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Report No: PAD00083

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 255.7 MILLION

(US\$340 MILLION EQUIVALENT)

TO THE

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FOR THE

LOWLANDS LIVELIHOOD RESILIENCE PROJECT, PHASE TWO

MARCH 4, 2024

Agriculture and Food Global Practice
Eastern and Southern Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2024)

Currency Unit = Ethiopian Birr (ETB)

US\$1 = ETB 56.60

US\$1 = SDR 0.75

FISCAL YEAR
July 8 – July 7

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**ABBREVIATIONS AND ACRONYMS**

AICCRA	Accelerating Impacts of CGIAR Climate Research for Africa
ATI	Agricultural Transformation Institute
AWPB	Annual Work Plan and Budget
CAHW	Community Animal Health Worker
CAVE	Community Agro-Vet Entrepreneur
CBBP	Community-Based Climate Resilient Breeding Program
CCDR	Country Climate and Development Report
CGIAR	Consultative Group on International Agricultural Research
CIAT	Centre international d’agriculture tropicale (International Centre for Tropical Agriculture)
CIG	Common Interest Group
CIMMYT	Centro Internacional de Mejoramiento de Maíz y Trigo (International Maize and Wheat Improvement Centre)
CIS	Climate Information Services
COSOP	Country Strategic Opportunities Program
CPF	Country Partnership Framework
CRSL	Climate Resilient and Sustainable Livelihoods
DBE	Development Bank of Ethiopia
DPRSIP	Disaster Preparedness and Resilience-Building Strategic Investment Plans
DRM	Disaster Risk Management
ECC	Ethiopian Cooperative Commission
EDRMC	Ethiopian Disaster Risk Management Commission
EFMP	Ethiopian Flood Management Project
EIAR	Ethiopian Institute of Agricultural Research
EMI	Ethiopian Meteorology Institute
ERR	Economic Rate of Return
ET-LITS	Ethiopian Livestock Identification and Traceability System
FAO	Food and Agriculture Organization
FCV	Fragility, Conflict, and Violence
FM	Financial Management
FPCU	Federal Project Coordination Unit
GDP	Gross Domestic Product
GEMS	Geo-Enabled initiative for Monitoring and Supervision
GHG	Greenhouse gas
GoE	Government of Ethiopia
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
ICARDA	International Center for Agricultural Research in the Dry Areas
ICIPE	International Center of Insect Physiology and Ecology
IDA	International Development Association



IFAD	International Fund for Agricultural Development
IFR	Interim Financial Report
IGAD	Inter-Governmental Authority for Development
IIRR	International Institute for Rural Reconstruction
ILRI	International Livestock Research Institute
IPF	Investment Project Financing
IRM	Integrated Rangeland Management
LFSDP	Livestock and Fishery Sector Development Project
LITS	Livestock Identification and Traceability System
LLRP	Lowlands Livelihood Resilience Project
LMIS	Livestock Market Information System
M&E	Monitoring and Evaluation
MFD	Maximizing Finance for Development
MFI	Microfinance Institution
MH-IB-EW-EAS	Multi-Hazard, Impact-Based Early Warning and Early Action System
MILLS	Ministry of Irrigation and Lowlands
MIS	Management Information System
MLSs	Ministry of Labour and Skills
MoA	Ministry of Agriculture
MSEs	Micro and Small Enterprises
NAP	National Adaptation Plan
NBS	Nature-Based Solutions
NDC	Nationally Determined Contribution
NFCS	National Framework for Climate Services
NPV	Net Present Value
PACK	Pastoral and Agropastoral Center for Knowledge
PAD	Project Appraisal Document
PAP	Pastoral and Agropastoral
PASACCO	Pastoral and Agropastoral Saving and Credit Cooperative
PCE	Private Capital Enabling
PCU	Project Coordination Unit
PCDP	Pastoral Community Development Project
PDO	Project Development Objective
PEI	Public Economic Infrastructure
PIM	Project Implementation Manual
P-PD	Pioneer Positive Deviance
PPSD	Project Procurement Strategy for Development
PRMR	Pastoral Risk Management for Resilience
PRPM	Participatory Rangeland and Pasture Management
RMIP	Rangeland Management and Investment Plan
RMP	Rangeland Management Plan
RMS	Rangeland Monitoring System



RPCU	Regional Project Coordination Unit
RRA	Risk and Resilience Assessment
SMEs	Small and Medium Enterprises
SMS	Short Message Service
SSRLD	Strategy for Sustainable and Resilient Livestock Development
STEP	Systematic Tracking of Exchanges in Procurement
TPMA	Third-Party Monitoring Agent
VSF-Suisse	<i>Vétérinaires Sans Frontières Suisse</i> (Veterinarians without Borders Switzerland)
WDRP	Woreda Disaster Risk Profile



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DATASHEET

BASIC INFORMATION

Project Beneficiary(ies) Ethiopia	Operation Name Lowlands Livelihood Resilience Project, Phase Two (LLRP II)		
Operation ID P180076	Financing Instrument Investment Project Financing (IPF)	Environmental and Social Risk Classification Substantial	

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input checked="" type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input checked="" type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input checked="" type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date 26-Mar-2024	Expected Closing Date 30-Jun-2029
Bank/IFC Collaboration No	

Proposed Development Objective(s)

To improve the livelihoods and climate resilience of pastoral and agropastoral communities in the lowlands of Ethiopia.



Components

Component Name	Cost (US\$)
Component 1: Pastoral Risk Management for Resilience	228,000,000.00
Component 2: Integrated Rangeland Management	64,480,000.00
Component 3: Climate Resilient and Sustainable Livelihoods	91,490,000.00
Component 4: Project Management, Monitoring, Evaluation and Learning	40,030,000.00

Organizations

Borrower: Federal Democratic Republic of Ethiopia
 Implementing Agency: Ministry of Irrigation and Lowlands

PROJECT FINANCING DATA (US\$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? Yes
 Is this project Private Capital Enabling (PCE)? No

SUMMARY

Total Operation Cost	424.00
Total Financing	424.00
of which IBRD/IDA	340.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	340.00
IDA Credit	340.00

Non-World Bank Group Financing

Commercial Financing	4.00
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Unguaranteed Commercial Financing	4.00
Other Sources	80.00
International Fund for Agriculture Development	80.00

IDA Resources (US\$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
National Performance-Based Allocations (PBA)	340.00	0.00	0.00	0.00	340.00
Total	340.00	0.00	0.00	0.00	340.00

Expected Disbursements (US\$, Millions)

WB Fiscal Year	2024	2025	2026	2027	2028	2029
Annual	5.00	150.00	100.00	40.00	30.00	15.00
Cumulative	5.00	155.00	255.00	295.00	325.00	340.00

PRACTICE AREA(S)

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Climate Change; Water; Fragile, Conflict & Violence; Urban, Resilience and Land

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document



SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● High
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Substantial
8. Stakeholders	● Substantial
9. Overall	● Substantial

POLICY COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No

ENVIRONMENTAL AND SOCIAL

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant



ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

Legal Covenants

Sections and Description

The Recipient shall ensure that the Memoranda of Understanding, in form and substance satisfactory to the Association, for the management of the Project are duly executed not later than sixty (60) days after the Effective Date between: (a) MILLS and line ministries and other federal-level implementing agencies setting out expected deliverables and AWPB development; and (b) Regional Bureaus and relevant bureaus regarding their specific role in Project implementation and any funds flow required, according to Regional specificities, priorities, and Project activities.

Conditions

Type	Citation	Description	Financing Source
Effectiveness	5.01	No withdrawal shall be made until the Recipient has, through the Ministry of Irrigation and Lowlands (“MILLS”), prepared and adopted a Project Implementation Manual (“PIM”) in accordance with the provisions of Section I.B.1 of Schedule 2 to the Agreement”.	IBRD/IDA
Disbursement	Schedule 2, Section III, B.1.b	No withdrawal shall be made under Category (1), unless and until the Recipient, has recruited an environmental specialist and a social specialist in each Region implementing Project activities, and	IBRD/IDA



		assigned environmental and social specialist focal points in each Woreda and Kebele implementing Project activities.	
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I. STRATEGIC CONTEXT

A. Country Context

1. **Over the past three decades, Ethiopia has made significant gains in human and economic development, but an onslaught of recent and ongoing shocks has threatened to set back its progress toward reducing poverty and food insecurity.** Ethiopia has been among the fastest-growing economies in Africa, and from 2000 to 2016, it more than halved its rate of extreme poverty and cut undernourishment by 70 percent¹. However, with a GDP per capita of US\$1,028 in 2022 and at least one-quarter of its population living in extreme poverty, Ethiopia remains among the poorest and most food-insecure countries in the world². Furthermore, recent circumstances, including the COVID-19 pandemic; the onset of conflicts in Northern Ethiopia; the rise in food and energy prices and increases in the incidence of droughts, floods, pests, and disease, due to climate change events have potentially pushed more people into extreme poverty and food insecurity. As of 2020, one-quarter of the population was undernourished—up from 14 percent in 2016—and 34 percent of children under five were estimated to be stunted in 2022³. Today, over 20 million people in the country are affected by multiple overlapping humanitarian crisis including conflict, violence, and climate change⁴.

2. **These circumstances have significantly slowed down the economy.** At 6.2 percent, growth in gross domestic product (GDP) over the past three years averaged 3.2 percentage points less than it did pre-COVID-19⁵. This slowdown came atop a marked decline (of 12 percent) in the share of the working age population employed from 2013 to 2021. This share dropped from 81 percent in 2013 to 67 percent in 2021, while unemployment among those active in the labor market increased from 5 percent to 9⁶.

3. **The compounding effects of cyclical droughts and extreme weather have particularly contributed to reversing recent development and food security gains and diverted scarce development resources toward relief efforts.** The country has faced eight major droughts in the past 15 years. Since 2020, approximately 13 million people have faced severe drought conditions in Southern and Eastern Ethiopia, which are mostly inhabited by pastoral and agropastoral (PAP) communities⁷. Drought and flooding have been major causes of livestock and crop losses, which in turn have been associated with increases in poverty, destitution, and multifaceted vulnerabilities. In 2023, it was estimated that 11.8 million people needed food assistance in drought-affected areas alone, 59 percent more than in early 2022. As of 2023, 3.8 million women and children in these areas needed support to prevent or treat malnutrition⁸. These emergencies have led development partners, including the World Bank, to provide a rapid response, moving resources away from medium to long-term development needs. Hence, there is an equally urgent need to break the cycle of disaster and response by investing in longer-term resilience.

B. Sectoral and Institutional Context

4. **In Ethiopia's lowlands, livestock are both an asset and a source of income for most households.** Home to 12–15 percent of the national population, Ethiopia's lowlands⁹ that comprises of 61 percent of the total land mass of the country, are arid and semiarid areas where extensive livestock systems—especially the raising of

¹ The World Bank in Ethiopia. <https://www.worldbank.org/en/country/ethiopia/overview>

² The World Bank. Ethiopia Country Profile. <https://data.worldbank.org/country/ET>

³ World Bank. 2023. World Development Indicators.

⁴ <https://reliefweb.int/report/ethiopia/ethiopia-humanitarian-response-plan-2023-february-2023>

⁵ National Bank of Ethiopia. 2023.

⁶ Ethiopia National Labour Force Survey. 2021.

⁷ Ethiopia: Humanitarian Response Summary 2023.

⁸ World Food Programme. 2023. Regional Drought Response Plan, January–December 2023.

⁹ World Bank. 2019. *Pastoral Development in Ethiopia: Trends and the way Forward*. Washington, DC: World Bank.



cattle, small ruminants, and camels—are central to most people’s lives, supporting approximately 18 million people belonging to PAP communities. Lowland PAP livestock systems are of national significance to the extent that the animals raised in Ethiopia’s lowlands account for about 44 percent of Ethiopia’s total livestock population and about 90 percent of its live animal exports¹⁰. For context, the overall livestock sector accounts for an estimated 12–16 percent of GDP and 30–35 percent of agricultural value added¹¹.

5. **Poverty and food insecurity are particularly high within Ethiopia’s lowland PAP communities, which have been most affected by climate shocks in recent years.** As of 2022, about 60 percent of Ethiopia’s PAP households lived in extreme poverty. Although PAP households spend nearly all their income on food, many are food insecure and enjoy limited dietary diversity and nutrition. In lowland PAP areas, about 33 percent of children under five are stunted, 21 percent are wasted, and 17 percent are underweight¹². Ethiopia’s lowlands have been experiencing extreme weather events of historic proportions, with drought particularly affecting PAP communities in the Somali, Oromia, South, and Southwest Ethiopia regions, and flooding particularly affecting the Gambella region in the western part of the country¹³. Ethiopia’s lowlands have been in the throes of the most severe and protracted drought in recent history, having faced five very poor rainy seasons in a row since 2020. The effects of climate change have been more noticeable in Ethiopia’s lowlands than in its highlands, and the livestock sector has been hit harder than other parts of the agricultural sector.

6. **PAP households are highly vulnerable to the effects of climate change.** Their exposure comes from factors such as (a) their strong natural resource and ecosystem dependence, given their reliance on extensive livestock and crop production in arid and semiarid zones; (b) the preexisting weaknesses in institutional, technological, and financial capacity; (c) a lack of economic opportunities for diversification, remoteness, and a history of marginalization; and (d) the prevalence of violent conflict. The major climate hazards affecting PAP communities include drought, torrential rain and flooding, erratic rainfall, extreme heat, and climate-sensitive pests and pathogens including zoonotic diseases¹⁴. Climate change affects production systems directly through extreme weather events and, indirectly, through its negative effects on labor productivity¹⁵, cropping systems, land and water resources, irrigation facilities, pasture and forage, distribution of pests and diseases, and various downstream value chain activities such as processing, storage, transportation, and distribution¹⁶.

7. **The capacity of PAP systems to cope with climate shocks has been sharply curtailed by the violent conflicts playing out in their midst.** Violent conflict has constrained the mobility of people and livestock, and hence, their ability to access pasture, water, public services, and markets when natural hazards strike an area. Conflicts in PAP areas have developed alongside increases in resource competition, instances of overgrazing when livestock concentrate on a limited area, erosion of traditional conflict management mechanisms, and disengagement or lack of supportive public institutions.

¹⁰ Shapiro, B., et al. 2017. *Ethiopia Livestock Sector Analysis*. Addis Ababa: International Livestock Research Institute (ILRI).

¹¹ MoA (Ministry of Agriculture). 2012. *Ethiopia Country Programming Paper to End Drought Emergencies in the Horn of Africa*. Addis Ababa.

¹² World Bank. 2023. *The State of Welfare of Pastoral Communities in Ethiopia*. Washington, DC: World Bank.

¹³ United Nations World Food Programme. 2023. *More Than a Decade of Drought Impacts and Lessons Learned across the Eastern Horn of Africa 2011–2022*.

¹⁴ Reid H., M. Alam, R. Berger, T. Cannon, S. Huq, and A. Milligan. 2009. *Community-Based Adaptation to Climate Change: An Overview*.

¹⁵ International Labor Organization. 2019. https://www.ilo.org/global/publications/books/WCMS_711919/lang-en/index.htm.

¹⁶ Kassahun, A., H. Snyman, and G. Smit, G. 2008. “Impact of Rangeland Degradation on the Pastoral Production Systems, Livelihoods, and Perceptions of the Somali Pastoralists in Eastern Ethiopia.” *Journal of Arid Environments* 72 (7):1265–1281. Elsevier; Thornton, P. K., P. G. Jones, A. Alagarswamy, and K. Andresen. 2007. *The Temporal Dynamics of Crop Yield Responses to Climate Change in East Africa*. Godde,

C. M., D. Mason-D’Croz, D. E. Mayberry, P. K. Thornton, and M. Herrero. 2021. “Impacts of Climate Change on the Livestock Food Supply Chain: A Review of the Evidence.” *Global Food Security* 28. <https://doi.org/10.1016/j.gfs.2020.100488>.



8. **Fragility and conflict are also factors in PAP areas.** Significant recent conflicts in Ethiopia have largely been in Ethiopia's highlands. They include the recent conflict in the Amhara region, political conflict with the Oromia Liberation Front for which negotiations are under way, and the previous conflict in northern Ethiopia centered in and around the Tigray region. In lowland PAP areas, fragility has primarily been driven by the interaction of (a) competition for land, water, pasture, and livestock resources along inter- and intra-ethnic lines, (b) climate change, displacement, commercialization, and armed conflict challenges, (c) disputes associated with identity and ethnic federalism, land rights, access to strategic assets, and boundaries, and (d) cross-border and cross-boundary mixed migration (displacement, resettlement, and transhumance). Increasingly, fragility has also been driven by emerging risks associated with geopolitical fluidity in the Horn of Africa including the war in Sudan and port diplomacy and tensions with Eritrea and Somalia.

9. **Because of gender-related socioeconomic and cultural realities, women in lowland PAP communities are among the most vulnerable to climate change, and among the most hurt by it.** While fully engaged in PAP activities, women have limited and deeply asymmetrical access to, and control over, vital resources such as land, livestock, and household assets. For the most part, men oversee decisions relating to community and household resources. In addition, women are often in charge of tasks that are particularly affected by climate change, such as fetching water, collecting fuelwood, and growing fodder. Climate change is forcing women to travel further and spend more time on these tasks¹⁷. The additional household responsibilities borne by women also constitute important factors that diminish their ability to initiate and sustain climate change adaptation measures. Moreover, in times of severe drought, men often migrate to faraway places in search of water and pasture, leaving women to take over men's work in addition to their own, in exceptionally challenging circumstances.

