmental assessment work and to seek to identify any concerns or issues that the local communities and stakeholders may have in relation to the sub-project;
- Second step of consultation, after further environmental assessment work is complete: presentation of the results of the environmental assessment, including presentation of identified impacts and proposed mitigations, seeking input on these proposed environmental management measures and to demonstrate the measures that have been taken in the design to address the concerns raised by the local communities/stakeholders; this second step will

include dissemination to identified interested parties of a brief summary of the environmental assessment in local language (generally Amharic and/or Oromigna);

- Any public consultation meeting undertaken by the Consultant will be documented using the form appended to these Terms of Reference (see Appendix 6);
- Main issues raised during consultation meetings will be summarized in the ESIA report, with a description of the manner in which these issues were addressed in the ESIA process.

iv. **Baseline assessment:**

The baseline assessment will address:

- 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 sub-project site(s) and in its (their) vicinity;
- Human environment: description of neighboring communities (population size, population structure and demography, socio-political organization, livelihoods, access to public services);

The baseline assessment will be summarized using the format presented in the "typical ESIA report structure" hereunder. Reports of field observations and bibliography used will be presented as appendices.

v. **Impact assessment:**

The methodology for impact assessment shall be briefly presented. Typically, impacts will be assessed along the following lines:

- Extension in space,
- Duration in time,
- Probability of occurrence,
- Magnitude

The combination of these parameters will be summarized in an all-encompassing measure of "significance", which will be the basis for impact assessment and prioritization of mitigations. Where changes in the project design (such as the re-siting or re-routing of a sub-project facility) may allow to eliminate one or several identified impacts, these changes (and generally any project alternative) will be discussed.

vi. **Mitigations and ESMP:**

Based on the typical ESMP presented in the LLRP ESMF, the Consultant will develop a sub-project ESMP, which will include as a minimum for each identified impact:

- A description of the mitigation measures,
- A description of monitoring measures,
- Implementation responsibilities,
- Cost,
- Assessment of residual impact after implementation of the mitigation

As necessary, specific additional protection measures to those included in the Environmental Guidelines for Construction Contractors presented as an appendix to the ESMF will be proposed by the Consultant.

vii. **Deliverables:**

The Consultant will produce:

- A summary project description in local language for purposes of public consultation (see above),
- A draft 1 ESIA report for submission to the Client,
- After initial Client's comments have been included in a revised version, a second draft ESIA report, including a brief summary in local language for purposes of public consultation,
- After public consultation results have been included, a final draft ESIA will be circulated for Competent Agency and World Bank comment.
- After satisfactory incorporation of comments, a final ESIA report for public disclosure according to arrangements presented in the ESMF.

TYPIAL STRUCTURE OF AN ESIA REPORT

1. **Executive summary**
2. **Introduction**

Scope of the ESIA
Team in charge of the EIA, with list of consultants involved and task of each
Summary of requirements applying to the EIA:
General Ethiopian legal requirements
ESMF requirements
RPF requirements
Other World Bank requirements if applicable
Time frame for implementation of the EIA

3. **Description of the Proposed Development Sub-Project**

Brief sub-project description with a focus on those physical components of the sub-project that may entail environmental and/or social impacts.
Technical components, including description of the methods used for construction and operation
Outline of the main alternatives
Sub-Project decommissioning at the end of the operation period
Implementation arrangements
Implementation schedule and cost

4. **ESIA Methods**

Terms of Reference of the EIA, and process through which they were arrived at
Description of the methods used for the EIA, including description of field investigations, mathematical models, social investigations, available literature
Description of standards and guidelines used
Statement on the extent of involvement
Identification of information gaps and uncertainties

5. **Consultation**

Identification of interested parties
Description of consultation with affected parties (timeframe, methods)
Main issues arising from consultation and how they were addressed in the ESIA process

6. **Description of the baseline environmental, socio-economic and health conditions** Focus of the baseline assessment depending on the nature of the sub-project and on its likely impacts
Description of the physical environment (climate, topography, geology, hydrogeology, surface water, soils in the sub-project area)

Flora and fauna - brief description of the baseline situation at the project site, with a specific focus on endangered species if any, and assessment of the general biodiversity situation in the project area
Description of the human environment:

- Identification of neighbouring communities, description thereof demography, socio-political conditions,
- Land use pattern, land tenure, and related social organization,
- Livelihoods,
- Water usages,
- Noise,
- Health situation

7. **Project Impacts**

Generally, prediction and assessment of each impact at all stages of the project cycle for each alternative, including, but not limited to;

- Construction phase
- Employment
- Impact on land use
- Impact on flora and fauna, with a specific focus on endangered species if any
- Noise, Dust and Vibration
- Impact on ground water quality
- Impact on surface water quality (related with erosion at the vicinity of the work site for example)
- Impact on surface water usage
- Impact on ground water usage
- Impact on soils (compaction by drilling equipment, removal of top soil)
- Potential uses of the environment that will be affected
- Operation phase
- Impact on ground water levels, flow and quality
- Impact on surface water (quantity - flow, quality)
- Impact on surface water usage with a focus on potential conflicts between upstream and downstream users if relevant
- Impact on ground water usage
- Impact of changes in water regimes on flora and fauna, and bio-diversity in general, with a specific focus on wet zones if any
- Potential uses of the environment that will be affected
- Decommissioning phase
- Summary table assessing the significance of each identified impact in terms of magnitude, extension, duration or frequency of occurrence and probability of occurrence

8. **Consultation Process**

Description of the consultation process (who was consulted, how, when)
Results: main issues raised and how they are addressed in the project design and in the EIA in general

9. **Mitigation Measures**

Table showing for each identified impact at each of the main three phases of the project the proposed mitigation measures, with narrative justifying them
Table showing the residual impacts once the mitigation measures are implemented

10. **Monitoring & Evaluation**

Table showing for each identified impact the monitoring measures that will be taken, with indication of indicators used, frequency of measurement, frequency of reporting and any relevant details on the methods to be used for collecting and treating monitoring data

11. **Environmental and Social Management Plan (ESMP)**

Table showing for each identified impact both the mitigation and the monitoring measures proposed in the EIA, with for each the implementation arrangements, including responsibilities for implementation, the timeframe, and the budgetary implications.

Annex 6. Alignment of Operations Procedure Summary

In 2014-15 a procedure for proactively managing the interface between the Government of Ethiopia's Commune Development Program (CDP) and Bank-financed projects was developed and agreed with government. The procedure, developed under the title "Supporting Results and Alignment of Operations in Ethiopia's Rural Areas" is designed to address the interface between Commune Centres (CC) and Bank-financed (IPF) projects or sub-projects in, or in the vicinity of, the CC. Henceforth the term "sub-project" is used to denote the intervention planned to be implemented within, or in the vicinity of, a CC.

The procedure will enable the Bank to support such sub-projects wherever possible, by:

- managing the operational interface,
- being able to demonstrate that it has taken all reasonable steps to consider the implications of the interface,
- while avoiding getting involved with non-viable or seriously deficient situations.

The procedure is simple and is designed to be embedded within the regular Environmental and Social Management Frameworks (ESMF) and or other safeguards instruments (RPF, RAP, SA, ESIA) already in use by such sub-projects. It involves gathering basic data on the CC and classifying it in terms of its viability. Based on the classification, the Bank determines whether, and how, the Bank-financed project or sub-project should proceed.

The Procedure

Step 1: Screening

The CC is screened by a local government staff member as part of the normal ESMF, RPF, RAP, SA, and ESIA screening procedure of the Bank-supported sub-project. The regular ESMF (and other safeguards instruments: RPF, RAP, SA, ESIA) sub-project Screening procedure will now contain an additional question: "Will this sub-project be inside a Commune Centre or close enough to a CC to have any potential direct or indirect impacts on it or on the people in a CC ?"

- If 'Yes', a checklist will be completed by the Screening staff member.
- The completed checklist will be forwarded via the federal **Environmental and Social** focal person to the Bank Task Team.
- If 'No', there is nothing additional to be done.

The checklist consists of a one-page data checklist on the CC. It is completed by the local government staff member who normally conducts the regular Safeguards Screening. This is normally done at the same time as the rest of the ESMF.

Step 2: Managing the Interface

The Bank Task Team classifies the CC based on the completed checklist (See Annex I). This classification indicates to the WB what strategy to adopt.

The factors used to classify the CC as set out in the checklist, and their significance, are as follows:

- **Mandatory Factors:** Sufficient and suitable *land* and *water supply based on regional/woreda government standards*. If they cannot be provided, the CC cannot be viable.
- **Access to Basic Services:** *Education, Health, Water*. Even if absent, these services could be provided in future.
- **Prior Conditions:** *Consultation, voluntariness, relocation distance* and *potential for conflict*. These issues should have been addressed at the planning stage. However, shortcomings may not necessarily mean that the CC is non-viable.
- **Operations and Maintenance:** *Good management & supervision, resource allocation,* and

grievance redress. These can only be provided by government.

Based on these factors, the CC is categorized by the Bank Task Team as follows:

- Category I: Broadly satisfactory in all respects (but not necessarily meeting WB standards)
- Category II: Deficient in some notable respects but could be rectified.
- Category III: Non-viable because fundamentally flawed. Very difficult or impossible to rectify.

The principles of CC classification as are follows:

- This procedure is concerned with "live" CCs. A CC ceases to be regarded by the Bank as a live project one year after the last registered household has settled. Such CCs are treated like any other regular community. Thus Bank-supported sub-projects in, or in the vicinity of such a CC may proceed regardless of the fact that the concerned community started life as a CC.
- "Live" CCs are categorized in the following manner:
    - If any of the Mandatory Resources are not available *and cannot be provided*, the CC is classified as Category III.
    - If all Mandatory Resources are available and there are no shortcomings in Access to Basic Services, Prior Conditions or Operations & Maintenance, the CC is Category I.
    - All other CCs are Category II.

