THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

FOR OFFICIAL USE ONLY

Report No: PAD5259

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION
PROJECT APPRAISAL DOCUMENT

ON
A PROPOSED CREDIT IN THE AMOUNT OF
EUR 92.1 MILLION (US$100 MILLION EQUIVALENT)
AND
A SHORTER MATURITY LOAN IN THE AMOUNT OF
EUR 46.1 MILLION (US$50 MILLION EQUIVALENT)
TO THE REPUBLIC OF KENYA

AND
PROPOSED GRANTS IN THE AMOUNT OF

SDR 29.8 MILLION (US$40 MILLION EQUIVALENT)
OF WHICH US$10 MILLION EQUIVALENT FROM THE CRISIS RESPONSE WINDOW
TO THE UNION OF THE COMOROS

SDR 111.6 MILLION (US$150 MILLION EQUIVALENT)
TO THE FEDERAL REPUBLIC OF SOMALIA

SDR 185.9 MILLION (US$250 MILLION EQUIVALENT)
TO THE REPUBLIC OF MALAWI

SDR 9.7 MILLION (US$13 MILLION EQUIVALENT)
TO THE AFRICAN UNION

US$15 MILLION
FROM THE GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAM
TO THE REPUBLIC OF MALAWI

US$3 MILLION
FROM THE GLOBAL PROGRAM FOR THE BLUE ECONOMY MULTIDONOR TRUST FUND
TO THE UNION OF THE COMOROS

FOR A FOOD SYSTEMS RESILIENCE PROGRAM FOR EASTERN AND SOUTHERN AFRICA PHASE 3 UNDER THE MULTIPHASE PROGRAMMATIC APPROACH APPROVED BY THE BOARD ON JUNE 21, 2022 WITH AN OVERALL IDA ENVELOPE OF US$2.3 BILLION EQUIVALENT AND PROPOSED TO BE INCREASED TO US$2.75 BILLION EQUIVALENT

May 8, 2023

Agriculture and Food Global Practice
Eastern and Southern Africa Region

CURRENCY EQUIVALENTS

(March 31, 2023)

Currency Unit =	SDR
US$1 =	SDR 0.74

FISCAL YEAR
January 1 – December 31
Malawi: April 1 – March 31

Regional Vice President:	Victoria Kwakwa
Country Director:	Boutheina Guermazi
Acting Regional Director:	Holger A. Kray
Practice Manager:	Shobha Shetty
Task Team Leaders:	Tomas Rosada Villamar, Vinay Vutukuru, Bobojon Yatimov, James Musinga, Mampionona Amboarasoa, Timothy Robertson

ABBREVIATIONS AND ACRONYMS

ACBP	Africa Climate Business Plan
AFAAS	African Forum for Agricultural Advisory Services
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AFE	Eastern and Southern Africa
AFSA	Alliance for Food Sovereignty in Africa
AFSLD	African Food Security Leadership Dialogue
AGCOM	Agricultural Commercialization Project
AICCRA	Accelerating Impacts of CGIAR Climate Research for Africa
AMR	Antimicrobial Resistance
APFS	Agro-Pastoralist Field School
APPSA	Agricultural Productivity Project for Southern Africa
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASWAp SP II	Second Agriculture Sector Wide Approach Support Project
ATI	Agricultural Transformation Institute
AU	African Union
AUC	African Union Commission
AUC-DARBE	African Union Commission - Agriculture, Rural Development, Blue Economy and Environment
AUDA-NEPAD	African Union Development Agency-New Partnership for Africa's Development
AWPB	Annual Work Plan and Budget
CAADP	Comprehensive Africa Agriculture Development Program
CBK	Central Bank of Kenya
CCARDESA	Centre for Coordination of Agricultural Research and Development for Southern Africa
CCB	Climate Change Co-Benefits
CDD	Community-Driven Development
CDDC	Community-Driven Development Committee
CE	Citizen Engagement
CECM	County Executive Committee Member
CERC	Contingent Emergency Response Component
CGIAR	Consultative Group on International Agricultural Research
CGM	Community Grants Manual
CIG	Common Interest Group
CMU	Country Management Unit
COMESA	Common Market for Eastern and Southern Africa
CPC	County Project Coordinator
CPCU	County Project Coordination Unit
CPIU	County Project Implementation Unit
CPSC	County Project Steering Committee

CRDE	Rural Center for Economic Development (*Centre Rurale de Developpement Economique)*
CRF	County Revenue Fund
CSA	Climate-Smart Agriculture
DA	Designated Accounts
DAT	Disruptive Agricultural Technology
DCAS	Digital Climate Advisory Services
DFIL	Disbursement and Financial Information Letter
DPF	Development Policy Financing
DRIVE	De-risking, Inclusion, and Value Enhancement of Pastoral Economies in the Horn of Africa
DRM	Disaster Risk Management
EAC	East African Community
EAFS	External Assistance Fiduciary Section
EDP	Enterprise Development Plan
EFA	Economic and Financial Analysis
EIRR	Economic Internal Rate of Return
ELRP	Emergency Locust Response Project
ENPV	Economic Net Present Value
ERM	External Resources Management
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
EU	European Union
FA	Financing Agreement
FANR	Food, Agriculture, and Natural Resources
FAO	Food and Agriculture Organization of the United Nations
FARA	Forum for Agricultural Research in Africa
FBO	Farmer-Based Organization
FCV	Fragility, Conflict, and Violence
FFS	Farmer Field School
FGS	Federal Government of Somalia
FLID	Farmer-Led Irrigation Development
FM	Financial Management
FPO	Farmer Producer Organization
FRR	Financial Rules and Regulations
FSRP	Food Systems Resilience Project
GAFSP	Global Agriculture Food Security Program
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GEMS	Geo-Enabling Initiative for Monitoring and Supervision

GHG	Greenhouse Gas
GoC	Government of the Comoros
GoK	Government of Kenya
GoM	Government of Malawi
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HCP	High Carbon Price
HDDS	Households Dietary Diversity Score
HOA	Horn of Africa
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information System
IFR	Interim Financial Report
IGAD	Intergovernmental Authority on Development
IMPIF	Irrigation Master Plan and Investment Framework 2016–2035
INRAPE	National Institute for Agriculture Research (*Institut Nationale de Recherche pour l'Agriculture, la Pèche et l'Environnement)*
IOC	Indian Ocean Commission
IPC	Integrated Food Security Phase Classification
IPF	Investment Project Financing
IPMP	Integrated Pest Management Plan
IPSAS	International Public Sector Accounting Standards
IRM-OM	Immediate Response Mechanism Operations Manual
IT	Information Technology
KALRO	Kenya Agricultural and Livestock Research Organization
KCSAP	Kenya Climate Smart Agriculture Project
LIMS	Land Information Management Systems
LCP	Low Carbon Price
LMP	Labor Management Procedures
M&E	Monitoring and Evaluation
MAPETA	Ministry of Agriculture, Fisheries, Environment and Tourism (*Ministère de l'agriculture, de la pêche de l'environnement et du tourisme*)
MBS	Malawi Bureau of Standards
MFD	Mobilizing Finance for Development
MIS	Management Information System
MoA	Ministry of Agriculture
MoAI	Ministry of Agriculture and Irrigation
MoALD	Ministry of Agriculture and Livestock Development
MoALFC	Ministry of Agriculture, Livestock, Fisheries, and Cooperatives
MoIT	Ministry of Industry and Trade
MoLFR	Ministry of Livestock, Forest and Range
MPA	Multiphase Programmatic Approach

MSMEs	Micro, Small, and Medium Enterprises
MTR	Midterm Review
NAIP	National Agriculture Investment Plan
NARIGP	National Agricultural and Rural Inclusive Growth Project
ND-GAIN	Notre Dame-Global Adaptation Initiative
NGO	Nongovernmental Organization
NPC	National Project Coordinator
NPCU	National Project Coordination Unit
NPSC	National Project Steering Committee
NRM	Natural Resources Management
NT	National Treasury
NTAC	National Technical Advisory Committee
O&M	Operation and Maintenance
OHS	Occupational Health and Safety
OIO	Office of Internal Oversight
PA	Productive Alliance
PAD	Project Appraisal Document
PCU	Project Coordination Unit
PDO	Project Development Objective
PFM	Public Financial Management
PforR	Program-for-Results
PIDC	Integrated Development and Competitiveness Project (*Project Intégré de Développement et de la Compétitivité*)
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PO	Producer Organization
POM	Project Operational Manual
PP	Procurement Plan
PPP	Public-Private Partnership
PPSD	Project Procurement Strategy for Development
PRAMS	Procurement Risk Assessment and Management System
PRC	Permanent Representative Committee
PrDO	Program Development Objective
PSC	Project Steering Committee
R&D	Research and Development
RAIP	Regional Agriculture Investment Plan
REC	Regional Economic Community
RFB	Request for Bids
RPF	Resettlement Policy Framework
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SACCO	Savings and Credit Cooperative Organization
SADC	Southern Africa Development Community