10. **Meanwhile, lowland PAP systems lack many of the building blocks that would be needed to support their performance even in less challenging times.** At the production level, PAP areas lack (a) effective agroclimatic information and research systems; (b) effective extension, advisory, early warning, and technology commercialization systems; (c) effective veterinary, plant protection, business development, financial, and other support services; (d) adequate and well-maintained resource access and productive infrastructure; and (e) strong land and resource governance frameworks. In PAP areas, pasture and fodder quantity and quality are often affected by a lack of capacity to manage the spread of invasive species (such as *Prosopis Juliflora*) and prevent overgrazing. Local veterinary services often lack the capacity to respond to herders' needs in a timely and coordinated manner, and zoonotic diseases like Rift Valley fever, tuberculosis, avian influenza, anthrax, brucellosis, rabies, and trypanosomiasis (which is transmitted by tsetse flies) have become increasingly common. Moreover, the potential for the transboundary transmission of zoonotic diseases is heightened by the frequent crossing of borders by people and livestock to access markets, water, and grazing resources.

11. **The PAP sector also more broadly lacks many of the elements needed for value addition, commercialization, income diversification, and the pursuit of existing market opportunities.** These include (a) strong enterprises, value chain organizations, and market links, (b) developed urban centers that create demand for pastoral products and labor, (c) effective market information systems, rural roads, electricity, weighing stations, and market facilities, and (d) business and financial capacity. These and other shortcomings contribute to the fact that, in lowland PAP areas, productivity is low and declining, most exports are of live animals, and many households generate low and unreliable returns from weakly diversified sources of income.

12. **Building the resilience of PAP communities in the face of climate change has emerged as a development priority for the Government of Ethiopia (GoE).** The national Pastoral Development Policy and Strategy of 2020 recognizes pastoralism as a viable economic activity that is suitable and adapted to Ethiopia's vast rangelands,

¹⁷ Munyae M. Mulingo and Melese Getu. 2013. Impacts of Climate Change and variability on Pastoralist Women in Sub-Saharan Africa. OSSREA, Kampala, Uganda.



and views “pastoral mobility” as key to ensuring the system’s sustainability¹⁸. The development of PAP systems is also prominently featured in the government’s Ten-Year Development Plan for 2021–2030, which calls for investments that will support growth, poverty reduction, and climate resilience, including in the agricultural sector. The plan sets ambitious targets for the livestock sector. Its intent is to raise the livestock sector’s productivity and output while enhancing its natural resource base and enhancing its contributions to climate change mitigation (through reduced greenhouse gas (GHG) emissions and increased carbon storage)¹⁹. The plan also foresees a significant increase in private sector involvement.

13. **Recent studies point to a number of pathways and measures that could help PAP systems adapt to climate change and achieve their full potential**²⁰. A 2023 World Bank study²¹ identifies improvements in livestock productivity, livestock commercialization, livelihood diversification, and disaster risk management (DRM) capacity as the key pathways for achieving higher levels of poverty reduction, food and nutritional security, and livelihood resilience in PAP areas (at the household and system levels) in the face of climate change and other sources of risk. Examples of measures include (a) improving the delivery of human development services, including access and utilization of basic social and economic services to strengthen human capital; (b) developing a safety net system that more explicitly considers climate change and helps households meet short- and long-term needs; (c) developing and sustainably managing water and rangeland resources, including pasture and forage, and ensuring households’ secure access to key natural resources; (d) strengthening and expanding the reach of rural financial institutions and services; (e) empowering existing customary institutions to support peace building and sustainable resource use efforts; (f) promoting land registration and investments; (g) strengthening climate legislation; (h) building climate-resilient infrastructure; and (i) strengthening DRM systems²².

14. **Based on the success of the ongoing Lowlands Livelihood Resilience Project (LLRP I, P164336), the GoE proposes to develop the second phase of the project, LLRP II.** LLRP II aims to build on the achievements of LLRP I and help the GoE achieve its goals for the development of PAP systems and communities in the lowlands of Ethiopia. LLRP I was approved in May 2019 with an initial allocation of US\$451 million, which was later revised to US\$325 million. The project is set to close in October 2025. Its main objective is to improve the livelihood resilience of 2.5 million PAP communities in Ethiopia.

C. Relevance to Higher Level Objectives

15. **LLRP II is aligned with national strategies and the World Bank Group’s Country Partnership Framework (CPF).** The project is aligned with the World Bank Group’s CPF for Ethiopia (FY2018–2023) (Report No. 119576-ET) discussed by the Board on May 22, 2017, particularly pillar 3, which aims to build resilience and inclusiveness. It is also aligned with key national development strategies including the Ten-Year Development Plan (2021–2030), which considers Climate-Resilient Green Economy as one of its strategic pillars, and the Long-Term Low Emission Development Strategy for 2050.

16. **The project is explicitly designed to implement Ethiopia’s climate strategies.** By helping minimize the emission intensities from livestock and emissions from land-use changes in the lowlands, the project will support

¹⁸ World Bank. 2023. *The Welfare Situation of Mobile Pastoralists in Ethiopia*.

¹⁹ Federal Democratic Republic of Ethiopia Planning and Development Commission, Ten-Year Development Plan: A Pathway to Prosperity.

²⁰ Addis Ababa University. 2022. *Socioeconomic and Food Security Situation of PAP Regions of Ethiopia*; World Bank and DFID. 2019.

Poverty and Vulnerability in the Ethiopian Lowlands: Building a More Resilient Future; Esayas Nigatu Gebremeskel, Solomon Desta, and Girma K. Kassa. 2019. *Pastoral Development in Ethiopia: Trends and Way Forward*. World Bank.

²¹ World Bank. 2023. *The Welfare Situation of Mobile Pastoralists in Ethiopia*.

²² Managing Disaster Risks for a Resilient Future A Strategy for the Global Facility for Disaster Reduction and Recovery 2013–2015. December 2012.



the decarbonization targets laid out under Ethiopia’s 2021 Nationally Determined Contribution (NDC)²³. The project will also support the National Adaptation Plan (NAP) of 2019²⁴, also known as Ethiopia’s Climate Resilient Green Economy Strategy. Of the 18 adaptation options identified by the NAP, the project will support food security, sustainable natural resources management, and early warning systems. The project design is aligned with the recommendations of the CCDR²⁵, which include (a) strengthening ongoing efforts to mainstream the climate agenda at the subnational level by building institutional capacity for early warning and action systems and Climate Information Services (CIS) and leveraging the woreda disaster risk profiles (WDRPs), (b) supporting nature-based solutions (NBS) including integrated rangeland management to increase groundwater recharge, and (c) improving natural resource governance by building the capacity of conventional and customary rangeland management institutions and strengthening the national rangeland health monitoring system.

17. **The project is aligned with key elements of the World Bank’s strategy for fragility, conflict, and violence (FCV).** The risk and resilience assessment (RRA) for Ethiopia identified competition for land, territory, and resources as a key driver of FCV in a context characterized by the scarcity and politicization of usable land. The project will directly address these sources of FCV. The project will also build on sources of resilience identified in the RRA by working to mend and strengthen social capital in dispute resolution and building the capacity of the public sector to provide services. FCV-sensitive elements of the project include its flexibility to adapt to new situations, local-level mobilization processes, community-based conflict analysis and resolution, integrated natural resources management, promotion of alternative and efficient energy technologies, inclusion of vulnerable groups, and support for intra- and inter-community institutions. Finally, the project is aligned with the World Bank mission to end extreme poverty and boost shared prosperity on a livable planet.

18. **The project is also aligned with the Country Strategic Opportunities Program (COSOP) of the International Fund for Agricultural Development (IFAD) for Ethiopia for FY23–FY30.** The project is being co-financed by IFAD. It is aligned with the two strategic objectives of the IFAD COSOP 2023–2030: (a) enhanced resilience and productivity of ecosystems in arid and semi-arid lowlands and moisture-stressed highlands, and (b) strengthened agricultural value chains. The project is also in line with the three priorities of the IFAD 13 financing cycle: (a) enhancing focus on fragile contexts, (b) investing in biodiversity and climate resilience, and (c) increasing engagement with the private sector.

19. **The project also reflects United Nations System priorities.** The project addresses all the priorities of the Sendai Framework for Disaster Risk Reduction²⁶, including Target G, which is to enhance the availability and accessibility of multi-hazard early warning systems and public disaster risk information by 2030²⁷. The project is also aligned with the five priority pillars of the Strategy for Sustainable and Resilient Livestock Development (SSRLD) for 2022–2037 of the Inter-Governmental Authority for Development (IGAD). Supported by the World Bank, the SSRLD aims to mainstream climate change adaptation and mitigation in livestock sector development plans,

²³ Federal Democratic Republic of Ethiopia. 2021. Updated Nationally Determined Contributions. July 2021 https://unfccc.int/sites/default/files/NDC/2022-06/Ethiopia%27s%20updated%20NDC%20JULY%202021%20Submission_.pdf

²⁴ Federal Democratic Republic of Ethiopia. 2019. Ethiopia’s Climate Resilient Green Economy National Adaptation Plan. <https://www4.unfccc.int/sites/NAPC/Documents/Parties/Final%20Ethiopia-national-adaptation-plan%20%281%29.pdf>.

²⁵ World Bank. 2024. Ethiopia - Country Climate and Development Report : Executive Summary . Washington, D.C. : World Bank Group.

²⁶ Sendai Framework for Disaster Risk Reduction 2015–2030.

²⁷ <https://reliefweb.int/report/ethiopia/midterm-review-implementation-sendai-framework-disaster-risk-reduction-2015-2030-ethiopian-voluntary-national-report-september-2022>.



II. PROJECT DESCRIPTION

A. Project Development Objective

20. To improve the livelihoods and climate resilience of pastoral and agropastoral communities in the lowlands of Ethiopia.

PDO Level Indicators

21. The PDO achievement will be monitored and measured using the following key results indicators:
- (a) Climate preparedness and resilience building infrastructure constructed and operational (number)
 - (b) Land area under sustainable landscape management practices (hectares)
 - (c) Increase in yield of selected livestock and crop commodities (percentage)
 - (d) Beneficiaries with 25 percent or more annual household income increment due to project interventions (percentage).

B. Project Components

22. The project rests on four complementary components that aim to improve the livelihood and climate resilience of PAP households, communities, and ecosystems. Resilience is defined as “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management”²⁸. In the context of LLRP II, improving livelihood and climate resilience rests on enhancing the capacity of lowland PAP households, communities, and production systems to anticipate, absorb, accommodate, adapt to, transform, or recover from climate shocks in a timely and efficient manner, while (and including by) ensuring the health and regeneration of lowland ecosystems and natural resources. Increases in production and productivity, better access to markets, roads, services, health, education, diversified diets, energy, and sustainable sources of income, and enhanced capacity to manage local resource-related conflicts are expected, among other improvements, to contribute to these outcomes.

Component 1: Pastoral Risk Management for Resilience (US\$228 million, including US\$184 million IDA equivalent and US\$44 million IFAD)

23. This component will enhance the absorptive and adaptive capacities of PAP communities and their ecosystems by strengthening DRM capacities and developing public infrastructure that supports disaster preparedness and climate resilience.

Subcomponent 1.1: Strengthening Lowlands Early Warning and Response System and Climate Information Services (US\$9 million, including US\$7 million IDA equivalent and US\$2 million IFAD)

24. This subcomponent will finance activities that relate to strengthening the early warning and response system and CIS in Ethiopia’s lowlands with a focus on ‘last mile connectivity’. This focus will ensure that information and advice about impending climate change-exacerbated hazards (including drought, floods, conflicts, livestock disease outbreaks, higher temperatures, and pest infestations) reach households across PAP areas in a timely fashion. To strengthen the early warning and response system, the project will finance the preparation of WDRPs. WDRPs will be prepared or updated (where they already exist) for all 120 of the project woredas in the eight regions and outline the major vulnerabilities of each woreda. In a process led by the Ethiopian Disaster Risk Management Commission (EDRMC), WDRPs will be prepared using participatory processes involving community representatives

²⁸ United Nations Disaster Risk Reduction. Sendai Framework Terminologies on Disaster Risk Reduction. <https://www.undrr.org/terminology/resilience>.



and key stakeholders at the woreda level. Experienced international organizations, such as the International Institute for Rural Reconstruction (IIRR), will facilitate the process and prepare a report using an interactive online platform to be hosted by the EDRMC. The Consultative Group on International Agricultural Research (CGIAR), through the Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) Project, will support the integration of climate information into WDRPs. The subcomponent will also (a) build the Government's and community's awareness of DRM; (b) support the EDRMC in rolling out the new Multi-Hazard, Impact-Based Early Warning and Early Action System (MH-IB-EW-EAS) roadmap for 2023–2030, in the lowlands, including by helping it develop region-specific implementation plans; (c) support the implementation of the National Framework for Climate Services (NFCS) in the lowlands by the Ethiopian Meteorology Institute (EMI); (d) strengthen partnerships and coordination among the Ministry of Irrigation and Lowlands (MILLs), EDRMC, and EMI, to ensure the successful implementation of the MH-IB-EW-EAS and NFCS in the lowlands; and (e) build the institutional, organizational, and human resource capacity of key stakeholders, including the EDRMC and EMI (at the federal, regional, and woreda levels), with a focus on forecasting and last mile communications in the lowlands of Ethiopia. In relation to CIS, the project will build capacities to collect, analyze, process, and disseminate information by (a) procuring automated weather stations; (b) developing the use of various communication channels such as short message service (SMS), community networks, local media, and public address systems; (c) investing in data storage and management capacities and other IT infrastructure; and (d) enhancing knowledge on climate change adaptation and mitigation through training programs and South-South exchange. The capacity-building activities under Subcomponent 1.1 will be coordinated with partners such as the Asian Disaster Preparedness Center and projects including the Ethiopian Flood Management Project (EFMP), the Netherlands' Water at the Center of Climate Project, the European Union Disaster Risk Reduction Project, and the Building Resilience in Ethiopia Project. The subcomponent will also seek technical support from the AICCRA Project of the International Livestock Research Institute (ILRI).

Subcomponent 1.2: Implementing Disaster Preparedness and Resilience Investments (US\$219 million, including US\$177 million IDA and US\$42 million IFAD)

25. This subcomponent will support the identification of, and selectively fund, a range of investments in climate-smart public economic infrastructure (PEI), that is, physical infrastructure that can help mitigate the impacts of climate-related (and other) hazards on PAP systems and communities. The identification, selection, and planning of PEI investments will proceed as follows.

- (a) **Regional Disaster Preparedness and Resilience-building Strategic Investment Plans (DPRSIPs).** Based on the WDRPs prepared under Subcomponent 1.1. and the rangeland management and investment plans (RMIPs) that were prepared under LLRP I, regional-level DPRSIPs will be prepared for each of the eight project regions in consultation with selected woredas and communities. Each DPRSIP will lay out a 5–10-year regional investment plan addressing key socioeconomic and climate-related challenges. Investment activities will be selected for inclusion in DPRSIPs based on their expected impacts, sustainability, and feasibility. The plans' preparation will be supported by the IIRR. Once finalized, the plans will become public documents (made available on the EDRMC's online platform). The scope of the regional DPRSIPs will be broader and beyond the budget envelope of LLRP II. Thus, LLRP II will finance selected activities while several development partners active in the lowlands will be able to finance others.
- (b) **Climate-smart PEI investment plan for LLRP II.** Facilitated by MILLs (LLRP II's Project Coordination Units [PCUs]), the project will prepare an overall PEI investment plan for the project, aggregating the PEI investments it intends to carry out. The full implementation of DPRSIPs is likely to require a large funding envelope that exceeds LLRP II's budget. Thus, the project will screen and select a subset of DPRSIP activities to finance. The screening will also apply to 71 PEI subprojects²⁹ worth US\$104 million already identified by

²⁹ LLRP I supported detailed feasibility studies and designs for approximately 71 subprojects across the seven project regions that it did not have the resources to implement. The detail studies are completed for 49 subprojects while the studies for 22 subprojects can be



LLRP I for which feasibility studies are either fully completed or will be completed by the time LLRP II is effective. Selection criteria will include readiness, sustainability, climate change sensitivity, complementarity with Components 2 and 3, other ongoing initiatives (for example, the World Bank-funded De-risking, Inclusion and Value Enhancement of Pastoral Economies in the Horn of Africa Project (P176517)) and the strength of operation and maintenance arrangements. The screening process will be participatory and involve all concerned region-level government and nongovernmental stakeholders. Once the specific PEI subprojects for financing under LLRP II are identified, the project will finance their detailed preparation or updating. The total cost of these activities will not exceed 5 percent of the actual investment cost for the PEI.

(c) **Climate-smart PEI investments.** At this stage, the project will move into the implementation of the project's climate-smart PEI investment plan in collaboration with relevant sector bureaus in each project region. Together, these investments are set to reduce the climate vulnerability of the PAPs Eligible climate-smart PEI investments to be financed under this subcomponent will include the construction, upgrading, or rehabilitation of (i) drought-resilient water resource infrastructure for both human and livestock consumption (such as deep water well, small, and micro-dams), (ii) efficient and innovative small-scale irrigation schemes (up to 500 ha per scheme), (iii) all-weather feeder roads, (iv) cold storage and feed stores, (v) livestock market facilities, (vi) veterinary service facilities, and (vii) flood management works, prioritizing nature-based solutions (NBS) identified under Component 2. The PEI investments will be strategically sited along key migration and trade corridors, and water supply infrastructure will be located with careful consideration of available grazing resources to avoid overgrazing and degradation in their vicinity. To ensure climate resilience, the design and specifications of the PEI investments will be informed by climate vulnerability assessments. Water resources development to improve drought resilience will be carried out in selected drought-prone regions such as Afar, Somali, and Oromia. In these areas, water supply and sanitation schemes will focus on already drilled boreholes and procuring and supplying deep well drilling machines with all accessories. Details on the operational modalities of these machines are outlined in the Project Implementation Manual (PIM). The project will ensure the establishment of operation and maintenance mechanisms for all LLRP II-financed PEI investments. To the extent possible, the project will promote the use of green energy for water supply and sanitation and all the livestock and other facilities such as cold storages, feed stores, laboratories etc. Tailored training will be provided on groundwater investigation and operations management.