The Bank-supported sub-project may proceed as follows according the category of the CC:

For Category I CCs:

- The Bank-supported sub-project may proceed as usual, with no special regard to the concerned CC.

For Category II CCs:

If there are rectifiable shortcomings in Mandatory Resources:

- The WB-supported sub-project can proceed subject to a written commitment from the concerned Regional government office that the essential resources will be provided to the CC within 1-2 years.

If there are shortcomings in Basic Services:

- The Bank-supported sub-project may proceed subject to the concerned Wereda (District) Development Plan showing that all necessary basic services will be provided to the CC within a reasonable time-frame to be specified by the Bank;
- The Bank may support sub-projects designed to provide basic services to the CC.

If there are shortcomings in Prior Conditions:

- The Bank's ***Systematic Operations Risk-rating Tool*** (**SORT**) must note any social or other risks likely to arise from systemic problems inherited from these past shortcomings.

For Category III CCs:

- The Bank may not proceed to support the concerned sub-project.
- The Client must select an alternative sub-project not associated with the concerned CC.

Table Annex 6.1: Screening Checklist[7]

Type of Criteria	First Question	Response	Second Question	Response
Mandatory Resources	Is suitable and sufficient land available based on regional/woreda government standard?	Yes No	Would it be possible to provide suitable and sufficient land?	Yes No
	Is suitable and sufficient water supply available based on regional/woreda government standard?	Yes No	Would it be possible to provide suitable and sufficient water?	Yes No
Basic Services	Are there adequate education service in line with GoE standards?	Yes No		
	Are there adequate health services in line with GoE standards?	Yes No		
	Is the amount of water available in line with GoE standards?	Yes No		
Type of Criteria	First Question	Response		
Prior conditions	Was the physical relocation viable for the majority of settlers?	Yes No		
	Were the consultations adequate?	Yes No		
	Was the relocation voluntary?	Yes No		
	Is the commune center free of potential serious social conflicts?	Yes No		
Operations and maintenance	Is the supervision and management of the commune center basically satisfactory?	Yes No		
	Are resources being allocated in a satisfactory manner?	Yes No		
	Is there a fair and viable grievance redress procedure?	Yes No		

[7] If possible the checklist is supplemented by information on the community livelihood system, chronology and size of the CC, the extent of relocation to date, and whether or not residents are free to return to their former location.

Annex 7: Guideline for Environmental and Social Management Plan

When a subproject includes distinct mitigation measures (physical works or management activities), an ESMP needs to be included with the subproject application. An ESMP usually includes the following components:

- **Description of adverse effects**: The anticipated effects are identified and summarized.
- **Description of mitigation measures**: Each measure is described with reference to the effect(s) it is intended to deal with. As needed, detailed plans, designs, equipment descriptions, and operating procedures are described.
- Description of monitoring program: Monitoring provides information on the occurrence of environmental effects. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental effects are monitored is discussed below.
- Responsibilities: The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they report and are responsible. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.
- Implementation schedule: The timing, frequency and duration of mitigation measures and monitoring are specified in an implementation schedule and linked to the overall subproject schedule.
- Cost estimates and sources of funds: These are specified for the initial subproject investment and for the mitigation and monitoring activities as a subproject are implemented. Funds to implement the EMP may come from the subproject grant, from the community, or both Government agencies and NGOs may be able to assist with monitoring.
- Monitoring methods: Methods for monitoring the implementation of mitigation measures or environmental effects should be as simple as possible, consistent with collecting useful information, so that community members can apply them themselves (see example below). For example, they could just be regular observations of subproject activities or sites during construction and then use. Are fences and gates being maintained and properly used around a new water point; does a stream look muddier than it should and, if so, where is the mud coming from and why; are pesticides being properly stored and used? Most observations of inappropriate behaviour or adverse effects should lead to common sense solutions. In some cases (e.g. unexplainable increases in illness or declines in fish numbers), there may be a need to require investigation by a technically qualified person.

ESMP Preparation Template Form

Potentiel environ-mental & social impacts	**Proposed mitigation measures**	**Responsible for implementing the mitigation measures**	**Responsible for monitoring the implementation of mitigation measures**	**Time Horizon**		**Cost Estimate**	
				Mitigation	**Monitorin**	**Mitigation**	**Monitoring**

Annex 8: Monitoring and Evaluation of the implementation of ESMF

For the effective implementation of the ESMF a regular and period follow up is required. The objective of this is to:
-Alert project authorities by providing timely information about the success or otherwise of the environmental management process outlined in this ESMF. This will ensure continuous improvement to LLRP environmental and social management process during the life cycle of the project.
-Make a final evaluation in order to determine whether the mitigation measures incorporated in the technical designs and the ESMP have been successfully implemented.

Monitoring of Environmental and Social Indicators

The goals of monitoring are to:

- measure the success rate of the project;
- verify the accuracy of the environmental and social impact predictions;
- determine the effectiveness of measures to mitigate adverse effects of projects on the environment;
- determine whether interventions have resulted in dealing with negative impacts;
- determine whether further interventions are needed or monitoring is to be extended in some areas;

Monitoring indicators will be very much dependent on specific project contexts. Two opportunities will be taken to build a simple system for the monitoring and evaluation of environmental and social impacts:

Initial proposals
The key issues to be considered in the LLRP subprojects include monitoring of water quality, soil erosion, land degradation, vegetation removal, soil acidification and Stalinization, genetic biodiversity, anti-biotic resistance, wetland drainage, occupational health & safety for those working in animal health clinic/post and soil testing laboratory, health problem, agricultural production, pest management, land acquisition, income generation and livestock health care and population influx.
Monitoring and surveillance of subprojects will take place on a spot check basis. The spot checks consist of controlling the establishment of mitigation measures. It is not recommended to collect large amounts of data, but rather to base monitoring on observations to determine the trends in indicators.

Monitoring of participation process

The following are indicators for monitoring of the participation process involved in the project activities.

- Number and percentage of affected households consulted during the planning stage
- Levels of decision-making of affected people
- Level of understanding of project impacts and mitigation
- Effectiveness of local authorities to make decisions
- Frequency and quality of public meetings
- Degree of involvement of women and youth or disadvantaged groups in discussions

Monitoring of implementation of mitigation plans lists the recommended indicators for monitoring the implementation of mitigation measures.

Evaluation of Results

The evaluation of results of environmental and social mitigation can be carried out by comparing baseline data collected in the planning phases with targets and post-project situations. A number of indicators would be used in order to determine the status of affected people and their environment (land being used compared to before (for example, how many irrigation subprojects than before)
In order to assess whether these goals are met, the IAs at Woreda and regional level will indicate the following in the ESMP. The Woreda and regional Office responsible for environment, and the LLRP regional ESS expert will review/check these issues
The regional and federal LLRP safeguard specialist will give technical assistance for IAs in doing so. The following are some pertinent parameters and verifiable indicators/questions to be used to measure the ESMF process, mitigation plans and performance.

- Have the LLRP coordination units at federal and regional level in collaboration with the regional and Woreda office responsible for environment trained a local social and environmental specialist, and IAs focal person in charge of LLRP activities in considering the social and environmental issues?
- Have the ESMP's and final subproject designs been cleared by the office responsible for environment offices at Woreda and regional level?
- At what rate are the IAs monitor ESMF implementations?
- How many RAPs/s have been fully executed before physical displacement of people?
- How many recorded grievance cases have been settled within one year?

Monitoring of ESMF implementation

In addition to the Project Reports and ESA studies required under the Ethiopian Environmental legislation, an Audit on ESMF implementation will be done every other year and report prepared by the Woreda office responsible for environment office for those projects executed by the Woreda IAs and delivered to its office. Again, the regional office responsible for environment will conduct auditing for those LLRP subprojects executed by the regional IAs. The audits conducted both at regional and Woreda level should be sent to the Ministry of Peace and Ministry of Environment, Forest and Climate (MEFCC). All implementing agencies should conduct their own regular internal ESMF implementation audit and submit to the office responsible for environment and their respective level. The regional and federal LLRP safeguard specialists facilitate and supervise the execution of the audit, and also provide technical support in doing so.

Monitoring Roles and Responsibilities

LLRP coordination units and IAs at Woreda and regional level have the lead responsibility to monitor the implementation of the ESMP including the PMP and the RAP that they prepare. The office responsible for environment at the offices at Woreda and regional level have also the responsibility to verify the monitoring report prepared by the IAs at their respective level. The office responsible for environment at woreda level will be required to prepare periodic monitoring reports and submit it to regional Office responsible for environment where periodic monitoring report prepared and submitted

to regional coordination unit of LLRP to be compiled and submitted to FPCU. ESS specialists at Regional and federal PCUs will facilitate and provide technical supports for the monitoring activities to be done by the regional and Woreda IAs and the office responsible for environment. They also carry out their monitoring activity to track the progress of the implementation of the mitigation measures prepared Woreda and regional IAs/PCUs. Development agents (DAs), KDCs and local community have also the responsibility to follow up the implementation of the ESMF at their locality. Donor representatives, independent consultants, Woreda TC, Zone TC and IAs have a role of giving support for the monitoring program.

Supervision

Supervising the implementation of ESMPs, which include ESMP, PMP and RAP/, will be the responsibility of the office responsible for environment offices at Woreda and regional level? Environment and Social safeguard specialists at Regional and federal PCUs of LLRP will provide technical supports and facilitate the process. Supervision of the ESMPs covers monitoring, evaluative review and reporting. Generally, it is designed to:

- determine whether the subproject is being carried out in conformity with environmental safeguards and legal agreements,
- identify problems as they arise during implementation and recommend means to resolve them,
- recommend changes in project concept/design, as appropriate, as the project evolves, or circumstances change and
- Identify the key risks to project sustainability and recommend appropriate risk management strategies.

It is vital that an appropriate environmental and social supervision plan by ESS experts in collaboration with environmental protection offices is developed with clear objectives to ensure the successful implementation of an ESMP.