SANOI	Food Nutrition Security in Indian Ocean (*Sécurité Alimentaire et Nutritionnelle en Océan Indien*)
SC	Steering Committee
SCMD	Supply Chain Management Division
SCRP	Somalia Crisis Recovery Project
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SESA	Strategic Environmental and Social Assessment
SH	Sexual Harassment
SMEs	Small and Medium Enterprises
SoE	Statement of Expenditures
SPD	Standard Procurement Document
SPS	Sanitary and Phytosanitary
SRO	Subregional Organization
SSAHUTLC	Sub-Saharan African Historically Underserved Traditional Local Communities
SSI	Small-Scale Irrigation
STEP	Systematic Tracking of Exchanges in Procurement
SVTP	Shire Valley Transformation Project
SWIOFC	Southwest Indian Ocean Fisheries Commission
TA	Technical Assistance
TIMPs	Technologies, Innovations, and Management Practices
ToC	Theory of Change
ToR	Terms of Reference
TPIA	Third-Party Implementing Agency
TPM	Third-Party Monitoring
TTL	Task Team Leader
UN	United Nations
UNDB	United Nations Development Business
UNFPA	United Nations Population Fund
VfM	Value for Money
VMG	Vulnerable and Marginalized Group
WBG	World Bank Group
WFP	World Food Programme
WUA	Water Users' Association
ZAMCOM	Zambezi Watercourse Commission

TABLE OF CONTENTS

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name
Eastern and Southern Africa, Kenya, Comoros, Malawi, Somalia	Food Systems Resilience Program for Eastern and Southern Africa (Phase 3)

Project ID	Financing Instrument	Environmental and Social Risk Classification
P177816	Investment Project Financing	Substantial

Financing & Implementation Modalities

[✓] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[✓] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[✓] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[✓] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Project Approval Date	Expected Project Closing Date	Expected Program Closing Date
31-May-2023	31-Aug-2029	30-Jun-2031

Bank/IFC Collaboration

No

MPA Program Development Objective

To increase the resilience of food systems and preparedness for food insecurity in the participating countries.

MPA Financing Data (US$, Millions)	
MPA Program Financing Envelope	2,750.00
with an additional request to IDA	450.00

Proposed Project Development Objective(s)

The objectives of the Project are to increase resilience of food systems and the Recipient's preparedness for food insecurity in Project areas, and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.

Components

Component Name	Cost (US$, millions)
C1 (Re-)Building Resilient Agricultural Production Capacity	139.70
C2 Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes	160.50
C3 Getting to Market	207.30
C4 Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking	60.00
C5 Contingency Emergency Response Component (CERC)	0.00
C6 Project Management	53.50

Organizations

Borrower:	African Union The Federal Republic of Somalia The Republic of Kenya The Republic of Malawi The Union of Comoros
Implementing Agency:	African Union Commission Ministry of Agriculture & Livestock Development (MoALD), Kenya Ministry of Agriculture and Irrigation (MoAI), Somalia Ministry of Agriculture, Fisheries, Environment, Tourism and Handicrafts (MAPETA), Comoros Ministry of Agriculture, Malawi

MPA FINANCING DETAILS (US$, Millions)	
Board Approved MPA Financing Envelope:	2,300.00

MPA Program Financing Envelope:	2,750.00
of which Bank Financing (IBRD):	0.00
of which Bank Financing (IDA):	2,750.00
of which other financing sources:	0.00

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	621.00
Total Financing	621.00
of which IBRD/IDA	603.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	603.00
IDA Credit	150.00
IDA Grant	453.00

Non-World Bank Group Financing

Trust Funds	18.00
Global Agriculture and Food Security Program	15.00
PROBLUE MDTF	3.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount

Kenya	100.00	0.00	50.00	0.00	150.00
National Performance-Based Allocations (PBA)	0.00	0.00	50.00	0.00	50.00
Regional	100.00	0.00	0.00	0.00	100.00
Comoros	0.00	40.00	0.00	0.00	40.00
National Performance-Based Allocations (PBA)	0.00	10.00	0.00	0.00	10.00
Regional	0.00	20.00	0.00	0.00	20.00
Crisis Response Window (CRW)	0.00	10.00	0.00	0.00	10.00
Malawi	0.00	250.00	0.00	0.00	250.00
National Performance-Based Allocations (PBA)	0.00	85.00	0.00	0.00	85.00
Regional	0.00	165.00	0.00	0.00	165.00
Somalia	0.00	150.00	0.00	0.00	150.00

National Performance-Based Allocations (PBA)	0.00	50.00	0.00	0.00	50.00
Regional	0.00	100.00	0.00	0.00	100.00
Eastern and Southern Africa	0.00	13.00	0.00	0.00	13.00
Regional	0.00	13.00	0.00	0.00	13.00
Total	**100.00**	**453.00**	**50.00**	**0.00**	**603.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028	2029
Annual	0.00	53.00	58.00	100.00	125.00	175.00	110.00
Cumulative	0.00	53.00	111.00	211.00	336.00	511.00	621.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Environment, Natural Resources & the Blue Economy, Finance, Competitiveness and Innovation, Social Protection & Jobs

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating

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

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 Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
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 Covenants

Sections and Description

AU- Schedule 2, Section I.B.1: Not later than three months after the Effective Date, prepare and adopt, in accordance with terms of reference acceptable to the Association, a Project Implementation Manual (PIM) setting out, inter alia, partnership arrangements between AUC and AUDA-NEPAD, AUDA-NEPAD project implementation staffing, and guiding principles for gender inclusion in AUC-DARBE and AUDA-NEPAD events and processes.

Sections and Description

Comoros- Schedule 2, Section I.A.1.b: The Recipient, through MAPETA, shall cause the PIU to appoint and hire, not later than three (3) months after the Effective Date, and thereafter maintain, throughout Project implementation, additional technical staff, including a financial management specialist and an accountant, and thereafter maintain, until completion of the Project, a structure, responsibilities and qualifications acceptable to the Association.

Sections and Description

Comoros- Schedule 2, Section I.B.1: The Recipient, through MAPETA, shall, not later than three months after the Effective Date, prepare and adopt, in accordance with terms of references acceptable to the Association.

Sections and Description

Somalia- Schedule 2, Section I.A.1 The Recipient shall (a): establish no later than three months after Effective Date and thereafter maintain throughout the period of Project implementation, a National Project Steering Committee co-chaired by MoAI and MoLFR, and comprised of representatives from, inter alia, the Ministry of Finance, Ministry of Energy and Water Resources, Ministry of Environment and Climate Change, Ministry of Planning, Investment and Economic Development, and other relevant stakeholder institutions.

Sections and Description

Malawi- Schedule 2, Section I.A.2: The Recipient shall, not later than three months after the Effective Date, establish and thereafter maintain at all times during the implementation of the Project, a PSC with a composition, terms of reference and resources satisfactory to the Association.

Sections and Description

Kenya - Schedule 2, Section I.A. 2 (c): The Recipient shall maintain the National Project Coordinating Unit, headed by the national Project coordinator; with composition satisfactory to the Association.

Sections and Description

Somalia- Schedule 2, Section I.A.1 The Recipient shall (c): establish no later than three months after the Effective Date and thereafter maintain throughout the period of Project implementation a National Project Coordination Unit: (i) led by a national Project coordinator, assisted by competent, experienced and qualified staff, in sufficient numbers and under terms of reference acceptable to the Association, as further detailed in the Project Implementation Manual, and (ii) vested with such powers, financial resources, functions and competencies, acceptable to the Association and set forth in the Project Implementation Manual, and shall be required to, inter alia, coordinate all activities under the Project among all Project stakeholders.