Component 2: Integrated Rangeland Management (US\$64.48 million, including US\$52.16 million IDA equivalent and US\$12.32 million IFAD)

26. Building on the success of LLRP I, the project will continue to use rangelands as the entry point for investments. Component 2 aims to improve the absorptive and adaptive capacities of PAP ecosystems by monitoring and improving the health and productivity of natural rangeland resources (improving their soil stability, hydrologic function, vegetation productivity, and biotic integrity) and attenuate community-level conflict in PAP areas. Healthier and more productive rangelands, in turn, will increase livestock productivity, PAP households' livelihoods, and PAP systems' overall resilience. They will also increase above- and below-ground soil carbon stocks, contributing to climate change mitigation and resilience. To achieve these results, the component will apply integrated, participatory, nature-based, and climate-smart approaches and leverage renewable and efficient energy sources and technologies. It will also leverage selected research outputs and innovations generated by ILRI's AICCRA Project on feed, pasture management, and integrated rangeland management in the lowlands. When possible, the project will promote NBS with guidance from the World Bank's NBS Invest Program.

completed in three months. These subprojects include 27 water, nine small-scale irrigation schemes, nearly 748 km rural access and feeder roads, three bridges, and nine livestock facilities, and so on.



Subcomponent 2.1: Rangeland Health Monitoring and Institutional Capacity Building (US\$4.35 million, including US\$3.48 million IDA equivalent and US\$0.87 million IFAD)

27. The subcomponent will support (a) the establishment of a national rangeland monitoring system (RMS) and (b) rangeland monitoring and management institutions, proactively targeting women in capacity-building efforts.

(a) **RMS.** The subcomponent will finance the establishment and operationalization of a national RMS that monitors the overall health of national rangeland and related trends. In collaboration with the MoA, Agricultural Transformation Institute (ATI), Alliance Biodiversity International and International Center for Tropical Agriculture (CIAT), and ILRI, the project will develop the system and ensure its capacity to (i) synthesize remote sensing data and leverage it to generate usable products or reports; (ii) conduct ground-truth analysis derived from satellite-based imagery in ways that draw on communities' insights (including women's); and (iii) disseminate rangeland-related information and advisories to different users in a timely fashion by leveraging user-friendly digital platforms and public and private delivery channels. The RMS will facilitate the estimation of baseline GHG emissions in preparation for possible future participation in carbon market schemes. The latter may help incentivize the adoption of climate-smart rangeland management strategies. LLRP II will coordinate its carbon market readiness activities with the Oromia Forested Landscape Program (Phase II, P151294). The RMS will be linked to the MoA's existing system for data sharing.

(b) **Capacity building for rangeland management and monitoring institutions.** The subcomponent will strengthen the capacity of rangeland management institutions, including existing and newly established rangeland management committees and customary institutions. Customary institutions will be supported in the implementation of traditional (indigenous) rangeland management practices such as livestock mobility, herd dispersal, and segregation. The activities to be financed will include trainings, consultative workshops, and visits including cross-border ones.

Subcomponent 2.2: Participatory Rangeland and Pasture Management (PRPM) (US\$52.5 million, including US\$42.5 million IDA equivalent and US\$10 million IFAD)

28. This subcomponent will support (a) the preparation of rangeland management plans (RMPs), (b) the implementation of rangeland and pasture development activities, and (c) the production and marketing of forage and feed.

(c) **RMPs.** The subcomponent will finance the updating of the 28 existing RMIPs prepared under LLRP I and the formulation of new RMPs through participatory rangeland management³⁰ principles to identify additional climate-smart mitigation and nature-based solutions³¹, validate their feasibility based on indicative land-use planning and characterization and formulate rangeland management bylaws. The project will ensure that all the RMPs have updated maps of livestock mobility routes and that related investments are aligned with livestock mobility and trade corridors.

(d) **Rangeland and pasture development.** Guided by the RMPs, and privileging inclusive, climate-smart, and nature-based solutions, the subcomponent will finance rangeland and pasture development activities. They may include (i) delineation, mapping, and land-use characterization of the project intervention areas; (ii) restoration of degraded and overgrazed rangelands through physical, biological, and agronomic soil and water conservation measures including sowing, reseeding, and community-based and temporary area closures that enhance rangeland productivity and the availability of pasture, especially during the dry season and droughts; (iii) development of silvo-pastoral and agro-silvo-pastoral systems through the plantation and management of multipurpose trees; (iv) wetland protection and maintenance to buffer the

³⁰ Flintan, F., and A. Cullis. 2010. *Introductory Guidelines to Participatory Rangeland Management in Pastoral Areas*. USA: Save the Children.

³¹ Examples of NBS for rangelands include the enclosure of degraded lands to enable their natural regeneration, conservation of endangered plant species and management of alien invasive plants, and plantation of multi-purpose trees on pasture.



impacts of floods/droughts and enhance biodiversity and food security for agropastoralists relying on receding farming; and (v) management of invasive species using multiple techniques such as prescribed fire (to reduce vulnerability to uncontrolled wildfire, the risk of which is exacerbated by climate change), targeted and selective clearing and de-rooting, and management by utilization (for example, the use of *Prosopis juliflora* as a source of biomass energy³² and feed). Through these interventions and water infrastructure investments carried out under Subcomponent 1.2, the project will facilitate the sustainable management of water for livestock and human consumption in dry and wet season grazing areas and livestock migration and trade corridors.³³ The subcomponent will also finance technical support, training, and supervision at the federal, regional, and woreda levels.

- (e) **Production and marketing of forage.** The subcomponent will improve the availability and quality of forage with the aim of increasing livestock productivity in normal times and ensuring their survival in times of drought. Guided by the fodder and feed value chain analysis carried out under LLRP I, the subcomponent will support the production and marketing of forage by financing (i) technical support to the fodder producer and marketing cooperatives and micro and small enterprises (MSEs) established under Subcomponent 3.2, with a focus on women, training, and input provision, (ii) the establishment of nurseries and grass and forage seed production and multiplication centers (in collaboration with research centers) and the provision of matching grants in coordination with Subcomponent 3.2, (iii) the development of productive alliances between fodder producers (such as MSEs) and traders, (iv) the facilitation of local and cross-border market links for the offtake of excess forage, and (v) support to pilot of joint management of feed stores through public-private partnerships. The subcomponent will target production of high yielding, nutritive and highly digestible forage species with a potential to lower carbon intensity per unit of livestock product, meat, or milk, produced. The project will not encourage government-led mass production and free distribution of fodder, as this would impede the sector's commercialization. However, in the event of a drought emergency (forecast with the support of Subcomponents 1.1 and 2.1), the project may facilitate and support fodder production and marketing in drought hotspot areas in collaboration with MSEs through the provision of inputs and advisory services. The subcomponent will be closely coordinated with Subcomponent 1.2, which may finance the construction of feed stores and processing plants, as well as Subcomponent 4.2, under which the project will support the development or updating of policies and strategies on the privatization and commercialization of fodder and feed production in PAP areas.

Subcomponent 2.3: Resource-Related Conflict Management and Mitigation (US\$7.63 million, including US\$6.18 million IDA equivalent and US\$1.45 million IFAD)

29. This subcomponent will equip PAP stakeholders with tools and capacities to address root causes of resource-related community-level conflict in PAP areas. Strong conflict management governance systems are critical to ensure peace and cohesion in face of climate change related events, amongst others. The project will approach this by updating conflict assessments conducted during LLRP I and assessing new project areas, with a newly introduced focus on the identification of: (a) stakeholder groups to include in the project's participatory processes (with due attention to minority and vulnerable groups); (b) the drivers of conflict in PAP areas; (c) conflict hotspots within project-targeted areas; (d) customary and indigenous peace building and conflict resolution institutions and mechanisms; and (e) risks posed by recent geopolitical developments and fragility in proximate highland areas. Based on updated findings, the subcomponent will: (a) ensure the inclusion and representation of identified stakeholders in project-supported groups and local institutions and their active engagement in the

³² The project will also promote and facilitate engagement of the private sector in managing *Prosopis Juliflora* through utilization as a source of green energy for the cement industry.

³³ This activity will be based on available GIS-based mapping and documentation of mobility routes, migration corridors, and wet and dry season grazing areas prepared by LLRP I and IGAD.



planning and validation of WDRP and DPRSIPs and the selection and implementation of PEI investments, and (b) in identified hotspots, support the development and empowerment of inter-communal peace committees³⁴ to oversee the project activities at local levels, foster consensus, and meet regularly to address and mitigate grievances associated with project interventions.

30. The subcomponent will also (a) help the Government identify, formulate, and enforce appropriate pastoral land tenure and land-use policies and strategies that legally recognize and certify customary pastoral land ownership and resource rights and enhance conflict resolution and arbitration processes; (b) promote modern, gender-sensitive and climate-smart technologies including fuel-efficient and safe cook stoves and alternative energy sources such as improved eco-design wood stoves with less fuel-wood usage, biogas stoves and solar cooker replacing wood-inefficient traditional stoves that involve lots of tree cuttings and deforestation, and high GHG emission ; and (c) support social cohesion through project messaging and by, for example, organizing sporting events, cultural days, environmental campaigns, project activity inauguration and completion, and other events that convey project messages. Importantly, conflict management and peacebuilding efforts under this subcomponent will be complemented by activities under other relevant subcomponents. The PIM will further describe procedures for ensuring the equitable targeting of project resources across subcomponents and adjusting to security risks if and where they arise, including by pausing or reallocating project resources and using third-party monitoring, as appropriate.

Component 3: Climate Resilient and Sustainable Livelihoods (US\$91.49 million, including US\$71.445 million IDA equivalent, US\$16.045 million IFAD, and US\$4 million in capital mobilized from community groups)

31. This component aims to enhance the absorptive and transformative capacities of PAP household by increasing, diversifying, and stabilizing their incomes, including those of households who are moving out of the pastoral system, with a focus on promoting climate-smart technologies and value chains, raising fewer but more productive animals, and increasing productivity while lowering GHG emissions.

Subcomponent 3.1: Crop and Livestock Productivity and Climate Resilience (US\$37 million, including US\$30 million IDA equivalent and US\$7 million IFAD)

32. This subcomponent will promote the development and adoption of a range of gender-sensitive and climate-smart technologies and practices that increase the productivity and output of crop and livestock production systems while simultaneously reducing their carbon intensity. Bundles of adapted, proven, and scalable innovations, technologies, and practices will be identified for different project locations, forming so-called ‘smart packs’. These will be put together in collaboration with the Ethiopian Institute of Agricultural Research (EIAR), regional universities and research centers, and CGIAR institutes such as International Center for Agricultural Research in Dryland Areas (ICARDA) and AICCRA.

33. To transfer smart packs to PAP households, the subcomponent will work with existing public and private extension and advisory services and build their capacity in targeted ways. It will also consider existing strategies such as the livestock extension strategy developed by the MoA in collaboration with the ATI. By working with multiple extension service providers, including Digital Green Ethiopia, ATI, and private advisory service providers supported by AICCRA such as Lersha³⁵, the project will support the Government’s pluralistic approach to extension. Following a capacity needs assessment, the subcomponent will finance the strengthening of existing PAP training centers, including the rehabilitation, equipping, furnishing of training centers; supply of materials; development and delivery of training modules; and production of printed communication materials on best practices, innovations, and technologies. The subcomponent will also support the demonstration of technologies, supply of inputs for demonstration and training purposes, and peer-to-peer learning events. In carrying out these activities,

³⁴ The inter-community peace committee will consist of elders, religious leaders, women, youth, woreda officials, and police.

³⁵ Lersha, a private sector initiative in Ethiopia, is a “one-stop digital service for smallholder farmers that provides advisory content on climate-smart agriculture solutions, weather information, and facilitates access to agri-credit and agri-insurance.”



the project will apply the agropastoral field school approach³⁶ and adopt and pilot ILRI's Pioneer Positive Deviance (P-PD) approach for PAP-led livestock adaption activities³⁷. The required technical and material supports will be provided by the project for implementation of the agropastoral field school and P-PD approaches. The subcomponent places a specific emphasis on gender, aiming to create technologies and practices grounded in an understanding of the primary obstacles hindering women's adoption of adaptation strategies in Ethiopia and in similar contexts³⁸.

34. Smart packs will be developed for: (a) nutrition-sensitive agropastoralism, (b) livestock breeds, (c) animal health service and One Health, (d) feed, and (e) husbandry and herd management.

- (a) **Nutrition-sensitive agropastoralism.** Forms of agropastoralism featuring both crop production and transhumance are growing in PAP areas. In this context, the subcomponent will supply seeds of higher-yielding, more nutritious, and drought-tolerant crop varieties. It will also finance activities, including trainings and inputs supplies, relating to improved dryland farming practices and conservation agriculture such as crop rotation, intercropping, agroforestry, green manure production, small-scale and household poultry production, apiculture, and aquaculture. The subcomponent will finance the training of agropastoralists and extension workers on conservation agriculture practices and support demonstrations in selected areas. The subcomponent will also support nutrition education with a focus on improving dietary diversity, particularly for women and children. Combined with other interventions addressing key drivers of child undernutrition and demand-driven nutrition-sensitive irrigation (water, sanitation, and hygiene) and human and animal health services, the project's nutrition-sensitive agropastoral activities, will help accelerate stunting reduction.
- (b) **Livestock breeds.** The subcomponent will finance breed improvements by supporting the ICARDA-led Community-Based Climate Resilient Breeding Program, which focuses on the selection of local breeds of small ruminants and cattle with preferred traits. LLRP II will finance the supply of improved local breeds for demonstration activities, the establishment of community ranches, and the training of communities and local technicians on **breeding** techniques and performance data management. Animals are bred for qualities such as heat and disease tolerance³⁹, feed efficiency, productivity, and reproductivity. Some of these qualities are associated with a lower carbon intensity, including by accelerating animals' growth and hence reducing the time to slaughter. The subcomponent will work with communities, women, and extension workers to promote and expand Community Based Breeding Program (CBBP) activities across project regions, including through artificial insemination. The project will also facilitate the provision of targeted technical support to the CBBP by ICARDA.
- (c) **Animal health service and One Health.** The subcomponent will strengthen public and community-based animal health and veterinary services to control the burden of animal disease. This is expected to increase livestock productivity and reproductivity, reduce livestock (and especially calf) mortality, and mitigate the sector's carbon intensity. The subcomponent will (i) expand community-based animal health service delivery capacity by upskilling community animal health workers (CAHWs) to become

³⁶ Details on the specific extension approaches and methodologies are provided in the PIM.

³⁷ Farmer-led adaptation identified with the P-PD approach demonstrates endogenous innovations scalable through farmer-to-farmer scaling networks.

³⁸ The Africa Gender Innovation Lab is preparing a white paper on gender and climate. The white paper focuses on women's constraints to the adoption of climate adaptation strategies in Sub-Saharan Africa. The white paper will examine the main constraints to women's adoption of adaptation strategies in Sub-Saharan Africa, and effective interventions that can lift those constraints and help women benefit from these strategies equally to men. The project will use evidence from the white paper to ensure that the climate-smart technologies and practices are sufficiently gender-sensitive.

³⁹ For example, the local *Sheko* breed is tolerant to tsetse fly diseases.



community agro-vet entrepreneurs (CAVEs); training new CAVEs⁴⁰, with a focus on women; and providing CAVEs and CAHWs with ‘Kickstarter’ veterinary drugs and equipment; (ii) build the capacity of public livestock health services, including by rehabilitating and equipping their facilities (veterinary clinics, laboratories, and research centers), providing targeted technical training for veterinarians and technicians at the woreda and community levels, and establishing and equipping mobile veterinary clinics; (iii) combat the spread of zoonotic disease, including trypanosomiasis, which is spread by tsetse flies⁴¹; and (iv) better control transboundary livestock diseases and invasive plants in Ethiopia—with a focus on the lowlands, livestock trade corridors, and the cross-border movement of livestock—by advancing the One Health approach. This will be done by financing platforms for the coordination of environmental, human, and animal (livestock and wildlife) health policies and measures at the woreda and regional levels, supporting the existing One Health Steering Committee (at the federal and regional levels), and facilitating its downscaling to the woreda level and financing South-South exchange on One Health topics and experience. To promote the One Health approach, the project will partner with the MoA, Ethiopian Public Health Institute, Wildlife Conservation Authority, Environmental Protection Authority, Forest and Climate Change Commission, and Veterinarians without Borders Switzerland (*Vétérinaires Sans Frontières Suisse*, VSF-Suisse) and draw on the practical experiences generated by the VSF-Suisse and ILRI One Health for Humans Environment, Animals, and Livelihoods Project.