Annex 9: Grievance Redress Mechanism (GRM)

According to Article 17 of Proclamation on EIA (proclamation no., 299/2000); any person dissatisfied with the authorization or monitoring or any decision of the Authority or the relevant regional environmental agency regarding the project may submit a grievance notice to the head of the Authority or the relevant regional environmental agency, as may be appropriate. The decision of the head of the Authority or relevant regional environmental agency shall, as provided above, be issued within 30 days following the receipt of the grievance.

The World Bank will also require the Borrower to provide a grievance mechanism, process, or procedure to receive and facilitate resolution of stakeholders' concerns and grievances arising in connection with the project, in particular about the environmental and social performance of the client.

Grievance redress mechanisms provide a way to provide an effective avenue for expressing concerns and achieving remedies for communities, promote a mutually constructive relationship and enhance the achievement of project development objectives. GRMs are increasingly important for development projects where ongoing risks or adverse impacts are anticipated. They serve as a way to prevent and address community concerns, reduce risk, and assist larger processes that create positive social change. GRMs provide a formal avenue for affected people or stakeholders to engage with the project implementers or owners on issues of concern or unaddressed environmental and social impacts. People adversely affected (or about to be affected) by a development project will raise their grievances and dissatisfactions about actual or perceived environmental and social impacts in order to find a satisfactory solution. Not only should affected persons (APs) be able to raise their grievances and be given an adequate hearing, but also satisfactory solutions should be found that mutually benefit both the APs and the project. It is equally important that APs have access to legitimate, reliable, transparent, and efficient institutional mechanisms that are responsive to their complaints.

Objectives of Grievance Redress Mechanism

The objective of the GRM is to ensure that the views and concerns of those affected by the project activities are heard and acted upon in a timely, effective and transparent manner.

Principles of GRM:

- Protect beneficiaries'/partners rights to comment and complain;
- Neutrality and equity while handling complaints;
- Timing: short cycle, quick response to the critical complaints;
- Transparency: Partners will be aware of the procedures; understand its purpose, have sufficient information on how to access it and understand how it works;
- Confidentiality: Create an environment in which people are more likely to raise concerns, complain or stand in witness. Confidentiality assures that any information given is restricted to a limited number of people and that it is not disseminated wider, therefore offering an element of protection and security to the complainant;
- Accessibility: The GRM will be easily accessed by as many people as possible within any stakeholder in the place where projects/subprojects are being implemented;
- Mutual responsibility between the project and complainants to insure fair, accurate, and responsible behaviour.

Grievance Handling Procedure

Woreda Level

If the community/project affected people or other interested parties have compliant on the unaddressed environmental and social impacts/damage/injuries as a result of LLRP subprojects implemented at Woreda level/capacity, they submit their issues to the Woreda Environmental protection office or equivalent. The Woreda Environmental protection office, having filed checking/verification of complaints will provide response effectively and in transparent manner. If the compliant are not satisfied with the response from the Woreda office, they go to regional Environmental protection offices. Woreda EPA also refers the cases if the issues are beyond its capacity to resolve.

Regional Level

If there are compliant from the community/project affected people or other interested parties due to LLRP subprojects which are implemented by regional project implementing offices/agencies; or if the cases are referred from Woreda Environmental protection office, the Regional equivalent will give response to the community and other interested parties within 15 days after conducting field investigation.

Federal level

Since most of LLRP sub-projects are implemented mainly at regional and Woreda levels, the grievance cases will also be handled at these levels. If there are cases, for example cross regional subprojects which may cause grievance, they will be handled by the federal LLRP PCU. The federal LLRP PCU will give response to the compliant within 30 days after conducting field investigation. Complainants may also pursue their cases through the court system, if they are not satisfied with the Grievance Redress System.

Potential grievances/disputes

Grievance procedures are required to ensure that peoples are able to present their complaint or concerns, without cost, and with the assurance of a timely and satisfactory resolution of the issue. Grievances will be actively managed and tracked to ensure that appropriate resolution and actions are taken. A clear time schedule will be defined for resolving grievances, ensuring that they are addressed in an appropriate and timely manner, with corrective actions being implemented, and the complainant will be informed of the outcome. The grievance redress procedure of the Project does not replace existing legal processes. Based on consensus, the procedures will seek to resolve issues quickly in order to expedite the receipt of entitlements, without resorting to expensive and time-consuming legal actions.

Registration of Grievances

Any grievance that may arise due to the implementation of the Project will be filed at the GR office established for the project. The committee will assess the nature of the grievance and provide solution with in the timeframe indicated in the RP. The overall process of grievance is as follows:

- The process of grievance redress will start with registration of the grievances to be addressed
- The Project will use a local mechanism which in most case called Grievance Redress Committee (GRC) as detailed below and the committee members which includes local leaders of the affected people, and 2 representatives from the PAPs, and
- The response time will depend on the issue to be addressed but it should be addressed with efficiency.

First Instance-Amicable Settlement and Appeal Court

The grievance redress procedure of the Project does not replace existing legal processes. However, the international experience of resettlement shows that such grievance redress mechanism helps to solve most of the complaints without formal procedures. So as it enable both speeds up implementation of the Project as well as timely satisfaction of complaints. In addition, courts of law may be viewed as slow and involving somewhat complicated procedures. People may prefer such matters to be first handled by a "first instance" mechanism, on the model of traditional dispute-resolution mechanisms. It usually appears that many grievances have roots in misunderstandings, or result from neighbor conflicts, which usually can be solved through adequate mediation using customary rules. Most grievances can be settled with additional explanation efforts and some mediation at regional, federal or Woreda levels. However, GRCs will also be established at the community level at each participating regions/zones/Woredas/cities/towns and kebeles with technical support from MoP if needed.

Grievance Redress Committee

The grievance Redress committee will be formed through the client at each participating /zones/Woredas/ /towns/kebele level and shall be comprised of the following:

a. Zonal/Woreda/Municipality/kebele representative Chair person
b. Zonal/woreda/kebele Agricultural office representative
c. Community representative Member
d. Representatives of PAPs Member
e. Women affairs office Member
f. Representative of Implementing Secretary and Member Agency at each level

It is essential to include representative of Implementing Agency in the grievance redress committee so that essential information on inventories, entitlements, and compensation rates, etc. can be provided to the committee members for review of complaint.

Grievance Redress Procedure: Grievance redress procedure will comprise of the following steps.

1. As a first step, all complaints and grievances relating to any aspect of the Project should be properly documented by implementing committee and address through consultations with the PAPs in a transparent manner and effective manner.
2. If the PAPs do not get any response from the implementing committee within 5 days of filling the complaint, or if the matter is not resolved to the satisfaction of the PAPs, the person will submit the complaint to the grievance redress committee count having jurisdiction.
3. If the matter remains unresolved within 15 days of filling compliant to the grievance redress committee, the person will forward the complaint to the regular court having jurisdiction. Or a party dissatisfied with a decision made by the grievance redress committee may appeal to the next

GRM level. A party dissatisfied with the decision made at any of the GRM level, may appeal to as may be appropriate, to the regular court within 30 days from the date of the decision. The decision of the court shall be final. All the types of grievance should be recorded. Sample Grievance Form depicted in Annex 9 of the RPF of this project. This grievance format is subject for revision by the grievance resolution committee before the start of their duties. The format will be distributed to the compensation implementation committee, the grievance resolution committee as well as to the other stakeholder's implementers of the resettlement action plan. The format should contain relevant information such as the name of the complaint and address, the types and details of grievances, the decision made, the date and the signature of the parties. The complaint, the receiver of the complaint, implementers should get the copy of the grievances.

Appeal to Court

If the grievance procedure which will be established at local level fails to provide a result, they can pursue further action by submitting their case to the appropriate court of law. Courts of law shall be considered as a "last resort" option, which in principle should only be triggered where first instance amicable mechanisms have failed to settle the grievance/dispute. However, the constitution allows any aggrieved person the right of access to court of law.

World Bank Grievance Redress Services

Communities and individuals who believe that they are adversely affected by the World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org. Grievance/Dispute Management Mechanism works as indicated in the figure below.

Annex 10: Integrated Pest Management Framework (IPMF)

IPMF is the principal tool and instrument to ensure initial project safeguards as regards pesticide use at this stage principally because the exact locations, scope, designs and nature of the proposed investments remains unknown. This IPMF is aimed at ensuring that implementing institutions in this project use it in order to ensure that the WB's pest management safeguard policies as outlined in Operational Policy (OP) 4.09 are adequately complied with.

The purpose of this section is to provide a strategic framework for the integration of pest management considerations in the planning and implementation of the activities to be implemented within the LLRP specifically on sub projects that will involve use of fertilizers and pesticides for fodder production and treatment of livestock.

Use of pesticides specifically in livestock health disease control and in livestock fodder production can constitute increased risks to human health and environment for reasons including the following:

- Lack of effective pesticide regulation and enforcement;
- Scarcity of, and or lack of Personal Protective Equipment (PPE);
- Failure to implement good plant health, soil health, and water management practices;
- Little or no understanding of IPM theory or principles;
- Inability to read or comprehend pesticide labels and safety warnings due to illiteracy;
- Inability to properly identify pests, their population levels, and economic thresholds;
- Inadequate knowledge about pesticides and their dangers;
- Porous national borders likely to encourage illicit entry and trade in pesticides

These are among the reasons that World Bank requires preparation of and compliance with an IPMF containing restrictions on the pesticides procured or facilitated recommendations for IPM, and specific recommendations for safety training and use of safety equipment. The primary goals are to reduce risk and to change attitudes and behaviors toward a more comprehensive approach to GAHP/GAFP.