Sections and Description

Somalia- Schedule 2, Section I.A.1 The Recipient shall (b): establish no later than three months after Effective Date and thereafter maintain throughout the period of implementation, a National Technical Advisory Committee co-chaired by Directors General of the MoAI) and the MoLFR and comprised of representatives from, inter alia, the Federal Ministry of Finance, Ministry of Energy and Water Resources; Ministry of Environment and Climate Change, maximum of four representatives from relevant line ministries of participating Federal Member States, and other relevant stakeholder institutions.

Sections and Description

Kenya- Schedule 2, Section I.A. 3 (a): To ensure efficient implementation of the Project at the County level, the

Recipient shall establish within ninety days of the Effective Date, and thereafter maintain throughout the implementation of the Project, the County Project Steering Committee, chaired by the CECM in charge of agriculture, with composition, terms of reference and resources satisfactory to the Association.

Sections and Description

Kenya- Schedule 2, Section I.A. 3 (b): To ensure efficient implementation of the Project at the County level, the Recipient shall

est

ablish within ninety days of the Effective Date, and thereafter maintain throughout the implementation of the Project, the County Technical Advisory Committee, chaired by the chief officer in charge of agriculture, with composition, terms of reference and resources satisfactory to the Association.

Sections and Description

Kenya - Schedule 2, Section I.A.2 (b): The Recipient shall establish within ninety days of the Effective Date, and thereafter maintain throughout the implementation of the Project, the National Technical Advisory Committee, co-chaired by the Principal Secretary of the MoALD, and a CECM in charge of Agriculture nominated by the Council of County Governors; with composition satisfactory to the Association.

Sections and Description

Kenya- Schedule 2, Section I. A.2 (a): The Recipient shall establish within ninety days of the Effective Date, and thereafter maintain throughout the implementation of the Project, the National Project Steering Committee, co-chaired by the Cabinet Secretary of the MoALD, and the chair of the Agricultural Committee in the Council of Governors; with composition satisfactory to the Association.

Sections and Description

Somalia - Schedule 2, Section IV. 1: No later than twelve months after the Effective Date, the Recipient shall update the Environmental and Social Framework instruments, in form and substance satisfactory to the Association.

Sections and Description

Kenya- Schedule 2, Section I.C.1 (a): The Recipient through the MoALD, shall not later than one month after the Effective Date, prepare and adopt, in form and substance satisfactory to the Association, a Project Implementation Manual, setting out, inter alia, specific implementation arrangements, results framework, activity descriptions, including cooperation mechanisms among the implementing entities, for the implementation of the Project.

Sections and Description

Somalia - Schedule 2, Section IV. 3: No later than twelve months after the Effective Date, the Recipient shall update the Stakeholder Engagement Plan, in form and substance satisfactory to the Association.

Sections and Description

Somalia- Schedule 2, Section I.H: The Recipient shall select and engage, by no later than six months after the Effective Date, and thereafter retain throughout the period of implementation of the Project, the services of a duly qualified and experienced monitoring consultant(s) satisfactory to the Association, under terms of reference acceptable to the Association, in order to monitor the achievement of the Project's objectives.

Sections and Description

Malawi - Schedule 2, Section IV: No later than thirty days after the Effective Date, the Recipient shall establish a Project grievance redress mechanism and thereafter maintain and operate the GRM throughout the implementation of the Project, in form and substance satisfactory to the Association.

Sections and Description

Somalia - Schedule 2, Section IV. 2: No later than six months after the Effective Date, the Recipient shall develop the terms of reference and prepare, consult upon, review, adopt, and publicly disclose the Strategic Environmental and Social Assessment, in form and substance satisfactory to the Association.

Sections and Description

Kenya - Schedule 2, Section IV. 1: The Recipient shall, no later than twelve months after the Effective Date, update the Stakeholder Engagement Plan, in manner and substance satisfactory to the Association.

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	AU- Article V, 5.01 (a) of the Financing Agreement: The Recipient has established the PIU in accordance with the provisions of Section I.A of Schedule 2 of this Agreement.
Type	Financing source	Description
Effectiveness	IBRD/IDA	AU- Article V, 5.01 (b) of the Financing Agreement: The Recipient has established the grievance mechanism in accordance with the provisions of Section I.E.5 of Schedule 2 of this Agreement.
Type	Financing source	Description
Effectiveness	IBRD/IDA	Malawi- Article IV, 4.01 (a) of the Financing Agreement: The Recipient has recruited the

		following staff to the PIU: environmental specialist, social and gender specialist, environmental health and safety officer, and social development and gender officer with terms of reference satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description Malawi- Article IV, 4.01 (b) of the Financing Agreement: The Recipient has adopted the Environmental and Social Management Framework, Labor Management Procedures, and Resettlement Policy Framework, in manner and substance satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description Malawi- Article IV, 4.01 (d) of the Financing Agreement: The Recipient has adopted the Project Implementation Manual, in accordance with Section I.B. of Schedule 2 to this Agreement.
Type Effectiveness	Financing source IBRD/IDA	Description Malawi- Article IV, 4.01 (c) of the Financing Agreement: The Recipient has updated the Stakeholder Engagement Plan and the Gender Based Violence Prevention and Response Plan, in manner and substance satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description Malawi- Article IV, 4.01 (e) of the Financing Agreement: The GAFSP Grant Agreement has been executed and delivered and all conditions precedent to its effectiveness or the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.

Type	Financing source	Description
Effectiveness	IBRD/IDA	Somalia- Article IV, 4.01 (a) of the Financing Agreement: The Recipient has prepared, consulted upon, adopted and publicly disclosed the Environmental and Social Management Framework, the Resettlement Policy Framework, the Vulnerable and Marginalized Group Framework, Livelihood Restoration Plans, the Sexual Exploitation, Abuse and Harassment Prevention and Response Plan, Integrated Pest Management Plans (including emergency response measures), and Waste Management Plan – all in form and substance satisfactory to the Association.
Type	Financing source	Description
Effectiveness	IBRD/IDA	Somalia- Article IV, 4.01 (b) of the Financing Agreement: The Recipient has prepared and adopted the Project Implementation Manual, in form and substance satisfactory to the Association.
Type	Financing source	Description
Effectiveness	IBRD/IDA	Kenya- Blend- Article IV, 4.01 (c) of the Financing Agreement: The Recipient has recruited/seconded to the NPCU, a security consultant and an SEA/SH consultant, with resources and terms of reference satisfactory to the Association.
Type	Financing source	Description
Effectiveness	IBRD/IDA	Kenya- Blend-Article IV, 4.01 (a) of the Financing Agreement: The Recipient has prepared, consulted upon, adopted and publicly disclosed the Environmental and Social Management Framework, the Resettlement Policy Framework, the Labor Management Procedures, the Vulnerable and Marginalized Group Framework, the Sexual Exploitation,

		Abuse and Sexual Harassment (SEA/SH) Prevention and Response Plan, Integrated Pest Management Plans (including emergency response measures), and Waste Management Plan – all in form and substance satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description Kenya- Blend- Article IV, 4.01 (b) of the Financing Agreement: The Recipient has prepared and adopted the Security Management Plan, in form and substance satisfactory to the Association.
Type Effectiveness	Financing source Trust Funds	Description Comoros - Article IV, 4.01 of the Grant Agreement: This Agreement shall not become effective until the Recipient confirms, and the Association is satisfied, that the following condition is met, namely, the Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.
Type Effectiveness	Financing source IBRD/IDA	Description Kenya- Blend- Article IV, 4.01 (d) of the Financing Agreement: The Recipient has established an accessible grievance redress mechanism, in form and substance satisfactory to the Association.
Type Effectiveness	Financing source Trust Funds	Description Malawi - Article IV, 4.01 of the Grant Agreement: This Agreement shall not become effective until evidence satisfactory to the Bank has been furnished to the Bank that the

		Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.
Type Effectiveness	Financing source IBRD/IDA	Description Kenya -SML- Article IV, 4.01 of the Financing Agreement: The IDA Blend Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.
Type Disbursement	Financing source IBRD/IDA	Description Comoros - Schedule 2, Section III, B 1 (a): No withdrawal shall be made for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed SDR 100,000 may be made for payments made prior to this date but on or after November 30, 2022, for Eligible Expenditures.
Type Effectiveness	Financing source Trust Funds	Description Malawi - Article IV, 4.01 of the Grant Agreement: This Agreement shall not become effective until evidence satisfactory to the Bank has been furnished to the Bank that the Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.