- (d) **Feed.** The subcomponent will increase PAP households’ and MSEs’ access to compound feed and forage resources including seeds (in coordination with Subcomponent 2.2). This is expected to improve animal nutrition, increase animals’ feed conversion rate, and reduce the sector’s carbon intensity. The subcomponent will: (i) supply and demonstrate highly digestible, higher-yielding, and heat-tolerant seeds of forage species⁴²; (ii) conduct demonstrations and facilitate PAP-to-PAP learning events; (iii) pilot and demonstrate innovative and climate-smart feed and fodder production and management practices⁴³ (at times in coordination with irrigation infrastructure built under subcomponent 1.2); (iv) in partnership with VSF-Suisse, demonstrate and offer trainings on hydroponics⁴⁴ and supply-related inputs; and (v) supply small-scale feed processing machinery for demonstration purposes.
- (e) **Husbandry and herd management.** The subcomponent will identify and demonstrate good animal husbandry practices with a focus on selecting animals, getting them to market faster (that is, when they have attained a marketable weight), and removing nonproductive animals from the herd. These practices will enhance herd productivity and reduce herd and sector-level carbon intensity. The subcomponent will also train PAP households on animal welfare as well as the handling, herding, housing, and transportation of animals; sanitation techniques to ensure animal health; food safety and public health; and other practices such as the dehorning of cattle to reduce injury in the herd, management of calves, lambs, and kids to increase their survival and fasten weaning, and branding and castrating. The subcomponent will collaborate with Subcomponent 3.2 in promoting the Ethiopian Livestock Identification and Traceability System (ET-LITS) for animals of targeted households. The

⁴⁰ CAVEs correspond to a new approach to engaging CAHWs on diverse agro-vet activities to diversify and increase their incomes from the sector and hence sustain their services.

⁴¹ For example, in collaboration with the International Center of Insect Physiology and Ecology (ICIPE) and MSEs, the project will finance the production and distribution of collar-mounted tsetse fly repellents (on cattle) and tsetse traps and targets (insecticide-impregnated screens) and provide technical support and inputs to MSEs—primarily women-led ones—to become involved in the production and sale of traps.

⁴² Including *Brachiaria brizantha*, more commonly known as climate-smart wonder grass, Napier grass, Desmodium, spineless cactus (*Opuntia ficus-indica*), which can be consumed by people and animals and help with erosion control, and forage trees.

⁴³ For example, crop rotation, intercropping of legumes with maize, the planting of forage trees, uses of crop residues, soil fertility management, and salinity management in irrigated farms and fodder and feed storage innovations and technologies at the household level.

⁴⁴ The technique of growing fodder using a water-based nutrient solution instead of soil, to cultivate fast-growing, high-quality, and environmentally sustainable fodder.



proposed husbandry activities will directly contribute to building adaptive capacity to floods and droughts.

Subcomponent 3.2: Commercialization and Livelihood Diversification (US\$55 million, including US\$42 million IDA equivalent, US\$9 million IFAD and US\$4 million from community contributions)

35. This subcomponent will foster the commercialization of PAP production systems and the diversification of PAP household incomes by supporting the development of crop and livestock value chains and reducing exposure to and dependency on drought vulnerable livelihoods. Focus value chains will include those for live animals (including camels), red meat, milk, hide and skin, fodder, fish, honey, gums and resins, horticulture, and potentially others.

- (a) **Producer and marketing groups.** The subcomponent will support a range of private sector initiatives driving sector commercialization and income diversification. The project will establish 3,280 new MSEs and help 1,000 existing common interest groups (CIGs) become MSEs, with a focus on women-led groups and businesses (at least 35 percent of the MSEs will be women-only MSEs). These groups and businesses will be involved in the production, aggregation, trading, and processing of crops, livestock, and other commodities. The subcomponent will support the following activities:
 - (i) Offer all 4,280 groups with needs-based and results-oriented training on leadership and group dynamics, business development skills, value chains, innovations, technologies, and improved practices, along with technical assistance, accessing finance, including to identify and pursue new income- and resilience-enhancing skills and business activities (for example, weaving, livestock fattening, exporting of live animals, beekeeping, poultry, hide and skin processing, milk processing, gum and resins production, aquaculture, horticulture, and community tourism). It is through this activity that the project will support businesses producing tsetse fly traps (see Subcomponent 3.1).
 - (ii) Provide matching grants of up to US\$10,000 per group (for new ones) based on pre-established criteria (notably, being a registered business entity and having a strong business development plan and having mobilized at least 10 percent of the required capital from own sources, adequate internal control system, and external auditing). The design of these activities will be informed by empirical evidence generated by the Africa Gender Innovation Lab. This includes learnings from an impact evaluation on life skills and leadership training aimed to help women diversify away from traditional roles and strengthen their economic participation in pastoral communities, which is part of the first phase of the LLRP. The PIM includes detailed guidelines on grantee selection and grant management including financial management (FM) arrangements (planning, controls, accounting, fund flow, reporting, oversight, and audit).
 - (iii) Provide technical and material support (for a value of up to US\$500 per CIG) for the 'graduation' of existing CIGs into MSEs. With technical support from International Center of Insect Physiology and Ecology (ICIPE), the project will integrate beekeeping as a means of diversifying livelihoods within lowland PAP systems. The project will collaborate with the Ministry of Labor and Skills (MLSs) regarding the establishment, technical support, and monitoring of MSEs. In addition, technical support for value chain development may be sought from Heifer International.
- (b) **Access to finance (support for Pastoral and Agropastoral Saving and Credit Cooperatives (PASACCOs) and Unions of PASACCOs).** Improving access to finance among PAP communities will help them improve their livelihood opportunities and household incomes to better cope up and adapt to the impacts of climate change. The subcomponent will expand access to finance for alternative on-farm and nonfarm activities, materials, equipment, and inputs in three main ways. It will support the following activities:



- (i) Help establish and financially and technically support 550 new PAP savings and credit cooperatives (PASACCOs), of which half will be women-only groups. The qualifying ones will be given saving leverage grants (up to US\$10,000 each)⁴⁵. In addition, up to 500 existing PASACCOs supported under LLRP I will receive technical and advisory support, but no saving leverage grants. The project will guide PASACCOs, existing and new, to mobilize savings from their members—leveraging grants from the project, and potentially, other financing from commercial banks and microfinance institutions (MFIs)⁴⁶—and provide small loans and other financial services to their members to engage in income generating business activities. Customized training programs will be developed for these groups covering skills such as leadership, conflict management, business development, marketing, FM, and veterinary care. In addition, the project will build the capacity of the Ethiopian Cooperative Commission (ECC) to support PASACCOs and unions thereof, including with auditing. Wherever there is geographic overlap with the DRIVE Project, LLRP II will encourage project beneficiaries to buy index-based livestock insurance policies.
 - (ii) In collaboration with the ECC, finance technical support, trainings, and advisory services to establish and or strengthen PASACCO unions to improve their access to financial services provided by MFIs, the Development Bank of Ethiopia (DBE), and commercial banks.
 - (iii) Promote interest-free (Islamic) finance and mobile banking, in partnership with ATI, Digital Ethiopia, and private sector service providers like *Lersha*.
- (c) **Market access and links.** The subcomponent will support market access in close coordination with Subcomponent 1.2, under which market facility and transportation (road) upgrades will be financed, and Component 4, under which national standards for market facilities will be updated. Complementing these actions, the subcomponent will: (i) finance the establishment and strengthening of productive alliances between producers (including PAP marketing cooperatives and small and medium enterprises [SMEs] and downstream actors such as off takers, processors, traders, and abattoirs); (ii) pilot a public-private livestock market co-management model through coordination and financing platforms; (iii) based on a gap assessment, link newly constructed or upgraded livestock markets facilities to the livestock market information system (LMIS) supported by the DRIVE Project (P176517) wherever the projects overlap and finance activities to strength the LMIS in the project regions and woredas including through provision of materials, IT equipment, trainings, and so on; (iv) finance the implementation of the ET-LITS in the lowlands in collaboration with the MoA⁴⁷; and (v) finance trade fairs and buyer-seller meetings and, in coordination with Subcomponent 4.2, develop communication materials (printed and documentary films) that attract traders and exporters to markets by calling their attention to road and market upgrades.

Component 4: Project Management, Monitoring, Evaluation and Learning (US\$40.03 million, including US\$32.395 million IDA equivalent and US\$7.635 million IFAD)

36. This component will finance (a) project management, (b) ME&L, and (c) knowledge management and policy support.

⁴⁵ Qualifying criteria will include being a registered business, mobilizing their own savings or financial resources, and having adequate internal control and auditing systems in place.

⁴⁶ The project will help link the PASACCOs to MFIs and the DBE, from which they could seek loans.

⁴⁷ The ET-LITS aims to enhance the commercialization of livestock and help control livestock diseases including zoonotic ones and will play a vital role in advancing the One Health approach. Support for the ET-LITS will focus on livestock export zones in the project regions and include the training of experts, community facilitators, and others and procurement and supply of ear tags, IT equipment, and materials. In coordination with Subcomponent 4.2, support will be provided for the development of related legal frameworks. ET-LITS-related activities will benefit from the practical experience gained by the World Bank-financed Livestock and Fishery Sector Development Project (LFSDP, P159382).



Subcomponent 4.1: Project Management and Monitoring, Evaluation, and Learning (US\$37.03 million, including US\$30 million IDA equivalent and US\$7.03 million IFAD)

- (a) **Project management.** This subcomponent will finance project management activities, including: (i) facilitating institutional coordination and partnerships among ministries and nongovernmental and international organizations; (ii) strengthening the capacity of PCUs at the federal, regional, and woreda levels; (iii) project planning, including by generating annual work plans; (iv) developing and overseeing project implementation procedures and processes including fiduciary oversight and the management of environmental and social risks; and (v) monitoring project implementation and outcomes. Detailed project rules and procedures are outlined in the PIM, which has been adapted from Phase I, incorporating lessons learned.
- (b) **Monitoring, Evaluation and Learning (ME&L).** The project's ME&L activities will include: (i) tracking project inputs and outputs to ensure the project's resource accountability; (ii) carrying out institutional mapping and performance monitoring; (iii) assessing project results and outcomes against the Results Framework; (iv) evaluating the project by carrying out baseline, midterm, and final assessments; and (v) facilitating learning events at the regional and federal levels, including through regular biannual project implementation review and annual work plan and budget (AWPB) planning workshops. The project will expand the functionality of LLRP I's management information system (MIS) by linking it to the new early warning and early response system, CIS, RMS, Geo-Enabled initiative for Monitoring and Supervision (GEMS), grievance redress mechanism (GRM) including the SMS service, and other project-supported systems. LLRP II will also work with ILRI and AICCRA to increase data quality and adapt the ILRI's Tracking Adaptation in Livestock Systems tool to track adaptation and resilience to climate change among targeted PAP households. Detailed ME&L guidelines are included in the PIM.

Subcomponent 4.2: Knowledge Management and Policy Support (US\$3.0 million, including US\$2.4 million IDA and US\$0.6 million IFAD)

37. This subcomponent will support knowledge management and policy-related aspects of the project, leveraging project data and learnings under Subcomponent 4.1. In relation to knowledge management, the subcomponent will finance: (a) studies of direct relevance to project activities; (b) the establishment or strengthening of a national-level think tank and policy platform on PAP livelihood-resilience in the lowlands, which will sponsor academic policy research and create a space for national-level policy dialogue on pertinent issues⁴⁸; and (c) the establishment and management of PAP centers for knowledge (PACKs) at the woreda level. Physically located in agriculture or pastoral and livestock offices and equipped with digital equipment, PACKs will offer venues for demonstrating early warning, climate information, and rangeland management systems and various technologies and innovations to PAP households and extension workers (in local languages). PACKs' facilities will be managed by the project for at least six months before they are handed over to their permanent hosts at the woreda level (offices of agriculture, livestock, or pastoral development).

38. In relation to policy support, activities will include a limited number of trainings for government officials along with help assessing policy gaps and formulating strategies. The subcomponent will support efforts such as the formulation of a national rangeland management policy and regulatory framework that guides the sustainable management and governance of rangeland resources and legal frameworks relating to the ET-LITS. These activities will be carried out in coordination with the recently established Pastoral Advisory Council under MILLS. The project will also support the formulation and updating of communication strategies for the project and MILLS.

⁴⁸ Analytic work that could be supported by the project and think tank could include a deep dive on pastoral land tenure systems, an overview of national rangeland management policy, an assessment of live animal export and commercialization challenges and opportunities, an update of the national strategy on alien plant species such as *Prosopis juliflora* and wetland management strategies, and an assessment of pertinent carbon finance opportunities.



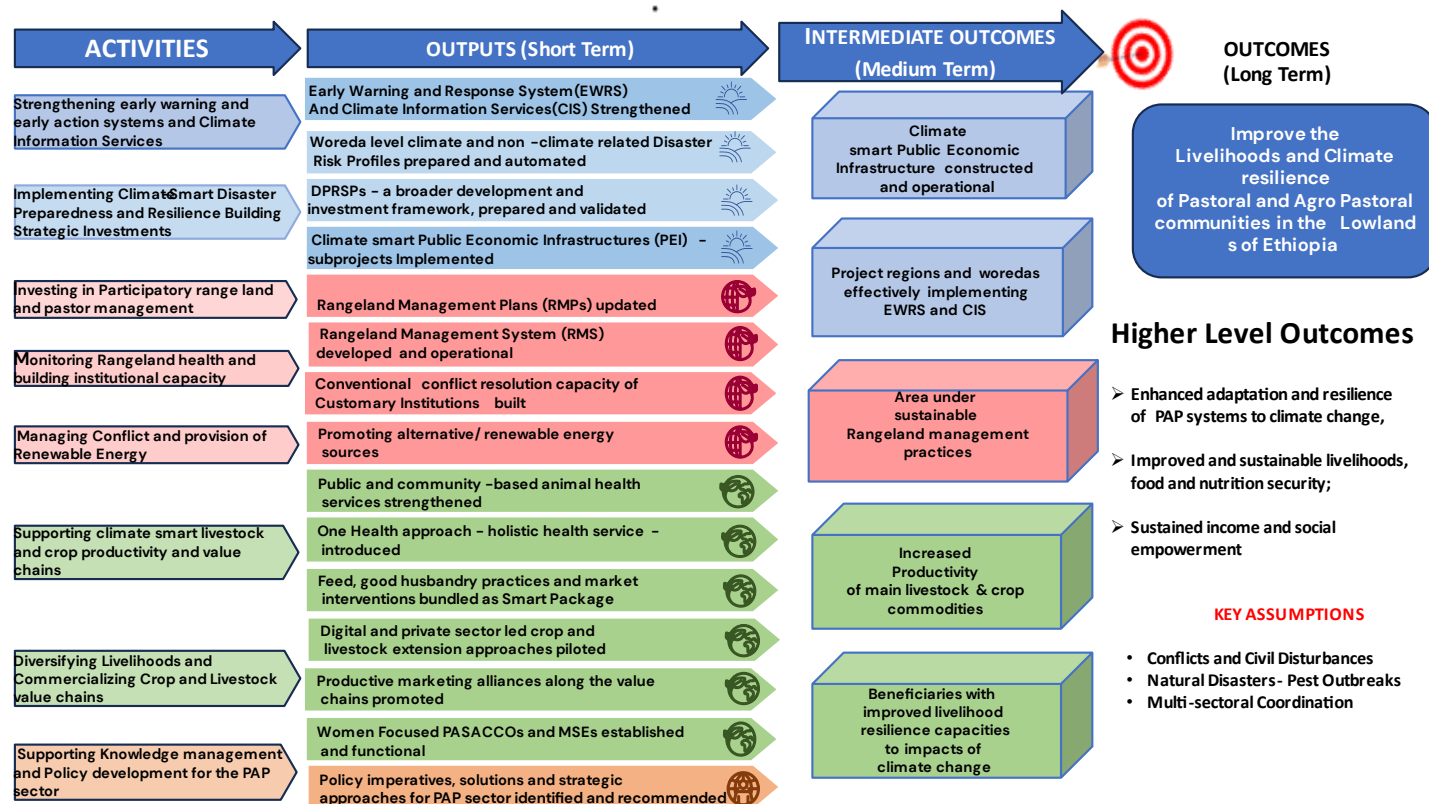
C. Project Beneficiaries

39. The project will cover eight regions in Ethiopia. They include the seven regions covered under LLRP I (Afar, Benshangul-Gumuz, Gambella, Oromia, Somali, South Ethiopia, and Southwest Ethiopia People’s regions) and the newly added region of Diredawa. A total of 120 woredas, including 100 woredas covered under LLRP I and 20 newly added ones, will benefit from the project. With additional resources, the project may expand to 30 more woredas. A map of the project’s area of operation is provided in Annex 3. The project will directly benefit 3 million PAP people (about 600,000 households), about 16 percent of the total population in the lowlands of Ethiopia. Women and youth will account for 50 and 30 percent of LLRP II beneficiaries, respectively. In addition, 2 million PAP community members will benefit indirectly from the project investments. The project will also benefit a range of organizations including various ministries and institutions, delivering public goods and services.

D. Results Chain

40. The project's design, including the range of activities, is founded on a well-defined theory of change that aims to enhance the livelihoods and climate resilience of pastoral and agropastoral communities. Drawing on insights from phase one of the project and similar initiatives in the region, the theory of change outlines the causal links between activities, short term outputs, medium term results and their contribution to the Project Development Objective (PDO), as well as to longer-term outcomes. Additionally, it identifies the most significant challenges and assumptions that are critical to realizing these connections.

Figure 1. LLRP II Theory of Change



E. Rationale for Bank Involvement and Role of Partners

41. The World Bank’s added value in implementing LLRP II comes from its capacity to: (a) curate global knowledge, experience, and financing to enhance the client’s climate change mitigation and adaptation capacities



and the sustainability and drought resilience of PAP production systems and livelihoods in the targeted areas, (b) provide operational supervision and technical assistance to the client to implement the operation, and (c) leverage additional resources from development partners and climate finance mechanisms. Key partners such as IFAD will co-finance the project, while other international organizations such as CGIAR institutes will bring global knowledge through technical assistance and advisory services.