Environmental and Socioeconomic Impacts of Pesticides

The potential adverse effects of pesticide use within the related sub projects under the LLRP will include among others:

- Pollution and contamination of surface and underground water bodies
- Pollution and contamination of soil
- Impact on aquatic life due to pollution of water resources
- Impact on terrestrial fauna due to contamination
- Human and animal health related hazards due to indiscriminate exposure to pesticides

All the pesticides banned or under restriction in Ethiopia will not be used in the LLRP. Wherever possible, non-chemical means of pest control will be exercised, in keeping with the policy of the bank to promote Integrated Pest Management (IPM). IPM can in some cases facilitate livestock and feed pest protection without the application of chemical based pesticides. Some IPM tactics that could be considered by LLRP sub projects that reduce pest risk includes:

- Biological control methods
- Natural physical methods, such as picking of ticks
- Mechanical/manual control of pests
- Breeding of pest resistant livestock

IPM Planning, Design & Implementation

This sub-section describes the typical methodologies that should be used by the LLRP when preparing sub project Integrated Pest Management Plans (IPMPs) for sub projects specifically when environmental and social screening determines that pesticides will be utilized and or their use will be promoted in the specific sub project. The likelihood and potential for application of pesticides in the LLRP sub projects triggers the OP 4.09 which requires the preparation of sub project specific IPMPs.

Designing an IPMP

IPM is a sustainable approach to managing pests by combining cultural, physical/mechanical, biological, and chemical tools in a way that keep pests below their economic injury levels and minimizes economic, health and environmental risks. Fundamentally, IPM aims to maximize the use of biological control; other control measures especially chemicals play a supportive rather than a disruptive role. Every sub project under the LLRP that triggers OP 4.09 will require the preparation of an IPMP and the sections below outlines the proposed approach in developing IPMPs. The LLRP will utilize its safeguard specialists and trained professionals with expertise in livestock science and pest management to prepare these IPMPs.

a) The following are key preconditions for an IPM approach, which will be adopted by all the sub projects within LLRP that will be screened and found to require pesticide use:
b) Understanding of the ecological relationships within a farming system (livestock, crop, plant, pests' organisms and factors influencing their development
c) Understanding of economic factors within a production system (infestation: loss) Understanding of socio-cultural decision-making behavior of the farmers (traditional preferences, risk behavior)
d) Involvement of the farmers in the analysis of the pest problems and their management
e) Successive creation of a legislative and agricultural policy framework conducive to a sustainable IPM strategy (plant quarantine legislation, pesticides legislation, pesticide registration, price policy)

This IPMF for LLRP has been developed following and applying the key elements of IPM program namely:

1. Ensuring that sub projects under LLRP use available, suitable, and compatible methods which includes resistant varieties, cultural methods, biological control, safe pesticides etc. to maintain pests below levels that cause economic damage and loss
2. Ensuring that sub projects under LLRP conserve the ecosystem to enhance and support natural pollinators
3. Ensuring that sub projects under LLRP integrate the pest management strategies in the farming system
4. Ensuring that sub projects under LLRP conduct analysis based on pests and crop loss assessments

Setting up an IPM Program

Planning is at the core of any IPM program. Every livestock has pests that need to be considered. Waiting until problems arise will end up increasing reliance on pesticides more and more. A good Integrated Pest Management program has four parts and all the IPMPs that will be prepared under LLRP will have to follow these parts:

a) Identifying problems;
b) Selecting tactics;
c) Considering economic and environmental factors; and
d) Evaluating the program.

A. Proper Identification of Problems

The correct IPM approach promotes "proactive" rather than "reactive" management. Correct identification is the first and most important step in controlling a problem. This first step is critical to future success, since an incorrect diagnosis leads to mismanagement. Scouting is, in fact, the key feature of any IPM program. By scouting, the ability to detect potential problems early is increased. The earlier a problem is discovered, the better you chances are of avoiding economic losses. Primary beneficiaries of LLRP from Level 1 to Level 4 (Small holder Farmers, cooperative producers and small investors) who will use pesticides or promoted to use pesticides because of other LLRP interventions will be trained on scouting techniques to identify pests early to promote the proactive approach in pest management as described above.
To scout effectively, the abovementioned primary beneficiaries of LLRP will be encouraged and trained to:

- Identify the cause of the problem to know what kind of pest they are dealing with.
- Contact agricultural extension officers or DAs if they encounter something that they cannot identify.
- Determine the stage of growth of the pest and livestock. This is essential for proper timing of control methods.
- Decide whether the infestation is increasing or decreasing.
- Assess the condition of the livestock.
- Map out problem areas. It may be possible to limit the area that needs treatment.
- Use the right scouting method for the specific pest.

B. *Select Tactics*

Once the problem has been identified, considerations on how to control it will have to be made. The goal in selecting control tactics is to use methods that are effective, practical, economical, and environmentally sound. To select the best control tactics, there will be need to:

- Understand the life cycle and habits of the pest. Some control methods will work only if they are used at the right time.
- Decide whether the infestation is serious in terms of economic loss.
- Compare the costs and benefits of various control methods.
- Make plans for the future. Not every part of an IPM program can be put into effect immediately.

Sampling to determine the extent of the problem
Once the pest is correctly identified, the next question which that will need to be answered will be; Is there a risk of significant loss? Is the problem occasionally seen? Localized? Or commonly found throughout? What is the extent of the damage? Is the problem a growing threat? Correct sampling will help to eliminate the guesswork in pest control by providing a means to quantify an old problem or discover a new one. Sampling knowledge and information on pest and crop biology should be used to make better management decisions.

Analysis to assess problem importance

This step in the pest management process entails analyzing the identification and sampling information and evaluating the need for a pest control action to make a determination on how bad the problem really is. There is need to assess whether the potential control measure are more costly than the damage potential? There is need to weigh economic, environmental, and times concerns and assess the impact of the current pest control decision on future management decisions?

Selection of appropriate management alternative

The action plan needed must entail a strategy that fits with the short- and long-term plans, labor force, capital, equipment, and finances of the farm. Therefore, an evaluation of the costs, benefits, and risks of employing various management options is needed. Opportunities to integrate different pest control strategies must be considered.

C. Choosing controls

There is no such thing as a completely safe and natural pesticide. Pesticides can vary greatly in their level of toxicity to non-target organisms such as people, pets or beneficial insects. Even organically approved pesticides can pose a danger to people and the environment if they are not used properly.

Pesticides are grouped into various types or categories. For example, there are fungicides, insecticides, herbicides (for weeds), nematicides (for nematodes) and miticides (for mites). While many pesticides control specific problems, there are still some broad-spectrum controls. In addition, there are many products that are only effective if they are used at a specific growth stage of the pest, so timing is critical.

It is never wise to use blanket applications of pesticides on large areas or to use them based on a calendar alone. The improper use of pesticides can pose a risk to the applicator, family, plants, beneficial organisms and the environment. There are times when pesticides are needed to prevent major losses. The judicious and proper use of pesticides can occur with a sound IPM program.

The following are examples of management tactics, which can be employed;

- Biological - Parasites, predators, pest
- Chemical - Pesticides, pheromones, baits, attractants
- Physical

Consider Economic Factors: Know When It Pays to Use a Pesticide

Despite efforts to avoid using chemicals, there are times when only pesticides can control the damage. Even so, it may not pay to use them. Pesticides should be used in an IPM program only when the benefits (yield, quality, aesthetic value) exceed the costs of control. Otherwise time and money are wasted. It's not easy to figure out when it pays to use pesticides. There are many variables: the pest population, variety, and growth stage, weather, and cost of the control.

D. Evaluate IPM Program

Evaluation means deciding how effective a program is and whether any changes are needed. All sub projects that will prepare IPMPs will have to evaluate the IPM program, and should:

- Monitor fields and keep records: Each time field visits are made, a note of livestock and pest conditions—record yields and quality and record any counts on pest populations.
- Record control measures: Records should include dates, weather conditions, pest levels, application rates and timing, and costs. Good records are a guide if the same problem occurs.
- Compare effectiveness: Whatever control tactics are chosen, use a different method on some strips. That way comparison can be made; which worked better, taking into account costs and environmental impacts.

Reporting and Performance Review Requirements

The MoLF through the FPCU will integrate pesticide use activities within the regular project specific quarterly progress safeguards reports for all sub projects, including Integrated Pesticide Management

Plans (IPMPs) for submission to the Bank specific for identified sub projects during the feasibility study phase of the project following detailed screening. Environmental and Social Safeguards Technical Assistance to the LLRP in regard to pesticide use and application will be provided by the FPCU's Social and Environmental specialists (to be recruited under the project) who will screen all sub-projects to determine if they trigger the need for IPMPs and prepare ToRs when such determinations are made. These reports will be submitted to the LLRP and the World Bank's implementation support missions.

Pest Management Framework for Agriculture Sub-Projects

Small-scale agricultural sub-projects may involve strengthening existing practices, introducing, diversifying or the intensification of crop production[i]. Support for the development of small-scale agriculture and certain livestock activities (i.e. tick dips) may lead to the introduction or increased use of pesticides and other agricultural chemicals such as herbicides and fertilizers. Pests are organisms that compete with humans, domestic animals, or crops for nutritional resources. They include species of insects, mites, nematodes, mollusks, plant pathogens, vertebrates and weeds. Fertilizers are used to promote crop growth. It is critical that appropriate planning, design and management be adopted for the handling, use, and management of all agricultural chemicals to avoid potential negative environmental impacts. If appropriate for small-scale agriculture projects funded under PCDP, abbreviated pest management plan for agriculture sub-projects should address the following issues:

1. Proper use of agricultural chemicals such as fertilizers to avoid reduction in soil and groundwater quality.
2. Prevent fertilizer run-off into surface water sources to avoid negative impacts on aquatic environments.
3. Proper use of pesticides and herbicides to avoid contamination of crops, soils and water.
4. Proper use, handling and storage of all agricultural chemicals to avoid adverse health impacts on the rural population.
5. Ensure that banned or unauthorized agricultural chemicals are not used.
6. Proper handling and disposal of unused agricultural chemicals and packaging materials (i.e. sacks, plastic containers, etc.).