Type	Financing source	Description
Disbursement	IBRD/IDA	Comoros - Schedule 2, Section III, B 1 (b): No withdrawal shall be made under Category (2) until and unless the Recipient has prepared, finalized, adopted, and disclosed in form and substance satisfactory to the Association the Environmental and Social Management Framework, the SEA/SH Action Plan, the Waste Management Plan, and the Integrated Pest Management Plan.
Type	Financing source	Description
Disbursement	IBRD/IDA	Comoros - Schedule 2, Section III, B 1 (c): No withdrawal shall be made under Category (3) for Matching Sub-grants until and unless the Recipient has adopted the Matching Sub-grants Manual in form and substance satisfactory to the Association.
Type	Financing source	Description
Disbursement	IBRD/IDA	Kenya - Schedule 2, Section III, B 1 (b): No withdrawal shall be made under Category (2) until and unless the Recipient has prepared and adopted the Community Grants Manual in accordance with Section I.C.2 of Schedule 2 to this Agreement.
Type	Financing source	Description
Disbursement	IBRD/IDA	Kenya - Schedule 2, Section III, B 1 (c): No withdrawal shall be made under Category (3) until and unless the Recipient has prepared and adopted the Inclusion Grants and Financial Inclusion Matching Grants Manual in accordance with Section I.C.3 of Schedule 2 to this Agreement.
Type	Financing source	Description
Disbursement	IBRD/IDA	Somalia - Schedule 2, Section III, B 1 (b): No withdrawal shall be made under Category (3)

		until and unless Somaliland has: (i) executed the Somaliland Subsidiary Agreement setting forth implementation arrangements for Somaliland's Respective Activities under the Project (including the flow of funds out of the Financing proceeds), and all Somaliland's internal requirements for the agreement to be binding upon Somaliland in accordance with its terms have been duly obtained/secured; (ii) prepared and formally adopted a Project implementation manual ("Somaliland Project Implementation Manual") for its Respective Activities under the Project; (iii) established the institutional arrangements set forth in the foregoing manual, as shall be required to carrying out its Respective Activities under the Project, in a manner and substance satisfactory to the Association.

I. STRATEGIC CONTEXT

A. Regional Context

1. **The food systems of the AFE region are some of the most vulnerable in the world.** AFE is home to over 656 million people, many of whom are extremely poor and face significant challenges accessing adequate, safe, and nutritious food every day. The region's food systems are generally beset by low levels of agricultural productivity, a severely degraded and stressed natural resource base, pronounced gender inequities in food and resource access, and relatively low levels of food trade and regional market integration. AFE is also among the regions most affected by fragility, conflict, and violence (FCV) as well as climate change. Food systems shocks, including the ones precipitated by extreme weather, pest and disease outbreaks, political and market instability, and conflict, are generally becoming more frequent and severe, putting more people at risk of being affected by both chronic and acute forms of food insecurity. Shocks to global food and energy systems have the potential to affect food systems in the entire Africa region.

2. **In recent years, the vulnerability of AFE's food systems has translated into a deteriorating food security situation.** Over 40 percent of AFE's population live on less than US$1.90 purchasing power parity per day, and as of 2019, nearly two-thirds were affected by moderate to severe food insecurity, 27 percent of the population severely so.[1] With just 8.5 percent of the world population, AFE accounted for one-fifth of all severely food-insecure people in the world in 2019 (18 percent of those affected by moderate to severe food insecurity), and the situation has been deteriorating. Between 2014–2016 and 2018–2020, the number of severely food-insecure people in AFE grew by roughly 22 percent. In AFE specifically, the share of undernourished people increased from 21 percent in 2019 to over 25 percent in 2020, and it was projected to increase to 29 percent in 2030. In 2018–2020, undernourishment affected over 131 million people in AFE—an estimate that excludes multiple countries for which data were not available.[2] Finally, the share of the population with insufficient food consumption in the four participating countries (as of January 2020) was in Comoros, 21 percent; in Kenya, 18 percent; in Malawi, 15 percent; and in Somalia, 89 percent.[3]

3. **Although the region is chronically food insecure, the situation is far worse than it has been in years.** An estimated 85–136 million people in 15 of 26 assessed AFE countries[4] were projected to experience food stress or find themselves in a food crisis, emergency, or famine (IPC[5] Phase 2+) in the August 2022–March 2023 time frame.[6] In the Horn of Africa (HOA) alone, more than 37 million people were facing 'high acute food insecurity' (IPC Phase 3+)—that is, a 'crisis', 'emergency', or 'famine'—between mid-2022 and

[1] World Bank (World Development Index 2022) poverty data are available for only 17 of 26 AFE countries, and the latest data year ranges from 2015 to 2019. For those countries, the weighted average poverty rate was nearly 43 percent. The 2019 food insecurity data were available for 20 of 26 AFE countries.
[2] The estimate is based on State of Food Security and Nutrition in the World 2020 data from 18 AFE countries. https://www.fao.org/3/cb4474en/cb4474en.pdf.
[3] World Food Programme (WFP). https://hungermap.wfp.org.
[4] Those countries are Ethiopia, the Democratic Republic of Congo, Zimbabwe, Malawi, Burundi, Rwanda, Somalia, Mozambique, Madagascar, Lesotho, Angola, Sudan, South Sudan, Kenya, and Uganda.
[5] IPC = Integrated Food Security Phase Classification.
[6] https://fews.net/sites/default/files/documents/reports/November 2022_FAOB_Public.pdf.

mid-2023.[7] As of November 2022, Kenya had joined Ethiopia, South Sudan, and Somalia in IPC Phase 4, denoting an 'emergency' situation.

4. **A major long-term contributor to food insecurity in AFE is climate change.** Climate change has already increased the frequency and severity of extreme weather events across Sub-Saharan Africa and accelerated the cycle of food production shocks. Across Sub-Saharan Africa, drought- and flood-related shocks to the food systems occurred once every 12.5 years on average during 1982–2006 and occurred every 2.5 years during 2007–2016. Whereas there were two years in which per capita food production dropped by more than 2.5 percent in that first quarter-century-long period (1983 and 1992, both El Niño-induced drought years), there were four such years in the roughly decade-long period that followed. The increased frequency of weather-induced shocks such as these is making it even more challenging to sustain adequate long-term growth in per capita food production. Climate has impacts on marine ecosystems, water resources and food systems infrastructure (irrigation, rural roads, market/value chain infrastructure, fisheries infrastructure, and so on), and these impacts will also likely exacerbate existing vulnerabilities and inadequacies of the region's food systems while introducing additional burdens on the capacities of national/regional institutions functioning under limited coordination mechanisms.

5. **In spite of this context, high returns are expected on investments in climate adaptation.** Studies show that investing in climate change adaptation can save more than it costs, factoring in the costs of climate-induced crises, disaster relief, and recovery. Across Sub-Saharan Africa as a whole, investing US$15 billion on agricultural and food systems adaptation could save an estimated US$201 billion annually. Meanwhile, the latest projections indicate that the world is not on track to meet the Paris Climate Agreement target of limiting warming to 1.5°C over preindustrial temperatures. A 3°C trajectory could catastrophically disrupt African food systems within the next 30 years, greatly narrowing the potential for adaptation.

6. **AFE's food systems have been affected by recent and ongoing shocks to the global food and energy systems.** Recent volatility in international food, oil, and fertilizer markets, most recently fueled by Russia's invasion of Ukraine, has delivered a major shock to AFE's food and fertilizer supply and prices. Before Russian and Ukrainian exports accounted for 25–30 percent of the global wheat market, and Russia and Belarus were also major exporters of fertilizer. As conflict erupted in 2022, global commodity prices surged reaching an all-time high around May 2022. AFE has been especially hit hard by this inflation given its significant dependence on imports of these and other affected commodities to produce and supply food.[8] For the countries participating in this Phase 3, the food inflation rates in 2021 have been in Comoros, −0.2 percent; in Kenya, 15 percent; in Malawi, 35 percent; and in Somalia, 15 percent.