F. Lessons Learned and Reflected in the project Design

42. Major lessons learned and reflected in the design of LLRP II include the need to: (a) bring DRM into the resilience framework elaborated under LLRP I, with a focus on building the capacities of PAP communities to better prepare for disaster and break the cycle of disaster and short-term response; (b) better coordinate capacity-building efforts across components to use project resources more efficiently (a dedicated capacity-building officer will be hired for this); (c) systematically design more targeted programs to address the disproportionate impacts of climate change on women and vulnerable groups; (d) carry out more focused and targeted research to facilitate policy reform; (e) seek more technical backstopping from international organizations; and (f) introduce more technologies and innovations, including in the preparation and automation of WDRPs and DPRSIPs (for example, interactive and satellite-based RMS, digital banking and fintech, private and digital extension services, collar-mounted tsetse fly control, adaptation and livelihood resilience tracking tool, and integration of the GEMS Kobo toolbox in the project MIS).

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

43. The project will build on and enhance the institutional arrangements of LLRP I, with a focus on enhancing coordination and synergies among different institutions supporting Ethiopia's lowland PAP communities. MILLS will be the lead implementing agency. It will host the Federal Project Coordination Unit (FPCU) and will have the overall responsibility for overseeing the project. Federal and regional Steering committees from relevant sectors ministries, including Ministry of Finance, and technical committees at federal, regional and woreda levels will continue to oversee and provide technical backstopping for the project. Implementing partners will include the MoA, ECC, EIAR, EDRMC, EMI, ATI, and MLSs. Technical collaboration with members of the CGIAR, such as ILRI, ICARDA, and CIMMYT, Biodiversity Alliance International and CIAT, International Centre for Insect Physiology and Ecology (ICIPE), VSF-Suisse, Heifer International and other international organizations present in Ethiopia are anticipated to ensure state-of-the-art technology transfer. The implementations of LLRP I and LLRP II are expected to overlap by up to one year and hence precautionary fiduciary measures will be put in place to reduce any related challenges that could arise during that time period. In addition, LLRP I's PCUs at the federal, regional, and woreda levels will continue the management of LLRP II with additional recruits at the federal level, including senior DRM, infrastructure, and livelihoods (economist) specialists and a capacity-building officer. New PCUs will be established for Diredawa and the newly added 20 woredas across the eight regions. The project will ensure that at least 20 percent of new technical hires across all PCUs are women. The PCUs will be subject to additional monitoring and support while they perform 'double duty' during the overlap period. The project's institutional architecture is further described in Annex 1.

B. Results Monitoring and Evaluation Arrangements

44. ME&L activities will be carried out under Component 4 of the project, as described above. ME&L activities include (a) developing and strengthening an MIS that networks all the entities involved in implementing the project and is linked to the monitoring and evaluation systems and other online systems supported by the project; (b) carrying out baseline, midterm, and final evaluations and annual work planning as a bottom-up participatory exercise involving all stakeholders including PAP communities; and (c) generating quarterly, biannual, and annual progress reports consolidating regional and national activities including reports from implementing and technical partners. The project will collaborate with ILRI to develop a clear and feasible data collection and analysis



methodology, and to conduct the baseline, midterm, and final evaluations for the project. Further details are outlined in the PIM.

C. Sustainability

45. The project's sustainability is based on several elements. They include: (a) a bottom-up and participatory planning process, particularly under Component 1, (b) reliance on existing government structures for project implementation, (c) enhanced partnerships and targeted capacity building, (d) promotion of NBS, investments in natural rangelands, traditional (rotational) rangeland management practices, and an automated rangelands health monitoring system to support the natural resource base and environment needed to sustainably supply the inputs needed by PAP production systems, (e) private sector engagement including through productive alliances, SMEs (including mobilizing own capital), and efforts to align commercial incentives with the goods and service needs of PAP producers and businesses, (f) expected improvements in the service delivery of public services such as extension and veterinary services based on the adoption of innovative models and technologies, (g) integrated support for the adoption of climate-smart and market-oriented livestock and crop management practices and technologies (feed, health, breed, market, and husbandry bundled as smart packs) that will reduce agricultural activities' carbon intensity in project-targeted areas, and (h) support for alternative income and livelihood options expected to enhance livelihood resilience in the face of climate change in the arid and semiarid lowlands.

D. Synergies

46. LLRP II will directly complement and build on the success of LLRP I⁴⁹ with more focus on climate change and hence deepening resilience in the PAP areas. The project will complement EFMP by addressing flood-related disaster risk in areas not covered by EFMP, and while EFMP will support the rollout of the new MH-IB-EW-EAS with a focus on the highlands, LLRP II will focus on its rollout in the lowlands. LLRP II will also link relevant infrastructure investments to the LMIS supported by the DRIVE project (P176517). Through its support for access to rural financial services, LLRP II will also support households' access to the index-based livestock insurance products supported by the DRIVE project. LLRP II will operate in the Oromia lowlands and will have the potential to synergize with the Oromia Forested Landscape Program (Phase Two P151294)). This synergy will be achieved through emission reductions to be monetized through the program(P151294) by generating carbon credits from its investments in sustainable and integrated rangeland management. LLRP II will build on the Livestock and Fishery Sector Development Project (LFSDP,P159382) success in developing the ET-LITS. LLRP II will also complement other World Bank-financed projects operating in the lowlands of Ethiopia such as the Horn of Africa Ground Water for Resilience Project (P174867).

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic, and Financial Analysis

47. **Technical design.** The technical design of LLRP II is robust. The project incorporates lessons learned and experience from LLRP I and related World Bank-financed operations. It is also informed by recent studies, including analytical work by the World Bank on the welfare of pastoral communities⁵⁰, and regional and national strategies on addressing vulnerability and enhancing climate resilience in the drought-prone lowlands. The project was designed to address all three pillars of livelihood and climate resilience, including the development of anticipatory and adaptive capacities under Component 1, adaptive capacities under Components 2 and 3, and transformative

⁴⁹ LLRP I is a five-year project that has been under implementation since November 21, 2019, in 100 woredas of seven lowland PAP areas. The project has made significant progress toward achieving its PDO and intermediate results targets, and so far, benefitted 2.4 million people (95 percent of the end-of-project target). In May 2020, at the request of the GoE, US\$125 million (36 percent of the IDA funding) was cancelled from the original IDA allocation to help the country cope with the macroeconomic impacts of the COVID-19 pandemic.

⁵⁰ World Bank. 2023. *The State of Welfare of Pastoral Communities in Ethiopia*.



capacities under Component 3. The project was also designed to build resilience at the community and systems level, under Components 1 and 2, and at the household level, under Component 3.

48. **Paris Alignment.** The project is fully aligned with the national climate strategies, including the NDC and NAP. The mitigation risks are low, as most project activities are universally aligned, and others have a low-to-moderate risk. Appropriate risk-reduction measures have been incorporated when needed. Based on the GHG accounting, the project will result in a net reduction of GHG emissions. The adaptation risks are acceptable, as the project has deliberately included activities to reduce the high risks of climate hazards for both the project and its beneficiaries. Further details on climate risks adaptation and mitigation measures are provided in Annex 2.

49. **Economic and financial analysis.** The ex-ante economic and financial analysis indicates that the project's planned activities are expected to be economically sound. A total of 19 financial models were developed for the assessment, including eight for various PAP activities, three for irrigation and water conservation ones, and eight for agribusiness and off-farm ones (including dairy, meat, and animal feed production).

50. Based on the ex-ante analysis of environmental externalities, the project is expected to reduce GHG emissions relative to a business-as-usual scenario. Using the FAO's Ex-Ante Carbon-balance Tool (EX-ACT), it was estimated that the project could mitigate GHG emissions by 32,882,407 tCO₂eq over a period of 20 years, or 1,641,120 tCO₂eq per year. Emission savings are expected to result from improved rangeland management (-1,620,495 tCO₂eq per year) and livestock productivity (-48,058 tCO₂eq per year). GHG emissions are expected to increase with the cropland practices (23,755 tCO₂eq per year), the use of inputs including electricity and fuel in processing and transportation, and fertilizer and pesticide (3,678 tCO₂eq per year).

51. **Economic cost-benefit modeling found the project to be profitable under all scenarios assessed, irrespective of whether the project's environmental externalities are factored in.** Under the baseline scenario, which does not factor in the project's environmental externalities, the project is expected to have a net present value (NPV) of US\$125 million and an economic rate of return (ERR) of 13.3 percent. When environmental externalities are considered, using the shadow price of carbon, the project's NPV increases to US\$897–1,671 million and its ERR increases to 37.4–55.5 percent, depending on whether a low or high price of carbon is used.⁵¹ Sensitivity analysis on baseline scenario, revealed that the project profitability would remain above the discount rate of 7 percent for all scenarios tested. However, sensitivity analysis also revealed that the project's profitability will be sensitive to a decline of benefits by 30 percent (NPV of US\$ 39 million and ERR of 9.3%) and the increase in costs by 30% (NPV of US\$ 76 million and ERR of 10.4%) but still above the discount rate. The sensitivity analysis also considered different exchange rate regimes and the result remains robust with positive NPV and an EIRR above the 7 percent discount rate.

B. Fiduciary

(i) Financial management

52. The project's FM arrangements meet minimum requirements under the World Bank Policy and World Bank Directive on Investment Project Financing (IPF). This was the conclusion of the FM assessment that was carried out for LLRP II in accordance with the Financial Management Manual for World Bank Investment Project Financing Operations, reissued on September 7, 2021, effective March 1, 2010. MILs will coordinate and manage all FM aspects of the project through an FPCU established under it and staffed with FM experts, among others. The project's FM will follow government procedures and an FM manual will be prepared following board approval. The implementing partners will be the EDRMC, MoA, MLSs, ECC, EIAR, ATI, and EMI. The project will prepare a consolidated AWPB and will obtain the 'no objection' from the World Bank. The budget will be proclaimed under MILs. The project will establish separate sets of accounts and maintain an adequate accounting system. The internal

⁵¹ Under the low-price scenario, the carbon price increases from US\$50/tCO₂eq in 2020 to US\$81/\$/tCO₂eq in 2042; under the high-price scenario, it increases from US\$99/\$/tCO₂eq in 2020 to US\$162/\$/tCO₂e in 2042.



audit unit of the FPCU will conduct an internal audit of the project. Quarterly unaudited interim financial reports (IFRs) will be submitted within 45 days of the end of the fiscal quarter according to agreed IFR formats. Ring-fencing measures will be taken to minimize any FM risks during the period of overlap between LLRP I and LLRP II, when both projects will be active. The project fund flow follows the Government’s channel 2 mechanism, whereby the funds will be transferred to MILLS/FPCU through a segregated Designated Account to be opened at the National Bank of Ethiopia. The project will also maintain separate local currency bank accounts at all levels. All disbursement methods are available to the project. For the advance to Designated Account and reimbursement methods, the project will use report-based disbursements, with the submission of a six-month forecast as part of quarterly IFRs. MILLS/FPCU will be responsible for having the project financial statements audited annually by an independent auditor acceptable to IDA and submit the audit reports to the World Bank within six months of the fiscal year-end and an interim audit within three months after the end of the first semester. Further details on FM are found in Annex 1.

(ii) Procurement

53. Procurement shall be carried in accordance with the World Bank Procurement Regulations for IPF Borrowers, 5th edition, dated September 2023; ‘Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants’, dated July 1, 2016 (Anti-Corruption Guidelines); and other provisions stipulated in the Financing Agreements. Procurement Plans will emanate from the Project Procurement Strategy for Development (PPSD) prepared for the project and cleared by the World Bank.

54. The Ministry of Irrigation and Lowlands and the respective bureaus at the regional level are responsible for implementing the procurement activities in the project through the eight PCUs that will be established or already established PCUs in LLRP I. The World Bank carried out procurement capacity assessments in the host agencies and identified risks and proposed risk mitigation measures. Some of the identified key risks are (a) inability to attract and retain qualified procurement and contract management experts; (b) limited procurement and contract management capacities; (c) incomplete and inaccessible procurement records and failure to update the Systematic Tracking of Exchanges in Procurement (STEP); and (d) lack of adequate competition and failed contracts due to multiple factors. Further details on procurement including mitigation measures are provided in Annex 1. The residual procurement risk rating is Substantial.

C. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Area OP 7.60	No

55. The project triggers the World Bank Policy on “Projects on International Waterways” (OP/BP 7.50) because some of the investments will take place in the Abay, Baro-Akobo, Omo-Ghibe, Genale-Dawa, Wabi-Shebelle, Ogaden, Awash, Danakil and Rift Valley systems, which are shared by Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, and Sudan and hence are international waterways as defined by the policy. All riparian countries were notified on December 22, 2023, in accordance with the Policy, and no objections were received. The requirements of OP/BP 7.50 have therefore been met. Based on the outcome of the notification process and the assessment that the project will not cause appreciable harm; management approval to proceed with the project was granted on February 9, 2024.

D. Environment and Social



56. All World Bank Environmental and Social Standards (ESSs), except for ESS9, are deemed applicable to the project due to a range of potential environmental and social risks. These risks include water pollution, excessive water extraction, soil salinization, depletion of soil nutrients, challenges in solid waste management, land acquisition, elite capture, and the social exclusion of disadvantaged and vulnerable groups. The project underwent screening using the World Bank's online Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Risk Screening Tool, resulting in a risk classification of 'Substantial'. The Ministry of Irrigation and Lowlands (MILLS), as the implementing entity, has prepared all necessary Environment and Social Risk Management (ESRM) instruments. Consultations were conducted from November 9 to 30, 2023. The suite of instruments includes an Environmental and Social Management Framework (ESMF), Labor Management Procedures (LMP), Stakeholder Engagement Plan (SEP), Social Assessment (SA), Security Risk Assessment and Management Plan (SRA/MP), SEA/SH Risk Assessment and Management Plan, and a Resettlement Framework (RF). These documents have been reviewed and approved by the World Bank and were disclosed in-country on December 22, 2023, on both the client's and the World Bank's websites.

57. **Climate Co-Benefits.** The project entails research-supported livestock emission mitigation actions that relate to better managing grazing land resources, modifying feeding practices, improving the treatment or use of animal manure, modifying the processing and transportation of animal products, and improving breeds⁵².

58. **GHG** emission reductions will also emanate from pasture restoration and management, herd management, grazing (altered land use for grazing and feed production, feeding practices, manure treatment, and herd size management), and the promotion of renewable and efficient energy sources introduced to address the natural resource degradation (tree cutting and clearing of regenerative bushlands for fuelwood and goat feeding). Thus, project interventions are expected to have significant climate co-benefits. Most co-benefits are expected with respect to adaptation, through the adoption of sustainable rangeland management, physical, biological, and agronomic soil and water conservation practices, climate-smart crop and livestock technologies and practices including improved feed and livestock breeds, and efficient smallholder irrigation systems. The implementation of climate-smart PEI will significantly improve the adaptive capacities of communities and PAP production systems and reduce the vulnerability of PAP households by increasing their access to social and economic services.

59. **Citizen engagement.** Citizen engagement will be critical to the project realizing its development objective, with so many of the project's activities and investments designed to be driven by communities. Citizen feedback will be encouraged and reviewed on a regular basis through multiple channels, including the well-functioning GRM established under LLRP I, which will be further revamped through introduction of a mobile phone-based GRM with a dedicated SMS hotline accessible to the public. This service will be established in collaboration with telecom service providers. The project will ensure that beneficiaries know the PDO and its expected benefits, are actively involved in the preparation of the project's strategic documents (such as DPRSIPs and RMIPs) and understand how to utilize the available GRM. In addition, the participatory planning processes used to develop DPRSIPs and RMIPs will ensure community and stakeholder engagement in the planning and implementation of the project.

60. **Gender.** Given the impacts of climate change, both female and male pastoralists can benefit from diversifying their sources of income for greater resilience. However, female pastoralists have less access to resources such as land, housing, and finance. In Ethiopia, pastoralist women and girls face forms of inequality that begin at birth and are perpetuated by their low educational status, low health status, low social status, limited access to resources, and limited decision-making power within their communities⁵³. Women in pastoralist communities have by far lower access to resources (land and housing) than average women in Ethiopia. For

⁵² Zhang, Y. W., B. A. McCarl, and J. P. H. Jones. 2017. "An Overview of Mitigation and Adaptation Needs and Strategies for the Livestock Sector." In *Climate* 5 (4). <https://doi.org/10.3390/cli5040095>.

⁵³ Kinati W., D. Baker, E. C. Temple, D. Najjar, and A. Abenakyo Mulema. 2022. "Empowerment Resources, Decision-Making and Gender Attitudes: Which Matter Most to Livestock Keepers in the Mixed and Livestock-Based Systems in Ethiopia?" *CABI Agriculture and Bioscience* 3: 49.



example, in Afar pastoral communities, only 23.7 percent of women ages 15–49 have access to resources and only 11.6 percent in Somali ones. Gender-based educational disparities are severe among pastoralist communities. In Afar communities, 68.7 percent of women ages 15–49 did not attend school, and in Somali state, 75.3 percent did not attend school⁵⁴.