Guideline for Pest Management plan for Agriculture subprojects; Elements of a Pest Management Plan

<u>Pest Management Approach</u>

i. Current and anticipated pest problems relevant to the project: common pest problems and estimated economic impact
ii. Current and proposed pest management practices: Describe current and proposed practices, including non-chemical preventative techniques, biological and chemical control. Is optimum use being made of agro-ecosystem management techniques to reduce pest pressure and of available non-chemical methods to control pests? Do farmers and extension staffs get sufficient information about IPM approaches that reduce reliance on chemical control?
iii. Relevant IPM experience within the project area, Woreda, region or country Describe existing IPM practices, projects/programs, research
iv. Assessment of proposed or current pest management approach and recommendations for adjustment where necessary. Where the current or proposed practices are not consistent with the principles of an IPM approach, the discrepancies should be discussed, and a strategy should be proposed to bring pest management activities into line with IPM.

Pesticide Management

i. Describe present, proposed and/or envisaged pesticide use and assess whether such use is in line with IPM principles. Provide purpose of pesticide use, type of products used, frequency of applications, and application methods. Is pesticide use part of an IPM approach and is it justified? Justification of pesticide use under the project should (a) explain the IPM approach and the reason why pesticide use is considered, (b) provide an economic assessment demonstrating that the proposed pesticide use would increase farmers' net profits, or for public health projects, provide evidence that the proposed pesticide use is justified from the best available (probably WHO supported evidence) public health evidence.
ii. Indication of type and quantity of pesticides envisaged to be financed by the project (in volume and ETB value) and/or assessment of increase in pesticide use resulting from the project.
iii. Circumstances of pesticide use and the capability and competence of end-users to handle products within acceptable risk margins (e.g. user access to, and use of, protective gears and appropriate application equipment; users' product knowledge and understanding of hazards and risks; appropriateness of on-farm storage facilities for pesticide).
iv. Assessment of environmental, occupational and public health risks associated with the transport, storage, handling and use of the proposed products under local circumstances, and the disposal of empty containers.
v. Pre-requisites and/or measures required to reduce specific risks associated with envisaged pesticide use under the project *(e.g.: protective gear, training, upgrading of storage facilities, etc.).*
vi. Selection of pesticides authorized for use, taking into consideration: (a) criteria set at national (if there is any) or international, (b) the hazards and risks and; (c) the availability of newer or less hazardous products and techniques (e.g. bio-pesticides, traps).

Monitoring and Supervision

i. Description of activities that require local monitoring during implementation,
ii. Description of activities that require monitoring during supervision visits (e.g. regarding effectiveness of measures to mitigate risks; progress in strengthening regulatory framework and institutional capacity; identification of new issues or risks arising during implementation),
iii. Monitoring and supervision plan, implementation responsibilities, required expertise and budget.

Annex 11: Vector and Disease Control/prevention Framework

The LLRP finances the use of agrochemicals for the small-scale irrigation farms. It may also finance use of vector and disease control drugs, chemicals, vaccines to improve the productivity of the livestock. The project will also finance the upgrading and strengthening of veterinary laboratory services through provision of laboratory chemicals, consumables and reagents. These laboratory chemicals, consumables and reagents which are used for the analysis of different pathogens; and vector and disease control/prevention drugs, chemicals, and vaccines are hazardous in their characteristics. They may pose serious environmental and human health impacts. They need proper handling, utilization, storage, transport and disposal. Waste (both solid and liquid) from veterinary clinics and laboratories are contaminated with hazardous chemicals/waste and infectious materials, and hence need proper management like any hazardous and infectious wastes. All ranges of the chemical and chemical waste management technologies and principles have to be followed and implemented.

The proper identification of the environmental, social and health impacts is important so as to define effective mitigation and management practices. This has a beneficial effect not only on overall environmental and social performance but also on the safety and health of the laboratory personnel and surrounding community.

When vector and disease control/prevention drugs, chemicals, vaccines, and consumables are procured and used, vector and disease control/prevention plan should address the following, but not limited to, issues:

- Have a plan in place for the use, handling, storage and disposal of drugs, chemicals, vaccines, consumables, empty containers;
- Maintain an inventory of the types and locations of hazardous materials and waste including unused and expired drugs, chemicals, vaccines, consumables;
- Each veterinary laboratory and clinics need to have health and occupational safety guideline;
- Have safety requirements in place for the handling, storage, and response to spills or exposures in the laboratory and store;
- Clearly segregate and label hazardous materials and waste;
- Treat and dispose hazardous materials and waste in accordance with applicable laws and regulations;
- Ensure that banned or unauthorized drugs, chemicals, vaccines, consumables are not used;
- Proper handling and disposal of unused drugs, chemicals, vaccines, consumables, packaging materials (i.e. sacks, plastic containers, etc.), and associated veterinary clinic and laboratory wastes.

For further reading and application, the Bureau of Agriculture, Health and respective Bureaus and Woreda Offices of Agriculture and Health can also be contacted.

Annex 12: Summary of Small Dam Safety Guideline (MoA)

1. Introduction

The overarching dam safety objective is to protect people, property and the environment from the harmful effects of mis-operation or failure of dams and reservoirs. To ensure that dams and reservoirs are operated and that activities are conducted so as to achieve the highest standards of safety that can reasonably be achieved, measures have to be taken to achieve the following three fundamental safety objectives:

- ✓ To control the release of damaging discharges downstream of the dam,
- ✓ To restrict the likelihood of events that might lead to a loss of control over the stored volume and the spillway and other discharges,
- ✓ To mitigate through onsite accident management and/or emergency planning the consequences of such events if they were to occur.

These fundamental safety objectives apply to dam and activities in all stages over the lifetime of a dam, including planning, design, manufacturing, construction, commissioning and operation, as well as decommissioning and closure.

2. Planning of small Dams

There are some fundamental principles which should be applied through the investigation, design, construction and commissioning stages to achieve an adequate level of safety. The principles are:

- ✓ the competence and experience of the owner's agents relative to the nature and dam hazard category of the dam must be appropriate in all areas;
- ✓ there must be a cooperative and trusting relationship between the owner and technical advisers, and the designers must be given full control over decision making in critical areas;
- ✓ the owner must agree to apply the appropriate level of funding for investigations, design and construction to reduce the chances of critically important issues (particularly related to foundations) being not sufficiently well assessed or under protected;
- ✓ the designer/technical adviser has a duty not to compromise unduly due to financial pressures from the owner, developer or contractor;
- ✓ continuity of key technical advice should be maintained throughout all stages of the dam from development, through design, construction and commissioning, to reduce chances of critical points of design philosophy and intent being misinterpreted during construction or commissioning.

Dam site investigation

Selecting the Dam Site

When choosing the location and size, the dam owner should also take into account what would happen if the dam failed suddenly and whether it would result in loss of life, injury to persons or livestock, damage to houses, buildings, roads, highways or railroads. The owner of the dam should ensure to avoid locating the dam where run-off from houses, dairies or septic systems can pollute the water.

Considerations at Investigation Stage

Technical Consideration

Site selection and site investigations are critical components to the success or failure of a dam. Regarding the technical consideration the following important aspects should be considered:

- ✓ The catchment is the area of land from which run-off is to be collected. If it is the main source of water supply, make sure that it is capable of yielding enough water to maintain both, the supply in the dam and the required releases over all periods of intended use. The catchment area however should not be too large, as it will then require a big and expensive overflow system (or spillway) to safely pass excess runoff from heavy rainfall without overtopping the dam.
- ✓ Topographical features such as slope, width and height of dam, as well as reservoir
- ✓ capacity will influence construction costs.

- ✓ Conducting site tests to establish the material properties for the embankment and foundation.
- ✓ A good location for a spillway that will effectively handle runoff and minimize erosion.
- ✓ Watershed activities that can affect the water quality or quantity of runoff.

Environmental Considerations

Dams with their associated reservoirs can have substantial environmental effects and any existing dam or new project must comply with the Ethiopian environmental and environmental legislations and associated licensing or permit requirements. It also complies with World Bank Safety of Dam Operational Policy (OP/BP. 4.37). It should be recognized at the outset that dam developments have effects extending beyond the immediate confines of the dam and inundated areas. For example;

- ✓ Reservoir slope stability may become a dam safety issue due to the risk of overtopping caused by large volumes of reservoir water being displaced by slope failures.
- ✓ Sitting of the dam/reservoir must take into consideration the local earthquake and faulting activity which may cause breaching of the dam
- ✓ Groundwater level changes may affect stability and land use around the reservoir margins and possibly adjacent to the downstream river, as a result of changed water levels.
- ✓ Trapping of sediments in the reservoir can result in upstream shoaling and loss of reservoir storage.
- ✓ Flora/fauna effects may occur in storage basin, downstream, and in passage around and through the dam.
- ✓ Minimum flow maintenance downstream of the dam to ensure the survival of flora and fauna, and to reduce causes of stream bed deterioration.
- ✓ Social development/changes to downstream use given the changed flood situation.

Dam Design

Embankment dams Design

The single most common cause of earthen dam failures is overtopping of the embankment. An undersized spillway will lead to overtopping; therefore, spillway design is critical to reservoirs. The spillway must be located such that discharge will not erode or undermine the toe of the dam. If the banks of the spillway are made of erosive material, provision must be made for their protection. Consideration must be given to the hazard to human life and potential property damage that may result from the failure of the dam or excessive flow rates through the spillway. Further consideration must be given to the likelihood of downstream development that may result in an elevation of the hazard classification.

Extreme Events

Large earthquakes, storm/flood activity and failure of upstream dams can be considered extreme events. The risk of failure from these events is minimized by using engineering design standards and relevant guidelines incorporating adequate margins of safety. Emergency preparedness set up well in advance is the only available measure of reducing the impact when a dam failure is about to happen.