7. **The inflationary and market-disrupting conditions created by Russia's invasion of Ukraine, together with protracted drought and conflict conditions in parts of the AFE region, have contributed to exacerbating the region's already deteriorating food security situation.** A recent International Food Policy Research Institute (IFPRI) study[9] of 1.27 million children in 44 low- and middle-income countries including Kenya and Malawi showed that exposure to food price inflation in the womb and first years of

[7] https://news.un.org/en/story/2022/08/1123812.
[8] As of 2020, Russia alone supplied African countries with US$4 billion worth of agricultural products, 90 percent of which were wheat and 6 percent of which were sunflower oil.
[9] IFPRI = International Food Policy Research Institute. Headey, D., and M. Ruel. 2022. "Food Inflation and Child Undernutrition in Low and Middle Income Countries." IFPRI Discussion Paper 02146. https://doi.org/10.2499/p15738coll2.136457.

life is associated with greater risks of child wasting in the short run and stunting in the long run.[10] Looking ahead, prolonged drought conditions in East Africa are expected to sharply reduce the production of wheat and other crops in 2023, compounding the effects of other challenging circumstances including historically high commodity prices, a tight rice market, and disrupted fertilizer supply.

8. **Across the region, women and girls have generally grown more vulnerable and food insecure over the past years.** Globally, food insecurity affects more women than men, and this gender difference has been exacerbated by recent shocks. At the height of the COVID-19 pandemic, for example, women in Somalia were more likely than men to indicate that their household's food production did not meet their food needs. Across the region, female farmers lacked access to productive assets, input and output markets, and information even before the pandemic began.

B. Sectoral and Institutional Context

9. **Agricultural productivity in AFE remains low by international standards and has not been the primary driver of sector growth.** Cereal yields in Sub-Saharan Africa rose by 38 percent in the 38 years from 1980 to 2018 or roughly half the rate observed in South and Southeast Asia. Over the past several decades, agricultural growth in Sub-Saharan Africa has been more due to agriculture's expansion than to its intensification, with studies suggesting that only about one-quarter of growth in crop output is attributable to yield growth.

10. **Climate change and variability are reducing food systems productivity while undermining food and nutrition security.** AFE is particularly vulnerable to climate change. Its readiness to improve its resilience against the impact of climate change, seen among others in more frequent extreme weather events such as droughts and floods, is limited. According to the Notre Dame Global Adaptation Initiative (ND-GAIN), Somalia is the second most vulnerable country (rank: 181) and the least ready while Malawi ranks 157, Comoros 149, and Kenya 143.[11] In the medium term, regional climate models consistently predict drier future conditions, with fewer days of rainfall in Southern Africa, while East Africa is projected to have a highly variable rainfall pattern with higher intensity of rainfall and frequency of extreme events.[12] In 2021, La Niña conditions contributed to drier-than-normal conditions in East Africa whereby Ethiopia, Kenya, and Somalia experienced the failure of crops, leading to an exceptional multi-seasonal drought. Fisheries, which also play an important role in food security, are being impacted by climate change and facing a modification and reduction of marine habitats that are critical as breeding and nursery grounds, including corals, seagrass beds, and mangroves. As future climate change and low adaptive capacity are likely to lead to even more severe impacts on many vital sectors critical to the region's food systems.

11. **Agriculture's expansion has been damaging to the region's forests, water resources, soil, and biodiversity.** In fact, the agricultural sector has been the leading driver of soil degradation, land use change, and forest and biodiversity loss in AFE and the wider region. In recent decades, the rate of deforestation in AFE has largely exceeded the global average. Between 1990 and 2006, while the world lost an average of 0.1 percent of its forests each year, AFE lost an average of 0.3 percent per year. Poor

[10] A 5 percent increase in food prices was found to increase the risk of wasting by 9 percent and severe wasting by 14 percent. Poor, rural, and landless children are generally the most severely affected.
[11] ND-GAIN 2022. Country Index. https://gain.nd.edu/our-work/country-index/rankings/.
[12] Dosio, Alessandro, Richard G. Jones, Christopher Jack, Christopher Lennard, Grigory Nikulin, and Bruce Hewitson. 2019. "What Can We Know about Future Precipitation in Africa? Robustness, Significance and Added Value of Projections from a Large Ensemble of Regional Climate Models." *Climate Dynamics* 53: 9–10.

agricultural land management practices have also been harmful to ecosystem services, leading, among other things, to a decline in soil fertility, carbon sequestration, and groundwater recharge and to the degradation of watersheds. Desertification and soil degradation affect about 29 percent of the land area in the Nile Valley and the HOA. Across Sub-Saharan Africa, the native vegetation carbon stocks suppressed by current uses of pasture are equivalent to 113 gigatons of carbon dioxide ($GtCO_2$), more than twice the global emissions of all greenhouse gases (GHGs).[13] According to the United Nations Convention to Combat Desertification,[14] the annual costs of land degradation estimated for some of the participating countries, as percentages of the country's GDP, are in Malawi, 6.8 percent, and in Kenya, 4.5 percent.

12. **In turn, the conversion of forests and grasslands into cropland and pasture, the degradation of soil and water resources, and the loss of ecosystem services have put downward pressure on agricultural productivity.** For example, large volumes of sediment have progressively silted up irrigation systems, lakes, reservoirs, and pastoral watering points, affecting communities' livelihoods and the productivity of cropland and pasture. In the 10 AFE countries, land degradation costs an average of US$108 per person per year or 9 percent of gross domestic product (GDP) in land productivity losses related to a combination of human-induced soil erosion, acidification, nutrient leaching, and compaction. Overall, agriculture has driven the region's natural resources endowment to decline on a per capita basis, further stressing its food production capacity in a context of rapid demographic growth and climate change.

13. **Despite these challenging circumstances, there are several reasons to be optimistic about the potential for agriculture-led growth to build up food systems resilience in the region. First, the agricultural and food sector remains a significant source of economic growth and job creation in AFE.** Agriculture accounted for nearly 15 percent of AFE's GDP in 2020, and the sector has been growing relatively fast by global standards. During the 2010s, agricultural value added grew by an average of 3.1 percent per year in AFE, compared to 3 percent in East Asia and the Pacific and 2.8 percent in Latin America and the Caribbean. AFE's agricultural growth rate was only outdone by that of Western and Central Africa, where the sector grew by an average of 3.8 percent annually over the decade

14. **Second, ongoing shifts in consumption are expected to create agri-food business opportunities.** Demand for agri-food products is expected to increase significantly over the coming decades as incomes rise and lifestyles urbanize. By mid-century, food demand in Sub-Saharan Africa at large is expected to increase by 60 percent over the 2005–2007 levels, with the population expected to grow by 1 billion and the average economy expected to grow at 4–5 percent per year. Presently, the food and beverages industry accounts for 38 percent of GDP, and 60 percent of the consumed foods are now processed, packaged, or perishable. By 2050, the industry is expected to see an 800 percent increase in the value of food marketed through rural-to-urban value chains. In addition, trade in processed foods could increase by up to 90 percent.[15]

15. **Third, there is significant potential in AFE to enhance agricultural productivity and climate resilience in the context through modern innovation and related service delivery systems.** In AFE and the wider region, there is enormous potential for productivity to increase, by up to two to three times.

[13] Hayek et al. *Nature Research* (2021). Based on vegetative cover, this study estimated global emissions as 31 $GtCO_2$, without accounting for the loss of soil carbon stores.
[14] Global Mechanism of the United Nations Convention to Combat Desertification. 2018. "Country Profiles. Investing in Land Degradation Neutrality: Making the Case. An Overview of Indicators and Assessments." Bonn, Germany.
[15] It is important to note that a shift toward the consumption of more ultra-processed food has the potential to create value-added opportunities as well as negatively affect public health in ways that need to be anticipated and managed, especially since the profitability of such foods can contribute to entrenching them in the economy and in consumers' eating food habits.

That potential lies in the adoption of better farm inputs and production technologies, as well as the more efficient use of water and soil resources and the restoration of natural capital and ecosystem services. For example, digital tools for monitoring climate risks can identify the onset of climatic shocks before they happen and facilitate responses for building resilience. Automated irrigation systems, soil sensors, and drones can boost efficiency in production. However, while the returns to research and development (R&D) are consistently found to be high (40–50 percent), funding for R&D has been limited over the past decades. Important opportunities exist within AFE to strengthen agricultural innovation systems, reorient agricultural R&D to meet emerging climate challenges, modernize agricultural extension services, and build innovation capacity throughout the food economy.