61. To address these and other gender gaps, the project, under Subcomponent 3.2, seeks to improve women’s access to finance and markets and help them diversify their livelihood activities, notably through support for MSEs and PASACCOs. The project will finance an outreach campaign to facilitate women’s enrollment in PASACCOs. Women will also be incentivized and supported, through targeted outreach and communication, to form or join MSEs and PASACCOs. Eligible MSEs will be given matching grants, and PASACCOs will be given saving leverage grants of up US\$10,000 (in either case). To enhance MSEs’ and PASACCO members’ competitiveness and access to markets, the project will help women entrepreneurs acquire business development, financial literacy, bookkeeping, and leadership skills. The matching grants will help MSEs expand their business, while the seed capital will help PASACCOs leverage group members’ savings and support their business activities with small loans. The project will help link the MSEs and PASACCOs to MFIs and the (DBE, from which they may seek loans. The project intends for: (a) at least 35 percent of newly established MSEs to be women-only ones, (b) 50 percent of the newly established PASACCOs (275) to be women-only groups, and (c) 50 percent of livelihood support and access to finance (MSEs, PASACCOs, and so on) to target women. Progress toward these targets will be tracked in the Results Framework.

62. **MFD.** The MFD activities will primarily be pursued under Component 3. They include (a) development of policy and infrastructure opportunities and value chains to attract private investment to engage in livestock product value addition and commercialization; (b) promotion of access to rural financial services and markets through MSEs, PASACCOs, and unions of PASACCO; (c) strengthening of links between PASACCO with unions and MFIs; and (d) establishment of Public Private Partnerships in the form of productive alliances involving PAP producers and other private value chain actors. The project will also facilitate private sector engagement under Subcomponent 2.1 through its support for commercial uses of *Prosopis juliflora* and other invasive plants. Under Subcomponent 3.1, the project will mobilize up to US\$4 million in private capital in the context of implementing its matching grant program for MSEs (US\$10,000 will be matched with 10 percent by each MSE). The project is therefore ‘private capital mobilization-enabled’.

V. GRIEVANCE REDRESS SERVICES

63. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank’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 Bank’s independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank’s Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank’s Accountability Mechanism, please visit <https://accountability.worldbank.org>.

⁵⁴ Central Statistical Agency Ethiopia and International Classification of Functioning, Disability and Health (ICF). 2016. Ethiopia Demographic and Health Survey 2016.



VI. KEY RISKS

64. **The overall risk to achieving the PDO is Substantial.** Each risk identified, and their ratings rated substantial or high are listed below, along with proposed mitigation measures.

65. **Political and governance risk is High.** The political and governance situation of the country has remained volatile, especially over the last four years. Although the situation appeared to be calm since the peace deal between the federal government and the Tigray Regional Government in early November 2022, there are still localized conflicts and civil protests in parts of the country including parts of Amhara and Oromia regions. This risk will be mitigated by: (a) preparation and implementation of a Security Risk Assessment and Management Plan; (b) careful planning and execution of implementation support missions that emphasize security; (c) continued, regular, and strategic communication between government counterparts (project teams) and the World Bank; (d) proper implementation and monitoring of Environmental and Social Framework instruments, including Security Risk Analysis and Security Management Plan; and (e) enhanced transparency, (downward) accountability, and citizen engagement in project-supported activities. The project will directly contribute to alleviating some of the drivers of the political unrest and civil protests, including by improving citizens' access to improved socio-economic services, key resources (rangeland and water), and diversifying economic opportunities that increase incomes and reduce joblessness.

66. **Macroeconomic risk is High.** Macroeconomic imbalances have deteriorated as high domestic inflation persisted, forex shortages intensified, and domestic and external buffers depleted. Foreign exchange shortages are disrupting public and private sector activity and contributing to inflation. High levels of inflation and the distortions in the foreign exchange market could affect the activities envisaged under LLRP II, which are expected to benefit PAP households, SMEs, and public service providers such as the host ministry, implementing partners in general. To get a better sense of potential impacts of the foreign exchange distortions, sensitivity analyses, including for shadow exchange rates, were incorporated in the economic analysis of the project. The Bank and the IMF continue to work closely in collaboration with the authorities on addressing Ethiopia's exchange rate and other market distortions in an orderly and sequenced way to minimize social and poverty effects.

67. **Sector strategies and policies risk is Substantial.** The PAP lowlands and the livestock system in Ethiopia, among other factors, are constrained by the absence and or inadequacy of sector policies and strategies. This includes the lack of land-use policy that considers pastoral production and livelihood systems and pastoral land tenure policy that recognizes ownership rights of pastoralists. Moreover, the existing pastoral development policy and strategy is not comprehensive enough to guide a sustainable management and governance of rangeland resources. The project will mitigate these risks by (a) building capacities and engaging the Government to formulate and enforce appropriate pastoral land tenure and land-use policies and strategies; (b) facilitating review of the existing pastoral policies and strategies, addressing gaps, and supporting the full-scale rollout of new or revised policy; and (c) supporting policy dialogue platforms, think tanks, and coordination platforms including to strengthen the recently established Pastoral Advisory Council under the MILs.

68. **Technical design of the project risk is Substantial.** The project proposes relatively complex multisectoral interventions and intervenes in disaster-prone areas, some of which are also becoming increasingly insecure. This may require changes in technical designs of specific interventions. Moreover, the project is mainstreaming climate considerations across activities, which brings novelty and is critical for sustainability of the impacts, and this approach may require a slight shift from business as usual, which may encounter some resistance. This set of risks will be mitigated by prioritizing interventions in different areas, so that implementation could continue if one area were inaccessible; adopting strong learning elements that will help regions move gradually toward the implementation of larger investments; and increasing their readiness and sustainability, sharing experiences, and



learning from each other. Moreover, additional staff will be hired to strengthen the PCU, and different national and international organizations will provide additional technical assistance for specific activities/components.

69. **Institutional capacity for implementation and sustainability risk is Substantial.** This is based on: (a) the limited institutional capacity of MILLS, the lead implementing agency, and other federal, regional, and decentralized entities to implement such a complex project; (b) the challenge of designing and implementing new systems such as early warning and climate information systems, RMS, digital and private sector-led extension, mobile-based, interest-free, and other financial products; and (c) weak links and coordination among institutions, sectors, programs and projects at all levels. This set of risks will be mitigated through awareness creation and training activities. The institutional capacity risk of MILLS will be mitigated by maintaining and strengthening LLRP I's PCU staff with additional recruitment of key positions relevant to the new design features of LLRP II with clearly defined job descriptions and accountability. To help mitigate coordination risk, the project will rely on existing government coordination platforms, including the MILLS-initiated Pastoral Development Council and the MoA-led Rural Economic Development and Food Security Sector Working Group. Furthermore, the project will coordinate with and build institutional partnerships between the PCU/MILLS and relevant local and international specialized agencies, such as the ATI, EDRMC, EMI, ECC, MoA, EIAR, MLSs, ICIPE, Heifer International, and CGIAR programs, and institutes such as AICCRA, ILRI, ICARDA, Alliance Biodiversity International, International Centre for Tropical Agriculture (CIAT), and International Maize and Wheat Improvement Centre (CIMMYT).

70. **Fiduciary risk is Substantial.** This is due to the high turnover of fiduciary staff in the PCUs at federal, regional and woreda levels, shortage of qualified accountants and auditors in the public bodies, weak internal audit function for projects, weak internal control at MILLS including audit issues, delay in the preparation and approval of the AWPB, and low budget utilization. The project will operate alongside the existing LLRP and this may create some FM risks in some woredas with accessibility limitations. Procurement risks are associated with capacity limitations at the PIU level, security concerns, market failures, shortages of foreign currency, price hikes, and shortage of construction inputs(details are provided in the procurement section). MILLS and most regions have acquired adequate experience in FM and procurement. However, the introduction of new federal level implementing agencies such as EDRMC, ATI, and EMI), and the geographic expansion of the Project in a new region (Dire Dawa), and 20 new woredas may require capacity strengthening. Fiduciary risks will be mitigated through: (a) timely preparation of project-specific procurement and FM manuals satisfactory to the World Bank; (b) assessment of the fiduciary capacity of implementing agencies at all levels and implementation of mitigation measures (action plans); (c) continuous capacity building (training); (d) for new project implementing regions and woredas, careful planning of capacity-building measures, including on STEP, and recruitment or assignment of one accountant for FM responsibilities; (e) timely preparation of the PPSD and Procurement Plan; (f) issuance of guidance notes to implementing entities to mitigate expenditure double-dipping; and (g) potential deployment of a Third-Party Monitoring Agent (TPMA) to monitor and evaluate project activities including fiduciary aspects in inaccessible woredas and sites.

71. **Environmental and Social risk is Substantial.** This rating is due to contextual security and climate disaster risks, as well as the absence, at times, of a clear allocation of water rights. The main E&S risk risks include water pollution, increase in water extraction, soil salination, soil nutrient management concerns, water consumption, pesticide use (although the project will not finance any), crop residue and solid waste management problems, etc. The social risks include: (a) land acquisition ; (b) elite capture; (c) social exclusion of disadvantaged and vulnerable groups; (d) escalation of social tensions d; (e) forced labor, child labor, and discriminatory hiring practices; (f) an influx of labor t; and (g) accidents and incidents. Contextual risks such as conflict, fragility, political instability, and internal displacement, particularly in some parts of the country, deepen the social risk of the project. To mitigate these environmental and social risks and impacts, the project will closely monitor implementation of the ESF instruments including the ESMF, LMP, SA, SEP and ESCP. Each project investment will be screened based on the ESMF procedure during implementation phase. Subproject specific E&S risk mitigation instruments such as



environmental and social management plans(ESMPs) will be prepared and implemented following the ESMF guidance.

72. **Stakeholder risk is Substantial.** This is due to the potential for: (a) the reemergence of political unrest and civil disturbances; (b) institutional/organizational restructuring/reorganization; (c) weak multisectoral coordination mechanisms; and (d) elite capture of project benefits and the exclusion of project beneficiaries, particularly underserved members of targeted communities. These risks will be mitigated through a series of carefully planned and properly executed consultations as per the Stakeholder Engagement Plan (SEP), during implementation. Elite capture risk mitigation measures will benefit from the experience of several World Bank-financed projects including, Pastoral Community Development Project II (PCDP II,P130276), LLRP (P164336), and Livestock and Fishery Sector Development Project (LFSDP,P159382) .



VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Closing Period
Improved the livelihoods and climate resilience of PAP communities in the lowlands of Ethiopia	
Climate preparedness and resilience building infrastructures constructed and operational* (Number)	
Jun/2024	Jun/2029
230	510
Land area under sustainable landscape management practices (Hectare(Ha)) ^{CRI}	
Jun/2024	Jun/2029
400000	1000000
Increase in yield of targeted livestock and crop commodities* (Percentage)	
Jun/2024	Jun/2029
0	25
Beneficiaries with 25 % or more annual household income increment due to project interventions (Percentage)	
Jun/2024	Jun/2029
0	60

Intermediate Indicators by Components

Baseline	Closing Period
Component 1: Pastoral Risk Management for Resilience	
Beneficiaries with access to timely information from the early warning and response systems and climate information services (Percentage)	
Jun/2024	Jun/2029
0	80
Project targeted Woredas with new or updated and automated disaster risk profile (Number)	
Jun/2024	Jun/2029
0	120
Regional Disaster Preparedness and Resilience-building Strategic Investment Plans prepared, endorsed by regional councils and automated for public use (Number)	
Jun/2024	Jun/2029
0	8
Component 2: Integrated Rangeland Management	



National Rangeland Monitoring System (RMS) developed and operational (Number)	
Jun/2024	Jun/2029
0	1
Climate Smart and Nature based Rangeland Management Plans (RMPs) updated or formulated and rolled out for implementation* (Number)	
Jun/2024	Jun/2029
28	29
Component 3: Climate Resilient and Sustainable Livelihoods	
Area provided with new/improved irrigation or drainage services (Hectare(Ha)) ^{CR1}	
Jun/2024	Jun/2029
0	2000
MSEs established for targeted value chains and operational 1 year after establishment (of which at least 35 % are women only MSEs) (Number)	
Jun/2024	Jun/2029
0	3,280
Project Beneficiaries that adopted two or more climate smart improved technologies and innovations* (Number)	
Jun/2024	Jun/2029
0	200,000
Annual increase in off take of animals from the project supported woredas* (Percentage)	
Jun/2024	Jun/2029
0	25
Beneficiaries reached with financial services (Number) ^{CR1}	
Mar/2023	Jun/2029
50000	120000
Productive alliances established and functional between PAP producers and private sector actors* (Number)	
Jun/2024	Jun/2029
15	45
Women beneficiaries (15-49 years) and children (6-23 months) with minimum dietary diversity (Number)	
Jun/2024	Jun/2029
0	250,000
Beneficiaries with Improved food security and resilience capacities to impacts of climate change (Percentage)	
Jun/2024	Jun/2029
0	60
Private capital Mobilized from MSE groups in conjunction with the matching grant from the project (Amount(USD))	
Jun/2024	Jun/2029
0	4,000,000
New Pastoral and Agro-Pastoral Saving and Credit Cooperatives (PASACCO) Established and Operational (of which 50 % will be women only PASACCOs) (Number)	



Jun/2024	Jun/2029
500	1050
Component 4: Project Management, Monitoring, Evaluation and Learning	
National and Sub-national annual Policy dialogues organized and facilitated by MILLS on climate change and PAP development agenda* (Number)	
Jun/2024	Jun/2029
0	13
Feedback (complaints, queries, suggestions) through GRM including SMS service, addressed and responded to within stipulated timeframes publicly communicated by the project (Percentage)	
Jun/2024	Jun/2029
0	90
Leadership positions held by women in all mixed (women and men) groups created/supported by the project (Percentage)	
Jun/2024	Jun/2029
0	30
Project direct beneficiaries (disaggregated by gender and age, 50 % women and 30 % youth)* (Number)	
Jun/2024	Jun/2029
2,500,000	3,000,000
Project Indirect beneficiaries (disaggregated by gender and age, 50 % women and 30 % Youth) (Number)	
Jun/2024	Jun/2029
0	2,000,000

NB. * Result Indicators continued from LLRP I.



Annex 1: Implementation Arrangements and Project Support

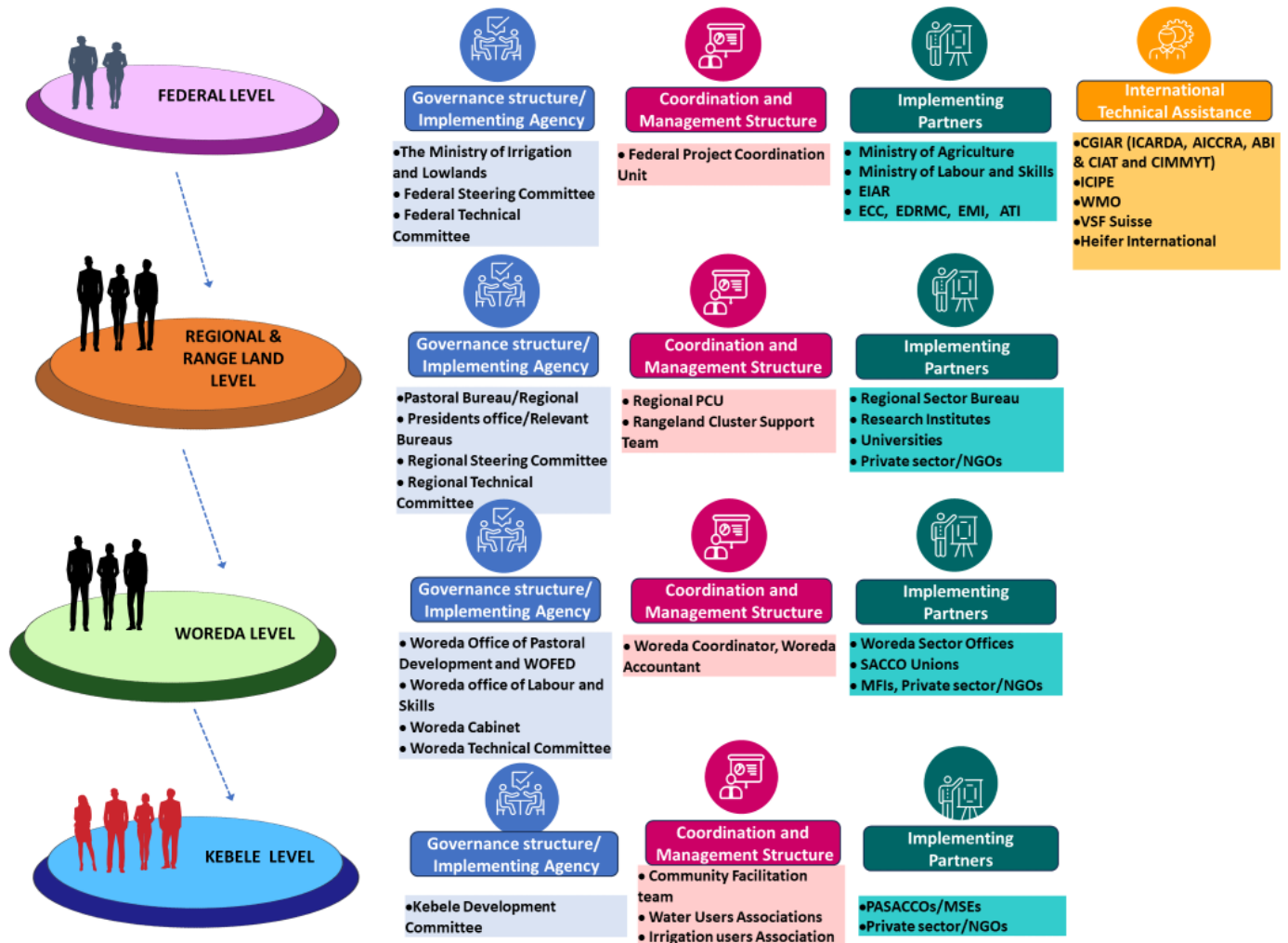
A. Project Institutional and Implementation Arrangements.