Sedimentation

The effective life of many of small dams is reduced by excessive siltation – some small dams silt up after only a few years. This issue is poorly covered in the many small dam design manuals that are available, as they mostly focus on the civil engineering design and construction aspects. Appropriate methods/tools have to be chosen to predict, and where possible reduce, siltation rates in small dams.

3. Construction of a Dam

The quality of construction is all-important to dam safety. As far as construction is concerned, the following requirements are necessary from the dam safety viewpoint:

- ✓ the contractors must be suitably experienced and committed to achieving the standards of work specified;

✓ the level of supervision of the works, quality assurance procedures and designer continuity, must be appropriate to the scale and complexity of the dam;
✓ the owner must recognize that inherent uncertainties may remain after design investigations and only be revealed during construction, and have funding in place to deal with costs arising from additional requirements identified during construction;
✓ any area identified in the design process as requiring confirmation by the designer during construction, must be totally under the designer's control, and no design change, however small, shall be made without the designer's review and formal approval;
✓ a suitably detailed design report and drawings showing the as-built structure of all components of the dam and foundation shall be developed as an on-going and integral part of the construction supervision process and be prepared after completion of each component so that there is a reliable record to refer to at all times in the future.

Therefore, the dam owner should ensure all the above-mentioned requirements are fulfilled and complied.

Selecting the contractor
The use of inexperienced contractors and/or inadequate supervision can develop into an expensive liability. Nothing can take the place of a reputable contractor, using appropriate equipment and experienced machine operators and working under supervision of an experienced engineer.

Construction Supervision
Construction supervision is an important phase of dam construction. Supervision is meant to ensure that the design factors and specification requirements have actually been included in the final product. If foundation preparation, material selection, outlet/spillway installation and embankment compaction are not properly carried out then the safety of the dam will be compromised. So, for all small dam types (both earthen and rock fill) expected to be constructed, all the dam safety requirements applicable should be considered accordingly.

4. Safety Surveillance
Purpose of Regular Inspection
The purpose of a dam safety surveillance program is to avoid failure of the dam, by giving early warning of any kind of symptom of trouble as early as possible. It is the most economical and effective means an owner has of maximizing the long-term safety and survival of the dam. Its primary purpose is to monitor the condition and performance of the dam and its surroundings.

Frequency of Inspections
The frequency of inspection required for an effective program of surveillance depends on a variety of factors including:
✓ Size or capacity of the dam;
✓ Condition of the dam; and
✓ Potential for damage resulting from failure of the dam (represented by the hazard category).
Adoption of the inspection frequency for a particular dam is the responsibility of the owner, though professional advice should be sought for large dams or those categorized under significant and high hazard dams. According to the dam safety guidelines prepared for AGP, the suggested inspection frequencies for small dams of less than 15 m height for the two levels surveillance (quick visual inspection and comprehensive examination) is presented in the table below and should be followed critically.

Quick Visual Inspection	
Dam Hazard Potential classification	
High	twice weekly
Significant	weekly
Low	fortnightly
Comprehensive Examination	

Dam Hazard Potential classification	
High	monthly
Significant	3-monthly
Low	twice-yearly

Special Inspections

Special inspections will be required after unusual events such as earthquakes, major floods, rapid drawdown or volcanic activity. Special inspections should enable the dam owner to become aware of faults before partial or total failure occurs. Times when inspections additional to those above are recommended are:

- ✓ before a predicted major rainstorm (check embankment, spillway and outlet pipe);
- ✓ during and after severe rainstorms (check embankment, spillway and outlet pipe);
- ✓ after any earthquake, whether directly felt on the owner's property or reported by local news media (check all aspects of the dam). Inspections should be made during and after construction and also during and immediately after the first filling of the storage.

Dealing with Problems

A systematic program of safety surveillance should maximize the likelihood that any developing conditions likely to cause failure would be found before it is too late. Surveillance will also help early detection of problems before they become major repair bills. As identified earlier typical problems (many of which are treatable if found early enough) are most likely to fall into one of the following categories: seepage/leakage; erosion; cracking; deformation/movement; concrete structure defects; and spillway blockage.

Instrumentation and Monitoring

Instrumentation at a dam furnishes data to determine if the completed structure is functioning as intended, provides a continuing surveillance of the structure, and is an indicator of developments which may endanger its safety. Typical items instrumented or monitored include;

- ✓ profiles and condition, deformations, seepages or damp areas (visual)
- ✓ reservoir water levels which relate to dam loads and flood behavior
- ✓ local rainfall which relates to background seepages
- ✓ drainage and distinguishable seepages which relate to control of leakage water flow
- ✓ Clarity of seepage flow which relates to potential erosion of embankment or foundation material.
- ✓ water pressures within the dam and foundations which relate to structural behavior
- ✓ movement or deformation of the dam surface and internal structure which relates to structural behavior
- ✓ stresses within the dam which relate to structural behavior
- ✓ seismic acceleration which relates to structural behavior

5. Operation and Maintenance of Dams

Effective and ongoing operation, maintenance and surveillance procedures are essential to ensure the continued viability and safety of a dam and its appurtenant structures. Poor operation, maintenance and surveillance will invariably result in abnormal deterioration, reduced life expectancy and possibility of failure. The proper operation, maintenance and surveillance of a dam provide protection for the owner and the general public. Furthermore, the cost of good operation, maintenance and surveillance procedures is small compared with the cost and consequences of a dam failure which could include major repairs, loss of life, property damage and litigation. Because many small dams fail through lack of maintenance, it is prudent to have a definite and systematic maintenance plan. The maintenance plan should be decided upon when the construction work on the dam is completed. It will affect the life of the storage if you do not maintain it properly. A good plan should include the practices to be used, as well as the approximate time of the year when they are applicable.

Annex 13: Environmental and Social Guidelines for Contractors

General

In addition to these general conditions, the Contractor shall comply with any specific ESMP for the works he is responsible for. The Contractor shall inform himself about such an ESMP and prepare his work strategy and plan to fully take into account relevant provisions of that ESMP. If the Contractor fails to implement the approved ESMP after written instruction by the Supervising expert to fulfill his obligation within the requested time, the Owner reserves the Right to arrange through the Supervising expert for execution of the missing action by a third party on account of the Contractor. Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance requirements specified in an ESMP. In general, these measures shall include but not be limited to:

- Minimize the effect of dust on the surrounding environment resulting from earth mixing sites, vibrating equipment, temporary access roads, etc., to ensure safety, health and the protection of workers and communities living in the vicinity dust producing activities.
- Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) are kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.
- Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels is maintained and/or re-established where they are disrupted due to works being carried out.
- Prevent bitumen, oils, lubricants and waste water used or produced during the execution of works from entering rivers, streams, irrigation channels and other natural water bodies/reservoirs, and also ensure that stagnant water in uncovered borrow pits is treated in the best way to avoid creating possible breeding grounds for mosquitoes.
- Prevent and minimize the impacts of quarrying, earth borrowing, piling and building of temporary construction camps and access roads on the biophysical environment including protected areas and arable lands; local communities and their settlements. In as much as possible restore/rehabilitate all sites to acceptable standards.

Upon discovery of ancient heritage, relics or anything that might or believed to be of archeological or historical importance during the execution of works, immediately report such findings to the Supervising expert so that the appropriate authorities may be expeditiously contacted for fulfillment of the measures aimed at protecting such historical or archaeological resources.

- Discourage construction workers from engaging in the exploitation of natural resources such as hunting, fishing, and collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities.
- Implement soil erosion control measures in order to avoid surface run off and prevents siltation, etc.
- Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camps.
- Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long-distance transportation.
- Ensure public safety and meet traffic safety requirements for the operation of work to avoid accidents.

- The Contractor shall indicate the period within which he/she shall maintain status on site after completions of civil works to ensure that significant adverse impacts arising from such works have been appropriately addressed.

The Contractor shall adhere to the proposed activity implementation schedule and the monitoring plan / Strategy to ensure effective feedback of monitoring information to project management so that Impact management can be implemented properly, and if necessary, adapt to changing and unforeseen conditions. Besides the regular inspection of the sites by the Supervising expert for adherence to the Contract conditions and specifications, the owner may appoint an Inspector to oversee the compliance with these environmental conditions and any proposed mitigation measures. State environmental authorities may carry out similar inspection duties. In all cases, as directed by the Supervising expert, the Contractor shall comply with directives from such inspectors to implement measures required to ensure the adequacy rehabilitation measures carried out on the bio-physical environment and compensation for socio-economic disruption resulting from implementation of any works.

Work site/Campsite Waste Management

All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous Chemicals shall be bonded in order to contain spillage. All waste containers, litter and any other waste Generated during the construction shall be collected and disposed of at designated disposal sites in line with applicable government waste management regulations. All drainage and effluent from storage areas, workshops and camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.

- Used oil from maintenance shall be collected and disposed of appropriately at designated sites or be re-used or sold for re-use locally.
- Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures: Such as banks, drains, dams, etc., to reduce the potential of soil erosion and water pollution.
- Construction waste shall not be left in stockpiles along the road but removed and reused or disposed of on a daily basis.

If disposal sites for clean spoil are necessary, they shall be located in areas, approved by the Supervising Expert, of low land use value and where they will not result in material being easily washed into drainage channels. Whenever possible, spoil materials should be placed in low-lying areas and should be compacted and planted with species indigenous to the locality.

Material Excavation and Deposit

The Contractor shall obtain appropriate licenses/permits from relevant authorities to operate quarries or borrow areas.

The location of quarries and borrow areas shall be subject to approval by relevant local and national authorities, including traditional authorities if the land on which the quarry or borrow areas fall in traditional land.