16. **There is significant scope for improving the management of natural capital in the region, thereby strengthening the very foundations of resilient food production systems and rural livelihoods, including marine fisheries.** Improved soil fertility and water management are critical for food systems resilience. More efficient irrigation can help support agricultural productivity and diversification under a changing climate. Soil is widely and significantly degraded; yet, it is of critical importance to agricultural productivity, water-use efficiency, water quality management, and carbon storage. A multitude of agroecological farming practices involving managed grazing, reduced tillage, cover cropping, permaculture, polyculture, landscape features, and more can contribute to promoting soil health and building soil organic matter and carbon storage capacity. Scaled-up investments in irrigation and water storage infrastructure and watershed or landscape management interventions that promote 'natural storage' are needed to unlock the region's full agricultural and economic potential. Importantly, the needs of pastoralists also must be considered in agricultural and water management planning, given their importance to food security and livelihoods in dryland areas. Improving the management of natural resources can also help diffuse conflict driven by competition over land and water resources.

17. **There is evidence of high returns on efforts to close existing gender gaps.** Studies consistently find that female farmers have lower rates of agricultural productivity than male farmers. Evidence shows that gender gaps in agricultural productivity arise because women experience inequitable access to agricultural inputs, including family labor, high-yield crops, pesticides, and fertilizer. Equalizing women's access to agricultural inputs, including time-saving equipment, and increasing the return to these inputs is therefore critical to close gender gaps in agricultural productivity; it could raise crop production by up to 19 percent, boost agricultural and overall GDP, and lift hundreds of thousands of people out of poverty.[16] Women's capacity to absorb shocks is highly responsive to investments in women's access to markets; their better integration into value chains; and the removal of institutional, legal, and regulatory barriers to their productive and entrepreneurial activities.

18. **While trade can help expand agri-food business opportunities, it can also help stabilize food availability and access across the region's markets in a context of increasingly frequent and intense climate and other shocks.** In that respect, the removal of physical and regulatory barriers to (intra-regional) agricultural trade holds particular promise for ensuring food security and food systems resilience, especially under a changing climate. Indeed, trade can help food move from surplus to deficit areas in response to localized harvest failures and other supply disruptions in the short run and in response to climate-induced shifts in the geography of food production in the longer run. Trade can also lead to a more efficient allocation of resources in agricultural production.[17] AFE and the wider region are

[16] UN Women. 2019. "The Gender Gap in Agricultural Productivity in Sub-Saharan Africa: Causes, Costs and Solutions."
[17] Trade also has the potential to help optimize agricultural production and resource allocation from an environmental perspective, provided that special measures are taken to allow it to do this.

characterized by relatively low levels of intra-regional food trade by international standards, with agricultural trade among African countries accounting for less than 20 percent of the region's agricultural trade. From that starting point, the further integration of agricultural markets, removal of technical barriers to trade, harmonization of trade modalities (including sanitary and phytosanitary [SPS] standards and controls), and coordination of responses to shocks, under the African Continental Free Trade Area (AfCFTA) or other initiatives like trade facilitation platforms,[18] could all contribute to building food systems resilience.

19. **Regional and cross-regional partnerships, coalitions, and investments in public goods are another way of amplifying scarce public resources in support of food systems resilience in AFE.** It has been increasingly recognized that some drivers of food insecurity are best addressed through regional approaches. That applies, for example, to the management of cross-boundary natural resources, fragility and conflict, pests, and zoonotic diseases. It is worth noting that in AFE, a large share of land and water degradation plays out in transboundary valleys and watersheds and cannot be effectively addressed without coordinated interventions by upstream and downstream riparian countries. Food crisis prevention and management are also best carried out at a regional level, the latter enabling greater risk diversification and transfer than a national approach, where expected returns to R&D increase with scale.[19] For instance, regional and cross-border collaboration in agricultural innovation systems and in the provision of hydrometeorological (hydromet) and early warning information to farmers can generate positive technology and knowledge spillovers as lower-capacity countries can learn from leaders to adopt new technologies and build effective forecasting capabilities (including for flood and drought)..

20. **Momentum to address food systems resilience is building at the regional level.** In 2019, the African Food Security Leadership Dialogue (AFSLD) was convened in Kigali, bringing together African leaders and development partners and raising the ambition for joint action to solve the region's food security challenges. Key priorities identified by the AFSLD include food systems' adaptation to climate change, leveraging of science and digital technology, and strengthened collaboration among development partners. They emphasized the need to implement existing agricultural and food security commitments including the African Union (AU) Agenda 2063 and the Malabo Declaration.

C. Relevance to Higher-Level Objectives

21. **The MPA Phase 3 is aligned with key global and regional World Bank Group (WBG) strategies.** It supports thematic Pillar 2 (Promoting Trade and Market Integration) and thematic Pillar 4 (Reinforcing Resilience) of the 2020 Africa Regional Integration and Cooperation Assistance Strategy Update for FY21–FY23,[20] and it directly contributes to the pillars of the FCV strategy 2020-2025 on preventing violent conflict and helping countries transition out of fragility and to the Climate Change Action Plan 2021–2025. Mainstreaming climate change and addressing climate resilience constitute key priorities in the WBG 2025 climate targets. The Phase 3 is also aligned with the WBG Gender Strategy (FY16–FY23) on enhancing human development outcomes, improving economic opportunities, and removing barriers to asset

[18] Ones that help connect, inform, and service buyers and sellers and other stakeholders.
[19] The World Bank, 2016. *Reaping Richer Returns, Preliminary Overview: Public Spending Priorities for African Agriculture Productivity Growth*. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/25782.
[20] World Bank Group. 2020. *Supporting Africa's Recovery and Transformation: Regional Integration and Cooperation Assistance Strategy - Update for the Period FY21–FY23 (English)*. Washington, DC: World Bank Group. http://documents.worldbank.org/curated/en/249911623450779120/Supporting-Africa-s-Recovery-and-Transformation-Regional-Integration-and-Cooperation-Assistance-Strategy-Update-for-the-Period-FY21-FY23.

ownership; and the Africa Region Gender Action Plan (FY19–FY22). The Climate Change Action Plan outlines a strong commitment to improving the planning and implementation of interventions to address climate-related risk more robustly and systematically through the WBG Green, Resilient, and Inclusive Development approach. Under its Reinforcing Resilience thematic pillar, the WBG Africa Regional Integration and Cooperation Strategy seeks to enhance resilience to shocks (including the drought-related risks that Phase 3 seeks to address) and promote effective management of challenges that cut across boundaries. Investments in the resilience of the region's food systems will also advance the World Bank's commitment to the Next Generation Africa Climate Business Plan (ACBP) for 20 countries, which aims to implement climate-smart policies and programs designed to scale up integrated landscape approaches on 60 million ha and provide 150 million people with access to impact-based warnings to facilitate adoption of climate-smart agriculture (CSA) by 28 million farmers. The MPA Phase 3 is also fully consistent with the WBG Global Crisis Response Framework (GCRF) and provides direct support to: Pillar 1-Responding to Food Insecurity (through supporting production, enhancing trade, supporting vulnerable producers, and investing in sustainable food systems); Pillar 3-Strengthening Resilience (by supporting investments to build nutrition sensitive and long-term sustainable systems, and increasing climate resilience); and Pillar 4-Strengthening Policies, Institutions, and Investments for Rebuilding Better (by supporting climate-smart policies and incentives towards a green and sustainable growth and institutional strengthening and capacity building).

22. **The Phase 3 is also aligned with key client strategies and builds on extensive existing national-level analytical work by the World Bank and other partners.** In particular, the Phase 3 is aligned with the AU Agenda 2063, the Malabo Declaration on African Agriculture, the Comprehensive Africa Agriculture Development Program (CAADP), and the Forum for Agricultural Research in Africa (FARA) strategic plans. The Phase 3 is developed under the umbrella of the Africa Food Security Leadership Dialogue (AU-WBG-FAO-AfDB-IFAD, Kigali, 2019[21]). It builds on strong analytical foundations, including CAADP National Agriculture Investment Plans (NAIPs), which set out a development strategy for countries' agriculture sectors (all countries), CSA profiles, and investment plans that identify priority technologies and delivery channels to increase climate smartness in the sector. The design of Phase 3 also builds on other World Bank-financed operations in East and Southern Africa [22], as well as in Western Africa[23]. In addition, it complements the Accelerating Impacts of Consultative Group on International Agricultural Research (CGIAR) Climate Research for Africa (AICCRA) by linking the same set of regional and national actors to the international science frontier from international CGIAR centers. The Phase 3 also complements other regional programs seeking to build resilience in the targeted territories, such as the De-risking, Inclusion, and Value Enhancement of Pastoral Economies in the Horn of Africa Project (DRIVE, P176517) and HOA - Groundwater for Resilience Project (P174867).