1. The project’s institutional arrangements and implementation approach will build on and refine those developed by LLRP I, drawing on key lessons learned from that project’s experience. The model aims at developing synergies, partnerships, and collaboration among the international organizations, government agencies, and other stakeholders supporting and serving PAP communities in Ethiopia. The implementation arrangements are based on the following principles: (a) bringing relevant government institutions, national and international technical organizations, and development partners under one coordinated umbrella, and (b) institutionalizing the sound structures and improved practices developed during project implementation, making them part of permanent PAP support systems and institutions.

2. The functions, roles, and thematic domains of each agency involved in project implementation are well-defined in the implementation arrangements for each of the project components. Moreover, the grouping of the institutions into demarcated roles in the areas of governance, coordination, and management, partnership implementation, and technical assistance will ensure coherent project implementation and smooth delivery of benefits to PAP communities. Key roles relating to governance, coordination, and management include oversight, policy guidance, administrative actions, and results monitoring. Roles relating to partnership implementation and technical assistance will include capacity building and the provision of technical advice. Technical assistance from international agencies will ensure that project implementation will leverage state-of-the-art technologies and global best practices. Project implementation arrangements will also reduce several risks, including a possible divergence of efforts, duplication of programs, and dispersion of resources, by ensuring strong coordination, convergence, and collaboration among the key institutions mandated to work in the PAP sector. The project implementation structure will go down to the woreda level. Local government entities at the kebele and community levels will ensure the involvement and participation of PAP communities in the planning, implementation, and maintenance of investments, as needed. The Kebele Development Committee will be supported and assisted by the community facilitation team consisting of women, youth, and other community members. The project will support them by building their capacity and covering mobilization and meeting expenses. Institutional arrangements and planned partnerships are described in greater detail in the PIM. Figure 1.1 depicts the project’s institutional arrangements.



Figure 1.1. LLRP II Institutional Arrangements



B. Strategy and Approach for Implementation Support

3. The proposed Implementation Support Plan (ISP) is consistent with the World Bank’s operational guidelines for Investment Project Financing and considers the Project-specific challenges and risks, as defined in the Systematic Operations Risk-Rating Tool. It is based on mechanisms that would enable enhanced implementation support to the GoE; timely and effective Project monitoring; and guidance on technical, fiduciary, environmental, institutional, and social aspects. The ISP would entail regular technical meetings and implementation support missions, including field visits, as appropriate as well as M&E activities. The World Bank’s implementation support would broadly consist of:

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Capacity-building activities to strengthen the ability to implement the proposed activities, covering the technical, fiduciary, and environmental and social dimensions.



- a) Provision of technical advice and implementation support geared towards the implementation of activities and attainment of the PDOs and intermediate results indicators through enhanced coordination with international and local implementing and technical partners, including ILRI, AICCRA, Alliance International Biodiversity and CIAT, ICARDA, ICIPE, ATI, Heifer International , etc.).
- b) Ongoing monitoring of implementation progress, including regular review of key outcome and intermediate indicators, and identification of bottlenecks.
- c) Monitoring changes in risks to the Project, identification of appropriate mitigation measures, and compliance with the financing agreements.

4. Technical meetings and semi-annual supervision missions would seek to provide strategic support to assess implementation progress; ensure the continued strategic alignment of the Project to local priorities, especially through regular engagement with key stakeholders and project beneficiaries in the lowlands development, particularly pastoral and agropastoral communities’ livelihoods and climate resilience areas and Project beneficiaries; and build the Ministry of Irrigation and Lowland’s (MILLs) capacity to evaluate project progress and ensure achievement of project results. The World Bank’s support will also include mobilizing global expertise from international partner organizations such as FAO and CGIAR, including through the hiring of specialized consultants for the Project’s technical aspects as needed, which will include but not limited to dryland farming, Climate Smart Agriculture and Livestock, Climate Change Adaptation and Resilience Measurement, impact evaluation design and monitoring, etc.

5. The Ministry of Irrigation and Lowlands (MILLs) allocated US\$33.7 million (11 percent of the total project cost) for component 4 on Project Management, Monitoring and Evaluation, of which US\$12.1 million is allocated for the project Monitoring and Evaluation activities.

6. The following table outlines key areas for implementation support, which will be refined during Project implementation based on progress and rising needs.



C. Implementation Support Plan and Resource Requirement

Time	Focus	Skills and Resources Needed
Year 1	<ul style="list-style-type: none"> • Ensure project Planning, budgeting, and allocation. • Review and support staffing of implementing agency. • Support preparation, consultation, and publication of Environmental and Social Management instruments • Assist client in formulation of terms of reference and assessment of resources required to implement Project components and setting up integration of proposed systems including Early warning and Action System, Climate Information Services (CIS) Systems, Rangeland Monitoring System (RMS) in to one project MIS, etc. • Reviewing the TA needs. • Monitor Results Framework including through project M&E and MIS. • Coordination with International and local technical partners (including ILRI, AICCRA, Alliance International Biodiversity and CIAT, ICARDA, ICIPE, ATI, Heifer International , etc.) 	<ul style="list-style-type: none"> • Project management, monitoring, and evaluation • Operations and implementation support • Financial management • Procurement management • ESF management • Staff salary and operational cost
Years 2-4	<ul style="list-style-type: none"> • Monitor project budgeting and allocation. • Monitor Results Framework • Review technical performance. • Assess fiduciary performance. • Monitor Environment and Social performance. • Carry out Mid-Term review to assess the Project’s performance and identify if any changes are needed in the project’s design. • Coordination with International and local technical partners 	<ul style="list-style-type: none"> • Project management, monitoring, and evaluation • Operations and implementation support • Impact evaluation design • Financial management • Procurement management • ESF management • Staff salary and operational cost
Year 5	<ul style="list-style-type: none"> • Monitor project budgeting and allocation. • Complete all planned infrastructure works. • Monitor Results Framework • Assess technical, fiduciary, and Environment and Social performance. • Begin collecting data for the implementation completion and results report in the final 6 months of implementation. • Coordination with international and local technical partners with focus on evaluation and impact assessment 	<ul style="list-style-type: none"> • Project management, monitoring, and evaluation • Financial management • Procurement management • ESF management • Staff salary and operational cost



D. Financial Management

7. **A Financial Management (FM) assessment** was carried out for the LLRP II per the Financial Management Manual for World Bank Investment Project Financing Operations. The FM risk of the project is Substantial. The preliminary mitigating measures proposed in the action plan will help to reduce the risk of the project once implemented and applied during project implementation.
8. **Entities responsible for Financial Management** -The project will involve 120 woredas in eight regional states (Somali, Afar, Benishangul-Gumuz (BG), Gambella, Southern Ethiopia Region (SER), Southwest Ethiopia Peoples' Region (SWEPR), Oromia and Dire Dawa). The project will be implemented under the leadership of MILLS through the FPCU which will be responsible for the financial management aspects of the Project liaising with regions and the federal implementing entities (MoA, ATI, EIAR, ECC, EDRMC, EMI, MLSs) as well as regional entities (BoA, RARI, RCA) including woredas. Out of the 120 woredas, 20 are new woredas that need continued capacity-building activities.
9. **Budget arrangement for the project.** The project will follow the Federal Government of Ethiopia's budgeting procedure and calendar. The FPCU, at MILLS, will prepare a consolidated AWPB which will be submitted to the World Bank for no objection before May 31 of each year and the budget will be proclaimed under the MILLS. The FPCU will ensure that robust budget monitoring and control mechanisms are in place. IFRs would include budget monitoring reports including variance reports along with explanations of material variances. Management will take corrective measures based on the reports.
10. **Accounting.** The GoE's accounting policies (modified cash basis) and procedures will apply to the project. Separate accounts for the project will be maintained at the FPCU. LLRP II will prepare a Financial Management Manual (FMM) within three months of the approval date, based on the experience of the existing LLRP FMM, and disseminate it to all implementers. A chart of accounts that is adequate to capture the project expenditures both in component and category will be developed for LLRP II and shared with all implementers including the new woredas and federal entities. The project's accounting system is expected to capture project records at the component, subcomponent, and activity levels. In addition, to comply with government reporting requirements, the project will have to maintain records through IFMIS. Currently, the finance function for LLRP is fully staffed at all levels for the existing implementers and the required staff will be filled for the new implementing entities under LLRP II.
11. The project will become active before the existing LLRP project is closed. In addition, the Project Coordination Units (PCUs) for LLRP will continue to support this project. Therefore, there is a risk of duplication or double dipping in the overlapping period. To mitigate this risk, appropriate controls will be designed and implemented, including separate budget preparation including separate AWPB; maintaining separate accounts; separate accounting records, vouchers, and documentation; separate staffing (as appropriate); using different 'PAID' stamps for each project; and so on.
12. **Grants and Seed Funds** – For Matching Grants to MSE under component 3.2 (a) and Access to finance seed funding to PASACCOs under component 3.2 (b), the project will have a separate manual/guideline for Matching Grant and Seed Funds either as part of the PIM or separately to provide guidance on selection, implementation, administrative, and other procedural issues regarding the components which include FM procedures and this is an effectiveness condition. On Financial management issues the Manual will explain the various FM arrangements including planning, controls, accounting, fund flow, reporting, oversight, audit, etc. A separate category will be set for each sub-component (parts 3.2 (a) and 3.2 (b)) of the project. In terms of expenditure recognition, because of the wide number of MSEs and PASACCOs to be involved and small amounts per recipient, for the Matching Grant and Seed Fund, the project will record expenditures upon transferring the money into the account of the MSEs and PASACCOs. However, the project's M&E system will monitor the use of



the funds; the project's internal auditor will also check periodically on the proper management of this activity; and the external auditors as part of the interim audit arrangements will check whether the entities are using the funds as per the requirement of the Manuals. The TPM will also include this due diligence exercise of ensuring that the funds are disbursed and being used for purposes intended as one of its roles. In addition, the FMM will also include detailed FM arrangements and requirements to manage this.

13. **Internal control and internal audit arrangements.** All the applicable Government internal control policies and procedures will be applied to the project. In addition, the project's FMM will incorporate detailed control procedures specific to the project. The internal audit unit of the FPCU will conduct audits, prepare reports, and share them with the World Bank. The management will take the necessary action on the internal audit findings and update the World Bank on the status of the implementation of the findings as part of the quarterly IFRs. Training will be provided to the internal auditors to enhance their capacity.

14. **Financial reporting arrangements.** Quarterly IFRs will be required for the project. The FPCU will prepare the quarterly IFR and submit it to the World Bank within 45 days after the end of the quarter. The template of the IFR is agreed and annexed to the Disbursement and Financial Information Letter (DFIL).

15. **External audit arrangements.** The MILLS/FPCU will ensure that the project accounts are audited annually. Annual audited financial statements and audit reports (including management letters and audited financial statements, with audit opinion) of the project will be submitted to the World Bank within six months from the end of the fiscal year using auditors acceptable to the World Bank. The auditor will be appointed within three months of effectiveness. The annual financial statements will be prepared within three months of the end of the fiscal year per standards and provided to the auditors to enable them to carry out and complete their audit on time. The audit will be carried out per the International Standards of Auditing issued by the International Federation of Accountants. Similar to LLRP, this Project will also have an interim audit report arrangement which is part of the annual audit report. By the World Bank's policies, the World Bank requires that the borrower disclose the audited financial statements in a manner acceptable to the World Bank. After formally receiving these financial statements from the MILLS, the World Bank will make them available to the public in accordance with the World Bank Policy on Access to Information.

16. **Third-Party Monitoring Agency (TPMA)** – Given the fact that some project woredas and communities have been inaccessible for monitoring and evaluation under LLRP, a Third-Party Monitoring Agency (TPMA) will be considered under LLRP II. The TPMA will include fiduciary assurances and involve teams with Financial Management (FM) expertise. The monitoring service's ToR will include required FM assurance activities and deliverables.

E. Disbursement Arrangements

17. **Funds flow and disbursement arrangements.** The project is an investment project financing, with a total project cost of US\$424 million. The funding sources are US\$340 million from IDA; US\$80 million in co-financing from the International Fund for Agricultural Development (IFAD) and US\$4 million from local farmer organizations. The project will follow the Government's channel two fund flow mechanisms, where IDA and IFAD funds will be made available directly to accounts managed by MILLS/FPCU. The MILLS/FPCU will open segregated Designated Accounts (DA) denominated in US dollars at the National Bank of Ethiopia (NBE) for IDA and IFAD sources. These accounts shall be opened by the credit and grant effectiveness date. The authorized ceiling of the DA would be two quarters forecasted cash requirement based on the approved AWPB. Funds from the designated US dollar accounts will be further transferred into pooled Birr accounts to be opened at the Federal, regional, zonal as well and woreda level implementing entities. It is important to ensure that the funds of this project are not comingled with the funds of the existing LLRP project.



18. **Disbursement methods.** The project may follow one or a combination of these disbursement methods: Advance to Designated Account, Direct Payment, Reimbursement, and Special Commitment. Further details about disbursements to the project will be included in the DFIL. Initial advances will be made based on six-month forecasts prepared based on the approved AWPB. Further replenishments will be made upon submission of the quarterly IFRs. The IFR will be used to settle past advances to the DA and request future resources.

19. **Financial Management Risks and Action Plan.** The FM risk of the project is Substantial and action plans are agreed to mitigate the risks.

Action Plan

	Action	Date Due By	Responsible
1.	New Implementing Woredas Capacity Assessment: - FM readiness is assured in all new 20 woredas, which as a minimum, will include the assignment or recruitment of an accountant; provision of basic FM training to accountants on the project FM requirements, opening bank accounts, and the setting up of sets of accounts and accounting systems.	Within three months of project effectiveness and before disbursement to the woredas.	MILLS/ FPCU
3.	Manuals -Prepare the project FM manual based on the existing LLRP -Prepare grant/seed money Manuals (GSMM)	FMM-3 months of effectiveness; GSSM-by Effectiveness	MILLS /FPCU
4.	AWPB The project's Annual Work Plan and budget will be prepared and submitted to the Bank by the end of May of each year. The budget will be notified before the start of the new FY.	During implementation	MILLS /FPCU
5.	Staffing/Capacity building Recruit or assign one accountant for each new entity implementing the project. Notify the Bank of the assigned personnel within three months of effectiveness. Provide training within one month of notification to the Bank.	With four months of effectiveness	MILLS/FPCU
6.	Internal control- Internal audit The internal audit will be conducted and share audit reports to World Bank. The management will take the necessary action to address the findings.	During implementation	MILLS
7	Control over expenditure comingling/double dipping Implement actions to minimize the risk of expenditure comingling/double dipping at all levels	Within one month of project effectiveness	MILLS/FPCU
8	Entity audit findings of MILLS with adverse opinion An update will be made by MILLS on whether entity audit findings are being addressed or actioned.	During implementation	MILLS/FPCU



F. Procurement

20. **Governing Procedure:** Procurement shall be carried in accordance with the World Bank Procurement Regulations for IPF Borrowers, 5th edition, dated September 2023; ‘Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants’, dated July 1, 2016 (Anti-Corruption Guidelines); and other provisions stipulated in the Financing Agreements.

21. **Procurement Documents:** The World Bank’s latest Standard Procurement Documents (SPDs) will be used for procurement of goods, works, Consulting, and non-consulting services while approaching the international market. The SPDs are available on the World Bank external website: www.worldbank.org/procurement/standard_documents.

22. **Use of National Procedure:** The national (both federal and regional) procedure is accepted for procurement from the national market provided that the requirements for use of the national procedure specified in the Regulation para 5.4 are met. Other national procurement that may be applied by the borrower (such as limited/restricted competitive bidding, request for quotation/shopping, direct contracting), shall be consistent with the World Bank’s core procurement principles and ensure that the World Bank’s Anticorruption Guidelines and Sanctions Framework and contractual remedies set out in its Legal Agreement apply.

23. **Project Procurement Strategy for Development (PPSD), Procurement Plan (PP) and Systematic Tracking of Exchanges in Procurement (STEP).** The client prepared PPSDs and PPs for the first 18 months of project implementation. Most of the envisaged procurement activities are simple requirements that will be procured using standard procedure. The clients will use the World Bank’s online tool (STEP) for procurement planning, processing, monitoring, and record keeping.

24. **Implementation Arrangement:** The Ministry of Irrigation and Lowlands is a focal ministry for coordinating and leading the procurement implementation in the project. The ministry will be supported by the PIU which will be staffed with qualified procurement and contract management specialists. Similarly, the respective regional offices with support from the respective PCUs staffed with qualified procurement specialist will be responsible for procurement implementation in their respective regions. Unlike LLRP I in which procurement has been implemented at local (Woreda) level, there are no procurement activities envisaged at woreda level under LLRP II. Thus, woredas are not identified as procurement implementing agencies under this project.

25. **Procurement Capacity assessment:** The World Bank carried out procurement capacity assessments using the Procurement Risk Assessment and Management System (PRAMS) template.

(a) *Procurement Regulatory Framework and management Capacity:* Both the Federal Government and Regional states (except the newly established regional states) enacted their respective public procurement proclamation and directives. The Federal proclamation is revised capturing the recommendation from the Core MAPS which is expected to be endorsed by the parliament soon. There is a fair level of application of the procurement rules in the day-to-day procurement implementation. As per the procurement document, the ministry established a clear procurement decision making structure including Bid Endorsing Committee which is mandated to review and approve procurement decisions for major contracts based on thresholds. The main challenge is related to inability to attract and retain qualified procurement experts at federal and regional level due to unattractive incentive structure.