New extraction sites:

- Shall not be located in the vicinity of settlement areas, cultural sites, wetlands or any other valued ecosystem component, or on high or steep ground or in areas of high scenic value and shall not be located less than 1km from such areas.
- Shall not be located adjacent to stream channels wherever possible to avoid siltation of river channels. Where they are located near water sources, borrow pits and perimeter drains shall surround quarry sites

- Shall not be located in archaeological areas. Excavations in the vicinity of such areas shall proceed with great care and shall be done in the presence of government authorities having a mandate for their protection.
- Shall not be located in forest reserves. However, where there are no other alternatives, permission shall be obtained from the appropriate authorities and an environmental impact study shall be conducted.
- Shall be easily rehabilitated. Areas with minimal vegetation cover such as flat and bare ground, or areas covered with grass only or covered with shrubs less than 1.5 m in height, are preferred.
- Shall have clearly demarcated and marked boundaries to minimize vegetation clearing.
- Vegetation clearing shall be restricted to the area required for safe operation of construction work. Vegetation clearing shall not be done more than two months in advance of operations.
- Stockpile areas shall be located in areas where trees can act as buffers to prevent dust pollution.
- Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.
- The Contractor shall deposit any excess material in accordance with the principles of these general conditions, and any applicable EMP, in areas approved by local authorities and/or the Supervising expert.
- Areas for depositing hazardous materials such as contaminated liquid and solid materials shall be approved by the Supervising expert and appropriate local and/or national authorities before the commencement of work. Use of existing, approved sites shall be preferred over the establishment of new sites.

Rehabilitation and Soil Erosion Prevention

- To the extent practicable, the Contractor shall rehabilitate the site progressively so that the rate of rehabilitation is similar to the rate of construction.
- Always remove and retain topsoil for subsequent rehabilitation. Soils shall not be stripped when they are wet as this can lead to soil compaction and loss of structure.
- Topsoil shall not be stored in large heaps. Low mounds of no more than 1 to 2m high are recommended.
- Re-vegetate stockpiles to protect the soil from erosion, discourage weeds and maintain an active population of beneficial soil microbes.
- Locate stockpiles where they will not be disturbed by future construction activities.
- To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.
- Remove toxic materials and dispose of them in designated sites. Backfill excavated areas with soils or overburden that is free of foreign material that could pollute groundwater and soil.
- Identify potentially toxic overburden and screen with suitable material to prevent mobilization of toxins.
- Compacted surfaces shall be deep ripped to relieve compaction unless subsurface conditions dictate otherwise. Re-vegetate with plant species that will control erosion, provide vegetative diversity and, through succession, contributes to a resilient ecosystem. The choice of plant species for rehabilitation shall be done in consultation with local research institutions, forest department and the local people. Water Resources Management
- The Contractor shall at all costs avoid conflicting with water demands of local communities.

- Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.
- Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.
- Temporary damming of streams and rivers shall be done in such a way avoids disrupting water supplies to communities downstream and maintains the ecological balance of the river system.
- No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses.
- Wash water from washing out of equipment shall not be discharged into watercourses or roads drain.
- Site spoils and temporary stockpiles shall be located away from the drainage system and surface runoff shall be directed away from stockpiles to prevent erosion.
- Chance finds procedure for culturally significant artefacts'
- The Contractor is responsible for familiarizing themselves with the following "Chance Finds Procedures", in case culturally valuable materials are uncovered during excavation, including:
- Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;
- Protect artefacts' as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts'
- Prevent and penalize any unauthorized access to the artefact
- Restart construction works only upon the authorization of the relevant authorities.
- Requirements for chance finds are also outlined in the Act. Article 41 which states that: "Any person who discovers any cultural heritage in the course of excavation connected with mining, explorations, building works, road construction or other similar activities shall report to the Authority and protect and keep same intact until the Authority takes delivery thereof". The Authority shall take all appropriate measures to examine, take delivery and register the Cultural heritage so discovered. Where the Authority fails to take appropriate measures within 6 months, the person that discovered the cultural heritage may be released from the responsibility by submitting a written notification with a full description of the situation to the Regional Government official.
- Cost of Compliance: It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item "Compliance with Environmental Management Conditions" in the Bill of Quantities covers these costs. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable Environmental and social impact. Water Resources Management
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- Site spoils and temporary stockpiles shall be located away from the drainage system and surface runoff shall be directed away from stockpiles to prevent erosion.

Chance finds procedure for culturally significant artefacts'

The Contractor is responsible for familiarizing themselves with the following "Chance Finds Procedures", in case culturally valuable materials are uncovered during excavation, including:

- Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;
- Protect artefacts' as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts'
- Prevent and penalize any unauthorized access to the artefact
- Restart construction works only upon the authorization of the relevant authorities.

Requirements for chance finds are also outlined in the Act. Article 41 which states that: "Any person who discovers any cultural heritage in the course of excavation connected with mining, explorations, building works, road construction or other similar activities shall report to the Authority and protect and keep same intact until the Authority takes delivery thereof". The Authority shall take all appropriate measures to examine, take delivery and register the Cultural heritage so discovered. Where the Authority fails to take appropriate measures within 6 months, the person that discovered the cultural heritage may be released from the responsibility by submitting a written notification with a full description of the situation to the Regional Government official.

Cost of Compliance

It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item "Compliance with Environmental Management Conditions" in the Bill of Quantities covers these costs. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable Environmental and social impact.

Water Resources Management

- The Contractor shall at all costs avoid conflicting with water demands of local communities.
- Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.
- Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.
- Temporary damming of streams and rivers shall be done in such a way avoids disrupting water supplies to communities downstream and maintains the ecological balance of the river system.
- No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses.
- Wash water from washing out of equipment shall not be discharged into watercourses or roads drain.
- Site spoils and temporary stockpiles shall be located away from the drainage system and surface runoff shall be directed away from stockpiles to prevent erosion.

Cost of Compliance

It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item “Compliance with Environmental Management Conditions” in the Bill of Quantities covers these costs. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable Environmental and social impact.

Annex 14: Environmental Compliance Reporting Template

Quarterly and Annual Environmental Compliance Reporting Template to be completed at Federal, Regional and Town/Woreda levels

Monitoring of implementation of the ESMF, ESMP and PMP is an important aspect of ensuring that the commitment to environmental sustainability of the project / program is being met. The regular monitoring of implementation of the ESMF, ESMP and the PMP will be overseen at federal and/or regional level. The environmental specialists at the federal and/or regional levels may also receive the relevant information from each Woreda or Town level project implementing entities.

1. **General**

Town/Woreda /Region/Federal: [Type the correct name here]
Reporting Quarter/Year: [type here]
Date of the report: [Type here]

2. **Report summary (narrative)**:

Here narrative of the overall environmental safeguards implementation during the reporting period is summarized. Activities carried out in implementing the ESMF (including aspects monitored), issues identified, proposed solutions and follow up activities are summarized here. Figures will be discussed in the reporting table below. Please also consider other issues, like for e.g.:

- Types of training provided or training demands;
- If an environmental permit was not granted by EPA, explain why;
- If no objection is obtained for ESIA studies from the World Bank, and whether these documents are disclosed on time both through the implementing agencies website and the World Bank's external website (please refer Disclosure requirements);
- Documentation practices for environmental instruments (ESS reports, ESMP, ESIA, PMP, etc.); and,
- Specific challenges encountered in the course of project implementation processes.

I. Environmental Compliance Reporting Format (To be Completed at Federal and Regional Levels)

Ministry: ---------- Region: ----------
Program/Project Type; (LLRP, AGP, PCDP, … etc.): ----------
Total Number of Project/Program Participating Woredas: ----------
Total Number of Program / Project Participating Towns: ---------- Date: ----------

S/N	Woredas or Towns	Total Nº of sub projects[ii] [8]	Screened & approved (in Nº)	Environmental Category			ESIA Prepared & approved (in Nº)	Prepared & approved (in Nº)		Implementation[9] of EMP/PMP (please use	Remark
				A	B	C		ESMP	PMP		

[8] Water supply (Surface water, Borehole, RPS, spring, HDW), sewage system, Toilet, irrigation, soil and water conservation, Feeder road, market center, etc**. in the budget year**

[9] State whether all the proposed mitigation measures (outlined in the ESMP and/or PMP) are properly implemented as per the schedule

							Nº)			**separate sheet if necessary)**	
1	Woredas										
2	Towns										
	Total										

NB: **in Nº** stands for the total number of subprojects

List of Outstanding Issues and Responsible Body for Implementation

S/N	**Name of Town or Wereda**	**Name of subproject site**	**Type of subproject**	**Outstanding Issues[10]**	**Recommended actions**	**Responsible body for implementation**	**Time schedule**
1							
2							
3							
4							
5							

Completed by: [Name ----------, Email: ----------, Phone: ----------]
Position: [type here – positions of all contributors]
Date: [type here]

[10] Types of environmental impacts, accidents, litigations, complaints or fines

II. Environmental Compliance Reporting Format (To be completed at Woreda or Town Level)

Name of Region: ---------- Woreda / Town: ----------

Program/Project Type; (LLRP, AGP, PCDP, UWSSP, UPSNP, TRANSIP… etc.): ---------- Date: ----------

S/N	Name of subproject site[11]	Types of subprojects/activities[12]	Screened & approved (Yes/No)	Environmental Category	ESIA Prepared & approved (Yes/No)	Prepared & approved (Yes/No)		ESMP/PMP implemented [13] (Yes/No)	Remark
						ESMP	PMP		
1									
2									
3									
4									
5									
Total									

List of Outstanding Issues and Responsible Body for Implementation

S/N	Name of Town or Wereda	Name of subproject site	Type of subproject	Outstanding Issues[14]	Recommended actions	Responsible body for implementation	Time schedule
1							
2							
3							
4							
5							

Completed by: [Name ----------, Email: ----------, Phone: ----------]

Position: [type here – positions of all contributors]

Date: [type here]

[11] Please specify the exact location of the subproject site (Kebele, village name or specific site name of the subproject)

[12] Water supply (Surface water, Borehole, RPS, spring, HDW), sewage system, toilet, SS irrigation, soil and water conservation, Feeder road, market center, etc**. in the budget year**

[13] State whether all the proposed mitigation measures (outlined in the ESMP and /or PMP) are properly implemented on time, please use separate sheet if necessary

[14] Types of environmental impacts, accidents, litigations, complaints or fines

Annex 15: Key findings of the stakeholders' consultation

(a) Community consultation in the Afar Region

Community consultation meetings were conducted in Dupti and Teru woredas in the Afar Region. The aim of the consultation meeting is to discuss the challenges and opportunities that are expected to result from the implementation of the proposed project. About 35 people from the two kebeles namely, Debelina Halebiri and Hankasina Aredo kebeles of Dupti woreda and 39 people from the two kebeles of Teru woreda namely, Guyah and Gulubule Kebeles have attended in the community consultation meetings that were conducted by the consultants. The three kebeles that have participated in community consultation except Guluble participated in the implementation of the PCDP program.