23. **The MPA Program aims to proactively convene national-, subregional-, regional-, and international-level stakeholders expected to play important roles in achieving the Program objectives.** The international partners comprise both humanitarian and development organizations, including the FAO, WFP, and member agencies of the CGIAR, as well as regional organizations addressing issues such as

[21] AfDB = African Development Bank; FAO = Food and Agriculture Organization of the United Nations; IFAD = International Fund for Agricultural Development.

[22] Such as East Africa Agricultural Productivity Program (EAPP, P112688); and Agricultural Productivity Program for Southern Africa (APPSA, P094183).

[23] Such as West Africa Food System Resilience Program (FSRP; P172769); Development Response to Displacement Impacts Project in the HoA (P152822); Pastoralism and Stability in the Sahel (PASSHA,P1537130); and Regional Pastoral Livelihoods Resilience Project (P129408).

science and technology, extension, political economy, crisis response, and markets and trade among the organizations that the MPA Program convenes. At the continent level, the AU acts as the custodian of African countries' commitments to sustainable, economic, and social development under Agenda 2063. Guided by the AU, the African Union Commission (AUC) elaborates, coordinates, and supports regional economic communities (RECs)[24] in promoting economic integration among member states of the Sahel, HOA, Central Africa, West Africa, Eastern Africa, and Southern Africa regions. The MPA will leverage the convening power of the AU and its RECs to influence country- and subregion-level policies and processes.

D. Multiphase Programmatic Approach

Program Framework and Phases

24. **The Phase 3 of the Food Systems Resilience Program for Eastern and Southern Africa (AFE) (the "Project") using a multiphase programmatic approach (MPA) will support the Union of Comoros, Republic of Malawi, Republic of Kenya, Federal Republic of Somalia, and the African Union with a total financing envelope of US$621 million.** Phase 1 of the MPA establishing the overall Program and a first set of Program activities was approved by the World Bank's Board of Executive Directors on June 21, 2022 (P178566). A total envelope of US$2.3 billion equivalent in IDA financing was approved for the overall Program. Phase 1 provides support to the Federal Republic of Ethiopia, Republic of Madagascar, Intergovernmental Authority on Development (IGAD), and Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA). Phase 2 of the MPA is being prepared concomitantly to support the Republic of Tanzania with a US$300 million equivalent in IDA financing. The overall Program is expected to be implemented over the course of nine years, that is, from 2022 to 2031. Annex 10 presents a map of the countries that have joined or are expected to join the MPA.

25. **As a 'horizontal' MPA, the Program is proceeding in phases, the sequencing of which will reflect clients' needs, requests, and readiness.**

Table 1. Food Systems Resilience Program (FSRP) Framework Overview

Phase	Country (Project Number)	Sequential or Simultaneous	IPF or PforR	Estimated IDA Amount (US$, millions)	Estimated Other Amount (US$, millions)	Estimated Approval Date	Estimated Environmental and Social Risk Rating
Phase 1 (ongoing)	Ethiopia, Madagascar, IGAD, and CCARDESA (P178566)	Sequential	IPF	788.1	65.5	June 21, 2022	High
Phase 2	Tanzania (P179818)	Simultaneous	PforR	300.0	0.0	May 31, 2023	Substantial
Phase 3	Comoros, Kenya, Malawi, Somalia, and AU (P178816)	Simultaneous	IPF	603.0	18.0	May 31, 2023	Substantial
Phase 4	Mozambique (P181112)	Sequential	IPF	75.0	—	July 2023	Substantial
Phase 5+[25]	Others			983.9	80.5		
Total revised overall IDA financing envelope: US$2,750 million							
Original Board-approved financing envelope: US$2,300 million							

[24] AU recognizes eight RECs.

[25] Order of phases and participants will be determined by their readiness.

Table 2. Updated List of Countries and Organizations Expected to Participate in the MPA[26]

Expected Participating Country/Organization	Estimated Financing (up to US$, millions)	Expected Participating Country/Organization	Estimated Financing (up to US$, millions)
Comoros	80	South Sudan	100
Democratic Republic of Congo	400	Tanzania	300[27]
Ethiopia	600	Zambia	100
Kenya[28]	150	Zimbabwe[29]	100
Lesotho	100	CCARDESA	5
Madagascar	190	IGAD	25
Malawi[30]	250	AU	13
Mozambique[31]	150	Other regional organizations (future phases)	37
Somalia[32]	150		
Total IDA (US$, millions)	**2,750**		

26. **With each additional phase, countries that join the Program need to demonstrate their commitment to the Program Development Objective (PrDO) and other requirements.** In particular, each country project (or phase) applies the same Theory of Change as the Program and shows how the activities it selects from the Program-level 'menu of options' contribute to the Program's overall food systems resilience objectives at the national and/or regional levels. In addition, Program participants are expected to prioritize activities that have a regional benefit as well as a gender-informed approach. All country-level projects include an assessment of gender gaps and develop an action plan to address and track them. They are also encouraged to use a holistic and people-centric approach to project design and implementation, integrating the perspectives of various sectors and agencies (planning, agriculture, environment, water, and so forth) and stakeholders (at the national and community levels) and to leverage the opportunities for peer-to-peer learning provided by the MPA. That said, phases may differ in their choice of financing instruments and packaging of activities selected from the overall Program 'menu'. Furthermore, projects that take place in conflict areas may be implemented by a third party.

27. **Phase 1 (P178566).** The Project Development Objective (PDO) is to increase the resilience of food systems and preparedness for food insecurity in Project areas. Phase 1 of the MPA is financing FSRPs in Ethiopia and Madagascar, as well as related two regional organizations: IGAD and CCARDESA, using investment project financing (IPF). The two regional organizations have received grants to support various aspects of the MPA's implementation including coordination and learning activities and may see the scope of their involvement and Program funding expand as more countries join.

[26] Table 2 indicates the level of funding each phase and country is expected to receive. These figures are maximum estimates for each country. In light of the rapidly changing food security situation, these numbers will be adapted in consultation with the participating countries during the preparation of their respective phases. Management will also ensure that the approval of future phases is consistent with the borrowing status of the participating countries.
[27] Represents a US$100 million increase under FSRP Phase 2 over the amount approved by the Board on June 21, 2022.
[28] Kenya added to the list of countries under FSRP Phase 3.
[29] Due to its nonaccrual status, Zimbabwe is currently ineligible to receive funding from IBRD/IDA. Zimbabwe's participation in future phases will be subject to the country becoming eligible for IBRD/IDA financing.
[30] Represent a US$50 million increase under FSRP3 over the amount approved by the Board on June 21, 2022.
[31] Under Phase 4.
[32] Somalia added to the list of countries under FSRP Phase 3.

28. **Phase 2 (P179818).** The PDO is to support food systems resilience by strengthening agricultural service delivery, the adoption of climate-resilient technologies and fiscal performance in the agricultural sector. Phase 2 is proposed to finance a Program-for-Results (PforR) operation in Tanzania. The operation is focused on reforms aimed at improving agricultural service delivery, the management of irrigation and warehouse infrastructure, and the fiscal performance of the Ministry of Agriculture (MoA) and its agencies.

29. **Phase 3 (P178816).** The PDO is to increase the resilience of food systems and the recipients' preparedness for food insecurity in project areas and, in the case of an Eligible Crisis or Emergency, to respond promptly and effectively to it. Phase 3 will finance food systems climate-resilient projects in the Comoros, Kenya, Malawi, and Somalia, as well as relevant activities of the AU, using IPFs. Each country project will include activities supporting food security and food systems resilience at both the national and regional levels.