(b) *Integrity and Oversight:* The procurement IAs both at federal and regional level are subjected to internal and external audit. In addition, the procurement regulatory agencies at federal and regional level carry out procurement audit annually. However, the project procurement activities are not included in the scope of their audit and thus, there is gap regarding external oversight on Bank financed procurement.



To address the gap and given that the project is implemented in decentralized structure, independent procurement audit will be sponsored with enhanced ToRs to provide feedback on procurement implementation on top of PPRs. Close follow up and support and enhanced accountability measures are required to ensure that the client hire the independent procurement auditor timely and address recommendation emanating from the IPAs and PPRs.

(c) *Procurement Process*: The client applies proportionate procurement methods and documents. However, the national SBDs are not used in consistent with the procurement regulation para 5.4 related to Bank's audit right, fraud and Anti-Corruption and ESHS clauses. Though there is a good practice in applying evaluation and post qualification criteria as provided in bidding documents, there were cases in which irrelevant and inappropriate evaluation criteria were used and evaluation reports were incomplete. In addition, the PIUs should improve transparency of the procurement process related to publication of award information which has not been adequate in the past.

(d) *Market Readiness*: Most of the procurement activities will be sourced from the domestic market which is competitive. However, the project sites for the major infrastructure projects are remote with security concerns which limits competition and interest from the market. In addition, the market is characterized by shortage of construction inputs (mainly cement and reinforcement bar) and skyrocketing price.

26. **Procurement Risk and Mitigation measures**: Based on the available information on the procurement system, procurement contract management process and performance, the residual risk after implementation of the mitigation measures is "Substantial". The major identified risks and proposed mitigation measures are as follows (i) Inability to attract and retain qualified procurement and contract management experts; (ii) lack of adequate competition and failed contracts due to security and market challenges; (iii) No standardized format for RFQ, PO, Evaluation reports etc.; (iv) Limited procurement and contract management capacity; (v) Skill gap to effectively use STEP; (vi) Limitation in the application of the agreed procurement decision making structure and complaint handling system; and (vii) Inadequate oversight commensurate to the size of decentralized implementation The proposed mitigation measures are (i) Recruit qualified procurement experts, at least two, in each of the federal and regional PIUs and provide attractive package as per the market rate (ii) Prepare Procurement Plans in advance and consider market conditions in selecting methods/approaches (iii) Prepare an agreed format and disseminate to Regions and provide training (iv) Provide training on contract management (v) provide training on STEP (vi) Strictly follow the agreed procurement and compliant handling procedure (vii) Plan and conduct a regular IPA and Prepare action plan and implement recommendation from IPA and PPRs

27. **Procurement oversight and monitoring arrangements**: The World Bank will exercise its procurement oversight through a risk-based approach comprising prior and post reviews as appropriate. The World Bank sets mandatory thresholds for prior review based on the procurement activity risk rating, as determined in the Procurement plan that will be agreed with the Bank throughout the course of project implementation. In addition, the client will employ independent procurement auditor and undertake procurement audit annually and submit audit report for Bank's review.



Annex 2: Climate Co-Benefits

Table 2.1 Summary of Climate Co-Benefits by Activity

Summary of Climate Co-Benefits by Activity.	Adaptation	Mitigation
Component 1: Pastoral Risk Management for Resilience		
Subcomponent 1.1: Strengthening Lowlands Early Warning and Response System and Climate Information Services		
Capacity building and capital investments to reduce the underlying causes of vulnerability to climate change at the systemic level	Increase awareness and information dissemination in the lowlands on how to adapt to climate change impacts. Mainstream national objectives on climate change adaptation into advisory services curriculum at decentralized levels with support of the project. Modernize the national early warning and response system.	—
Subcomponent 1.2: Implementing Disaster Preparedness and Resilience Investments		
Capacity building, infrastructure rehabilitation (goods and works)	Support adaptation to climate change impacts in the lowlands through enhancing the ability of local institutions’ (local governments, public agencies, and utilities) to identify climate risks, undertake climate-risk informed investment planning and management, develop early warning systems, prepare contingency plans, develop, and enforce climate risk-informed building codes to all infrastructures, as appropriate, undertake climate-risk informed spatial planning, and so on. Selection of construction/rehabilitation of critical infrastructure will include climate change vulnerability as a primary consideration. Eligible climate-smart PEI investments to be financed under this subcomponent include the construction, upgrading, or rehabilitation of (a) water resources both for human and livestock consumption (such as deep water well, small, and micro-dams) to build drought resilience; (b) efficient and innovative small-scale irrigation schemes; (c) all-weather feeder roads; (d) cold storage and feed stores, exploring renewable energy where possible, including solar power and biodigesters; (e) livestock market facilities; (f) veterinary service facilities; and (g) flood management works, prioritizing NBS identified under Component 2. Together, by enhancing access to critical social and economic services in sustainable and climate-smart ways, these investments are set to enhance the climate resilience capacities of the most vulnerable people to the impacts of climate change such as PAP community members including women, children, and the elderly. For instance, by constructing and updating feeder roads in the remote, historically underserved, and vulnerable project operation sites, the project provides access to markets, health, education, and other basic social and economic services, including emergency responses and access to public extension services. Improved road access implies improved opportunities and connectivity, thereby enhancing the	Support lower-carbon options for critical infrastructure investments and increase in carbon footprint and lifetime of the infrastructure compared to the pre-disaster or emergency scenario. When possible, the designs for construction, upgrading and rehabilitation of cold stores, feed stores, veterinary facilities will consider clean energy sources such as solar power.



Summary of Climate Co-Benefits by Activity.	Adaptation	Mitigation
	<p>resilience and adaptation capacities of the beneficiaries. The construction and upgrading of livestock market facilities will consider climate vulnerability assessment. Improved livestock markets will enhance access to market and trade among the PAP communities and enhancing commercialization of livestock. Access to markets will give the PAP with the opportunities for commercial destocking during drought, thereby minimizing the livestock deaths due to lack of access to market. Improved and sustainable access to livestock markets will improve offtake of livestock from the less-commercialized livestock sector in the remote PAP areas, thereby improving household incomes giving opportunities for investments in non-farm/livestock opportunities and hence better and diversified incomes for better adaptive capacities and food and nutrition security. Through implementation of flood protection structures, including cutoff-drains, retention walls, and diversion weirs, the project will reduce the vulnerability of communities in flood-prone areas such as Gambella region.</p>	
Component 2: Integrated Rangeland Management		
Subcomponent 2.1: Rangeland Health Monitoring and Institutional Capacity Building		
Capacity building	<p>Establish a comprehensive national RMS and provide institutional and organizational capacity-building support at federal, regional, woreda, and community levels. Provide information on the rangeland trend in comparison with historical data for communities, managers, and policy makers to take proactive management, market, and so on actions before losses occur due to droughts or floods. For example, enhanced rangeland monitoring capacities at institutional, and communities' level will enable the prevention of irreversible degradation to the rangeland ecosystem.</p>	<p>Maintain healthy grasslands, avoid loss of soil carbon, and launch policy interventions that explicitly protect carbon stocks (for example, land-use zoning, enforcement of sanctions on deforestation, sustainable intensification of land use, and land degradation prevention measures).</p>
Subcomponent 2.2: Participatory Rangeland and Pasture Management		
Capacity building, capital investments for pasture management (goods and works)	<p>Increase the resilience of pastures to climate change impacts through participatory rangeland and pasture management and land restoration. This will include restoration, regeneration, and rehabilitation of grasslands; protection and prevention of further grassland degeneration; and management of invasive species. Empower women, indigenous and marginalized groups, and poor people through specific interventions that address their challenges such as improved access to pasture and water, in adapting to climate change. Improve the health and productivity of rangelands that are critical assets for PAP communities for their survival in such arid and semiarid environments where other types of livelihood</p>	<p>Support carbon sequestration activities: improve pasture management to increase soil carbon stocks and reduce erosion; improve grazing management, circular, or integrated activities that enhance carbon stock; and promote silvo-pastoralism and nitrification-inhibiting practices in pastures. Support production and marketing of high-yielding forage to increase livestock productivity</p>



Summary of Climate Co-Benefits by Activity.	Adaptation	Mitigation
	<p>options than rangeland-based livestock are not economically and environmentally feasible. Improved rangelands provide better ecosystem services for better adaptation to the impacts of climate change to vulnerable communities. For example, improved and sustainably managed rangelands will improve biodiversity through managing invasive plant, improve availability and quality of pasture and water, thereby improving production and productivity of livestock that depends on the natural rangelands, reducing livestock deaths and improving productivity with better milk, meat, and other livestock products for PAP community members, enhancing their food and nutrition security. This in turn improves the adaptation capacities of the community to the impacts of climate change. Similarly, by managing the wetlands through appropriate practices and innovations, the project improves the productivity of wetlands thereby improving food security and climate resilience of the vulnerable communities, as wetlands provide critical flood mitigation services and help prevent water logging of cropland and pasture lands.</p>	<p>to lower carbon intensity per product and reduce livestock mortality during drought times to reduce carbon wastage. The project will include a specific GHG reduction indicator to measure progress because of the project interventions. agreed to work with ILRI to develop methodologies to measure.</p>
Subcomponent 2.3: Resource-Related Conflict Management and Mitigation		
Capacity building	<p>Resource-related conflicts in the PAP lowlands of Ethiopia are one of the major drivers of food insecurity. Due to conflicts, (many of which are climate-related in nature given the impact of climate change on key natural resource availability) the PAP communities are not able to move freely and feed their animals. This issue is exacerbated during drought times when natural resources significantly diminish. Conflict-affected areas are not accessible by people and animals for long periods, leading to encroachment by unpalatable, alien, and native invasive plant species, further deteriorating the already constrained rangeland ecosystem. Support conventional and indigenous conflict prevention and mitigation mechanisms through conflict analysis and mapping, capacity building, facilitating peace-building dialogues, and strengthening customary institutions to be able to protect and secure access to key natural resources, enhance unconstrained mobility of livestock and pastoralists ensure access to better pastures, water, and markets, and public services during drought.</p> <p>This subcomponent will also engage the government to formulate and enforce appropriate pastoral land tenure and use policy to legally recognize and certify</p>	<p>Investments under this subcomponent will identify and promote low carbon technologies such as solar energy, energy efficient fuel-saving stoves, biodigesters, biogas using manure and livestock wastes, etc.</p> <p>Through promoting and supplying these lower-carbon technologies to replace less efficient technologies (i.e., traditional wood stoves that necessitate deforestation) these investments will minimize the burden on natural resources through reduced deforestation, leading to a substantial reduction in GHG emissions.</p>



Summary of Climate Co-Benefits by Activity.	Adaptation	Mitigation
	<p>traditional pastoral land ownership and resource rights. If PAP land and resource rights are protected by law and secured, communities can protect the health of their rangeland resources and, in turn, mitigate the impacts of climate change.</p>	
Component 3: Climate Resilient and Sustainable Livelihoods		
Subcomponent 3.1: Crop and Livestock Productivity and Climate Resilience		
Capacity building, goods, and works	<p>Support PAPs in the development and implementation of agricultural and livestock production/processing practices including breed, health, feed, good animal husbandry practices (GAHPs), nutrition-sensitive interventions, and market linkages. Promoting Good Animal Husbandry Practices (GAHPs) could contribute towards resilience building by contributing to building adaptive capacity.</p> <p>All together, these will enhance production and productivity, improved and sustainable household incomes and hence improved nutrition and food security, thereby enhancing resilience and adaptive capacities of PAPs to impacts of climate change.</p>	<p>Supporting the development and adoption of climate-smart practices to improve animal production efficiency (health, feed, and reproduction management), and thus reduce emission intensity. Promoting good animal husbandry practices could contribute toward resilience building by contributing to building adaptive capacity. Supporting animal health management and providing selected high-quality feed could result in lower emission intensity from healthier animals. Investments will also promoting climate-smart irrigation technologies (such as solar, drip irrigation, and so on) combined with improved agronomic practices could lead to reduce GHG emissions.</p>
Subcomponent 3.2: Commercialization and Livelihoods Diversification		
Capacity building, goods, works, and capital investments in market infrastructure	<p>The lack of alternative viable livelihood options in the climate vulnerable lowlands of Ethiopia is one of the major challenges for PAs. Therefore, supporting livelihoods diversification and promoting alternative options has been identified as a critical resilience pathway for climate resilient livelihoods.</p> <p>Therefore, the project’s support for livelihood diversification and commercialization will play a critical role in enhancing adaptation and resilience among poor households, including women and youth as many have already moved out or are on the verge of moving out the PAP systems because of livestock loss due to drought related livestock loss.</p>	<p>supporting household, to diversify available resources and engage in climate friendly livelihood activities will enable them to shift away from more carbon-intensive activities such as fuelwood cutting and the use of charcoal.</p>



Measuring Livelihood and Climate Resilience

1. Improving the livelihood and climate resilience of PAP households, communities, and ecosystems is the central focus of the project and all its undertakings. The project views household and community resilience as stemming from three types of capacities: absorptive capacity, adaptive capacity, and transformative capacity. Table 2.2. offers more detailed descriptions of these capacities along with examples of LLRP II interventions that aim to build these capacities and indicators that will be used to measure how they evolve.

Table 2.2. Addressing and Measuring Livelihood and Climate Resilience in LLRP II

Resilience Capacity	LLRP II Intervention Area	Components	Measurement Indicators in Results Framework
Absorptive Capacity (Capacity to take intentional protective action and cope with or bounce back after a shock by ensuring stability and limiting negative impacts)	<ul style="list-style-type: none"> Early warning and response system and CIS to provide timely and relevant information on natural shocks will help communities and government to take appropriate actions to reduce impacts. 	1.1	IR indicator: Beneficiaries with access to timely information from early warning and response systems and climate information services (percentage)
	<ul style="list-style-type: none"> Participatory rangeland and pasture management will protect rangeland and pastures as natural capital 	2.2	PDO indicator: Land area under sustainable landscape management practices (hectares)
	<ul style="list-style-type: none"> Woreda risk profiles help take proactive decisions to protect community groups through risk reduction and contingency planning 	1.1	IR indicator: Woredas with new or updated automated disaster risk profiles (number)
	<ul style="list-style-type: none"> Disaster preparedness and resilience investments will enhance preparedness and resilience of communities, their ecosystem and production systems. 	1.2	PDO indicator: Climate resilient public economic infrastructure constructed and operational
Adaptive Capacity (adaptation is the flexibility to better manage and accept an unpredictable change)	<ul style="list-style-type: none"> National RMS covering land, soil, and water as an adaptation to climate change 	2.1	IR indicator: National rangeland monitoring system (RMS) developed and operational (number)
	<ul style="list-style-type: none"> Rangeland management plans as forward-looking decisions and innovations to implement nature- 		IR indicator: Climate Smart and Nature based Rangeland Management Plans (RMPs)



Resilience Capacity	LLRP II Intervention Area	Components	Measurement Indicators in Results Framework
	based climate-smart land management practices	2.2	updated or formulated and rolled out for implementation (Number)
	<ul style="list-style-type: none"> • Animal health services including the One Health approach, feed husbandry practices, and market intervention to ensure access to markets, livestock, and input supplies 	3.1	<p>PDO indicator: Increase in yield of targeted livestock and crop commodities (Percentage)</p> <p>IR indicator: Project Beneficiaries that adopted two or more climate smart improved technologies and innovations* (Number)</p> <p>IR indicator: Area provided with new or improved irrigation</p>
	<ul style="list-style-type: none"> • Feed, animal husbandry practices and market interventions 	3.2	<p>IR indicator: Annual increase in off take of animals from the project supported woredas</p>
	<ul style="list-style-type: none"> • Digital crop and livestock extension for technological and social innovations 	3.2	<p>IR indicator: Project beneficiaries that adopted two or more climate-smart improved technologies and innovations (number)</p>
	<ul style="list-style-type: none"> • Women-focused community groups as social network to have strong and diverse participation on diverse livelihoods options 	3.2	<p>IR indicator: Leadership positions held by women in all mixed (women and men) groups created/supported by the project (percentage)</p>
	<ul style="list-style-type: none"> • Policy, solutions, and strategic approaches for supporting adaptations during changing conditions 	4.2	<p>IR indicator: National and Sub-national annual Policy dialogues organized and facilitated by MILLS on climate change and PAP development agenda (Number)</p>
<p>Transformative Capacity (Capacity to consciously</p>	<ul style="list-style-type: none"> • Conflict mitigation to protect land-use rights for collaboratively 		<p>IR indicator: Feedback (complaints, queries, suggestions) addressed and</p>



Resilience Capacity	LLRP II Intervention Area	Components	Measurement Indicators in Results Framework
engage in long time change process)	working together for shared management of natural resources	2.3	responded within stipulated timeframes publicly communicated by the project (percentage)
	<ul style="list-style-type: none"> Diversifying and commercializing livelihoods to reorganize and potentially transform practices and system to generate momentum for change 	3.2	<p>PDO indicator: Beneficiaries with 25 % or more annual household income increment due to project interventions.</p> <p>IR indicator: Beneficiaries supported with potential and viable alternate livelihood options (Number)</p>
	<ul style="list-style-type: none"> Productive marketing alliances along value chains to engage in the long-term process of change addressing poverty and social movements ensuring sustainable and just features 	3.2	IR indicator: Productive alliances established and functional between PAP producers and private sector actors



Annex 3: Map of Area of Operation