Concerns raised by the Dupti and Teru woreda communities include:

- Problem of pastoral land which lead to scarcity of feed for animals
- Lack of access to veterinary clinics
- Problem of market access
- inadequate supply of water to their farms
- Unavailability of flour mills close to the villages
- Lack of Pre and post-natal clinics
- poor road network between kebeles
- Critical shortage of potable water for human and animals
- Critical shortage of animal feed
- Power shortage
- problem of basic infrastructure such as road, water supply and health facilities
- Problem of malaria
- Serious land degradation, genetic erosion and recurrent drought especially in the case of Lare woreda
- lack of employment for the youth
- Lack of support for school children
- Lack of micro-finance that provides credit facilities
- Critical shortage of animal feed

Conflict resolution

Afar is divided into clans in which each clan has its own leader called Kidoh Abba. All clans have administration called "MEDEA". This law has significant role to resolve conflicts and bring peace among the communities. Conflict in the community is resolved by clan leaders. If an individual in the community is found guilty he or she will get the necessary assistance from his or her clan to pay penalty.

(b) Community consultation in the Gambella Region

The two woredas selected to host community consultation in Gambella Region are Itang and Lari. About 20 people from the two kebeles of Etang woreda namely; Dorong Kebele and Pokumu Kebeles and another 20 people from the two kebeles of Lare Wodera namely; Nip-Nip and Magok Kebeles have

attended the community consultations meetings conducted by the consultants. In the consultation meeting it was disclosed that these two woredas were not part of the previous PCDP.

Major concerns raised by the Etang and Lare Woreda communities during the consultation meetings include:

- lack of potable water during dry season
- Problem of access to schools and market due nonexistence of road between kebeles and some cases even between woredas
- Job opportunity to the youth that have completed their high school
- No flour mill near the villages
- The nonexistence of veterinary clinic near the villages and lack of human and animal medicines in the drug stores
- Problem of insect that attack maize
- In-migration of Fulani tribe from South Sudan to their territory in search of food for their animals
- Shortage of tractors and agricultural inputs s such as improved seeds and fertilizers
- The nonexistence of health clinics and health posts near the villages
- Prevalence of human and animal diseases
- Problem of market linkages for the women to sell milk to the towns due to lack of transportation and unavailability of reregisters

- Woman are not entitled to own property

(c) Community Consultation in the Oromia Region

The two woredas selected to host community consultation in the Oromia Region are Fentale and Boredede. About 20 people from the two kebeles of Fentale woreda namely; Benti and Gelcha Kebeles and another 20 people from the two kebeles of Boredede Woreda namely; Kontre and Abensa and Kebeles have participated in the community consultations meetings.

Major concerns raised by the Fentale and Boredede Woreda communities during the consultation meetings include:

-Recurrent Occurrence of drought in the area

-Scarcity of potable water for human beings and animals

-Resource use conflict between the community and Awash Park especially in Fentale Woreda

-Frequent occurrence of traffic accident on camels of the community on the Addis Ababa-Djibouti Railway especially in the areas within Fentale Woreda

-Blockage of animal passage and irrigation canals and limiting to water for irrigation due to railway construction

-Serious security issue especially in Obensa Kebele bordering with Somali Region

-Problem of river water pollution due to the release of wastes from Metehara Sugar Factory

-Problem of prosopis. Most of the grazing land is covered by this plant species

(d) Community Consultation in the SNNP

The two woredas selected to host community consultation in SNNP Region are Hamer and Bena Semay. Two kebeles of _Hamer woreda namely; Kolakeja and Angude and the other two kebeles of Bensemay

Woreda namely; Kibo Tulbana and Sheba Arshemja have participated in the community consultations meetings. Major issues raised by Hamer and Bena Semay Woreda communities during the consultation meetings include:
- Poor social services
-Limited livelihood opportunities
-gender disparity in accessing assets
Displacement due to private investors

(d) Community Consultation in the Somali Region

The two woredas selected to host community consultation in the Somali Region are Harshin and Gursum. About 20 people from the two kebeles of Harshin woreda namely; Harshin Kebele 01 and Ferah Liben a Kebeles and another 35 people from the two kebeles of Gursum Woreda namely; Tulu Guled and Chin Acseni and Kebeles have participated in the community consultations meetings.
Major issues raised by Harshin and Gursum Woreda communities during the consultation meetings include:
-Problem of drought and the need for rehabilitating water harvesting structures
-Shortage of improved seed
-Lack of market out let
-Expansion of invasive plant species
-Scarcity of animal fodder

The communities of all the woredas that have participated in the consultation meetings emphasized the need to address all concerns raised during the meeting during the formulation of the sub projects at woreda level.

Lessons from the previous Pastoral Community Development Project (PCDP)

According to the opinion of the communities that have participated in the consultation meetings of the regions, the following are some of the important lessons that can be drawn from PCDP

- weak coordination between the project office and the community representatives
- Interventions were not planned to address the concern of the community at the grass root level
- week participation of the community in the implementation of the PCDP project
- the project lacked transparency and there were communication barriers between the project office and the community
- Slow progress in the project implementation due to lack of skilled manpower

Vulnerable Groups in Pastoral and Agro-pastoral Communities

Pastoralist/Agro Pastoralist is the key livelihood system in Afar and Somali in general and in lowland zones of Oromia and SNNP, Gambella and Benshangul-Gumuz regional states in particular. Pastoralist is uniquely well adapted to dry land environments. As an economic and social system, it operates effectively in low and highly variable rainfall conditions. However, in Ethiopia, pastoralist/ agro pastoralist livelihoods systems are becoming increasingly vulnerable. The losses of productive assets and increasing household food insecurity due to drought have become defining features of lowland pastoral and agro-

pastoral communities of Ethiopia. The low land areas are characterized by poorly developed infrastructure, very low education and literacy levels and increasing competition for scarce resources. In addition, high population growth, and climate change are negatively affecting their resilience capacity.

The problem is further complicated due to extreme poverty and resource degradation. While all households are exposed to risks associated with climate change and could potentially be rendered vulnerable, the poorer households are the most at risk. This is because their assets and livelihoods tend to be highly exposed and sensitive to the direct and indirect risks associated with climate change. Within households, impacts will sometimes fall disproportionately on vulnerable individuals such as children, women, elderly, and disabled sector of population in these regions.

One of the factors that determine the vulnerability of a group is access to resources. Given the same shocks, access to resources will lead to lesser vulnerable by boosting their adaptive capacity. With this broader framework all the study areas are highly vulnerable as they are characterized by poor infrastructure developments, susceptible to natural hazards, poor resource endowments and limited livelihood opportunities. However, the degree of vulnerability among the community is not uniform and is categorized as follows:

The Poor and Destitute households

The major determinants of wealth include livestock in pastoral communities; land and livestock in agro-pastoral and sedentary agricultural communities; and availability of labor in all livelihood systems. As poor and destitute households lack one or more of these factors they become more vulnerable to risks and shocks. In the discussion held with women group in Argoba special woreda by the previous group of consultants in other projects, they identified landlessness and lack of livestock as main source of vulnerability in their area. Though access is not limited, the poor becomes less beneficiary from some of the project outputs due to limited resources. According to the information obtained from one of the community consultation participants of Lare woreda of Afar poor households that have no livestock or financial capacity y have not received much support e from the veterinary clinic constructed during PCDP-3.

Female and female headed households

The Decision-making ability women in most of the pastoralist and agro-pastoralist communities' area of Afar is very limited even on the issues that directly affect them. From the discussion with the Afar community it was obvious that women have no access to financial income from the sale of livestock. In Somali Region, women are usually subordinate of o men and their role is confined only to the household activities and child care. They rarely have access to productive resources and have very limited participation in important family affairs. In general, lack of confidence and limited life skills together with discriminatory norms on female headed household in the regions woman pastoralist and agro-pastoralist are more vulnerable compared to men.

The Elderly

In most of the pastoral and agro-pastoral communities of Ethiopia elderly people have special respect and acceptance in the community. They usually serve in traditional institutions as leaders and counselor. In

the old days these privileges enabled them to have better access to and priority to traditional welfare system. Nowadays, the traditional welfare mechanisms are weakening due to frequent occurrence of natural hazards that deplete the social value of the community.

People with disabilities

Pastoral communities support disabled people through their traditional social support systems. Most of the disabled people are dependent on their relatives and clan members for their survival. In general, this group of people is among the most underserved from any project intervention most of the time. People during community consultation in Lare woredas stated that most of disabled children are not attending schools. The people during the consultative meeting stressed the need to incorporate initiatives that support disabled children in these the woredas.

Outcast groups

Previous studies conducted in the Borena zone of Oromia identified some minority social groups called '*Waataas*'. They are hunters and gatherers and also depend on handicrafts. Similarly, in SNNPR among the *Tsemay* people, members of the *Gitema* clan who are blacksmiths are labeled as *Puga* and are excluded from social services. These are clans that perform the pottery and metal works. The outcasts are not allowed to eat, drink, greet or marry with the other clan members.

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