PrDO Statement

30. **The PrDO is to increase the resilience of food systems and the recipients' preparedness for food insecurity in participating countries and, in the case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.[33]**

PrDO-Level Indicators

31. The five Program-level indicators are consistent with the MPA Program indicators, as shown in Table 3.

Table 3. PrDO-Level Indicators

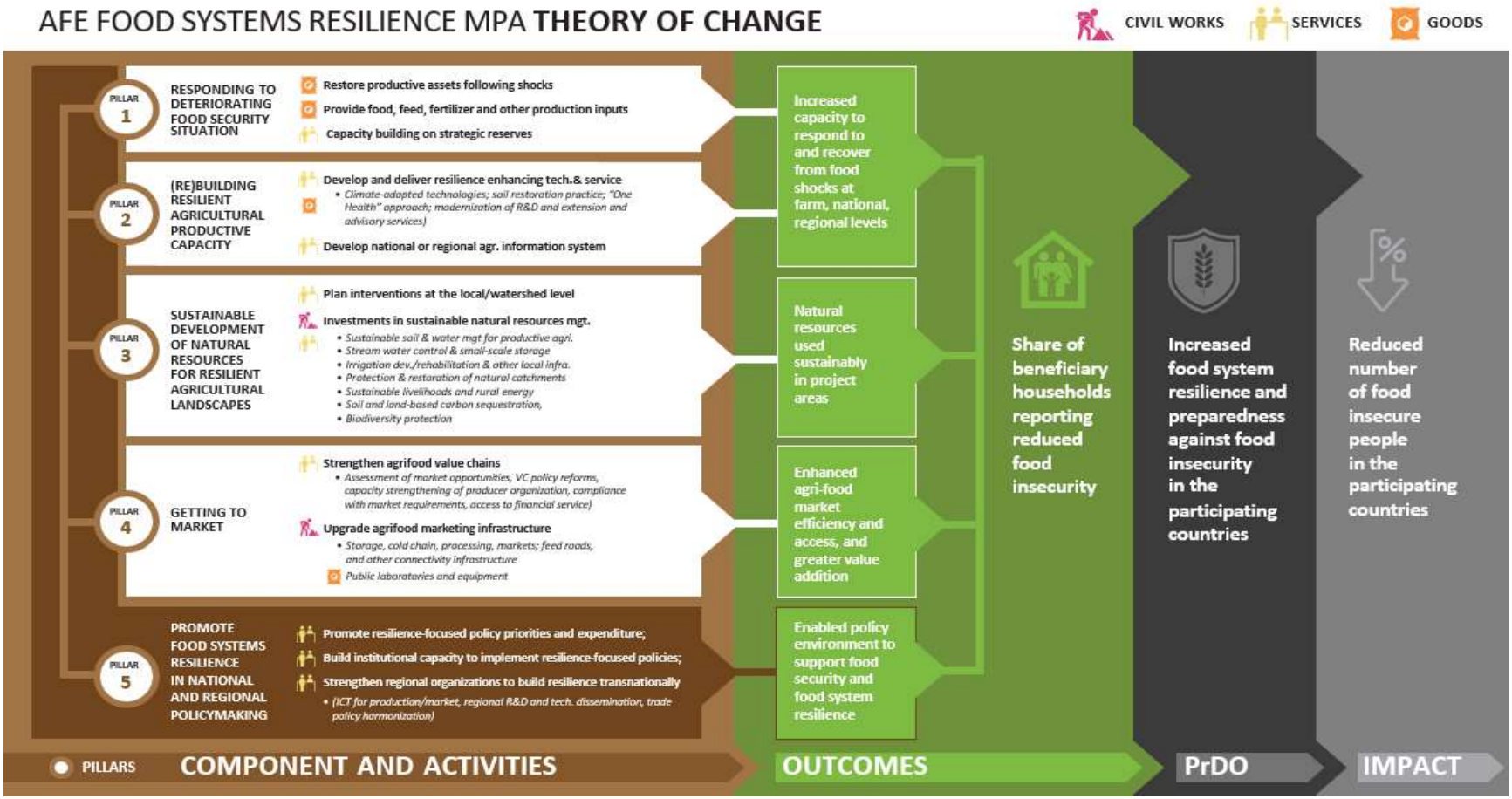
	Indicator	Baseline	Phase 3 Final Target
1	Reduction in food insecure people in Project targeted areas (percentage)	0%	25%
2	Farmers adopting resilience-enhancing technologies and practices (number) (percentage of female farmers)	0	611,600
3	Land area under sustainable land management practices (hectares)	0	595,480
4	Increase in volume of agricultural production sold on domestic and regional markets (percentage)	0%	25%
5	Policy products adopted with Project's support related to agriculture, natural resource management, and food systems resilience (number)	0	35

[33] The UN Food Systems Summit of 2021 defined food systems as "the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and food industries, and the broader economic, societal and natural environments in which they are embedded." Resilience is the capacity of vulnerable households, families, communities, and systems to withstand and respond effectively to shocks, recover, and adapt sustainably.

Program Theory of Change

32. Figure 1 **presents a diagram of the MPA Program Theory of Change.**

Figure 1. Program Theory of Change



II. PROJECT DESCRIPTION

A. Project Approach

33. **The MPA Program's goal is to increase the climate resilience[34] of the region's food systems,** thereby putting all people in the region, including the most vulnerable, on a path to having reliable access to adequate, safe, and nutritious food while contributing to enhancing rural livelihoods and healthy ecosystems. While priority is given to medium-term investments, Phase 3 of the Program ("the Project") also offers short-term support in case of deteriorating food security situation. Project activities are designed with a view to empowering women and youth.

B. Phase 3 Components

34. **The overall MPA Program is organized around five technical pillars, a project management component, and a contingent emergency response component.** The five MPA Program Pillars are: (1) Responding to a Deteriorating Food Security Situation, (2) (Re-)Building Resilient Agricultural Production Capacity, (3) Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes, (4) Getting to Market, and (5) Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking.[35]

35. **Phase 3 of the MPA includes four technical components, plus a management component, and a contingent emergency response component corresponding to Pillars 2–5 of the overarching MPA Program**. These four technical components are common to all participating recipients (four countries and the AU), adopting slightly different approaches in their respective subcomponents according to their priorities and needs. These components are described in detail for each of the participating recipients in Annexes 1–5, and Table 4 presents the breakdown of financing by participant and component. The scope of these four technical components is the following:

(a) **(Re-)Building Resilient Agricultural Production Capacity** (total cost of US$139.7 million equivalent; about 22.5 percent of the Project). This component is providing support to Pillar 2 of the Program and includes activities focused on agricultural R&D, information and innovation systems (including crop, livestock, and aquaculture systems); agricultural extension services and community-based technology transfer; digital agriculture; land demarcation and property registration; climate-smart technologies and practices, and policy options; post-harvest food loss mitigation technologies; and food safety and traceability systems.

(b) **Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes** (total cost of US$170.5 million equivalent; about 27.45 percent of the Project). This component corresponds to Pillar 3 of the Program and includes: irrigation infrastructure

[34] Climate-smart agriculture (CSA) is an integrated approach to managing landscapes (cropland, livestock, forests, and fisheries) that address the interlinked challenges of food security and climate change. It includes agricultural improved technologies and practices that have been proven to address the problems created due to climate change. These may contribute to (a) sustainably increasing agricultural productivity and incomes, (b) adapting and building resilience to climate change and climate variations, (c) increasing energy efficiency, and (d) reducing and/or removing GHG emissions. Climate-resilient agriculture (CRA) is the application or use of CSA in a specific location.

[35] A detailed description of these pillars and the menu of activities they include can be found in the FSRP Phase 1 (P178566) project documents.

rehabilitation and development, irrigated cropland leveling, and related organizational strengthening; water management landscaping and infrastructure development (crops and livestock); sustainable rangeland management; coastal and marine resources management (including organizational capacity and regional cooperation).

(c) **Getting to Market** (total cost US$207.3 million equivalent; about 33.38 percent of the Project). This component support Pillar 4 of the Program, and includes the following main activities: strengthening of FPOs and agri-food enterprises (including access to finance); investments in public facilities, post-harvest handling, trade facilitation, and market links; rehabilitation and construction of rural feeder roads and last-mile infrastructure for improved market access; Productive Alliances (PAs) for agriculture and aquaculture; E-vouchers for high-quality commercial inputs; trade policy and rule harmonization (including food and trade standards, food safety management, and compliance) and trade negotiation capacity; and public food procurement.

(d) **Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking** (total cost of US$50 million equivalent; about 8.05 percent of the Project). This component is directly supporting Pillar 5 of the Program and includes: planning, development and implementation of policies, strategies, and legal and regulatory reforms supporting food systems resilience (including related analytic work); institutional and human capacity building; regional integration efforts; impact evaluation and adaptive project design.

Table 4. Phase 3 Funding by Participant and Component

Components	Malawi	Comoros	Kenya	Somalia	AU	Total Phase 3
	US$, millions					
1	28.0	17.7	50.0	40.0	4.0	139.7
2	81.0	9.5	30.0	50.0	0.0	170.5
3	128.0	11.3	45.0	20.0	3.0	207.3
4	10.0	1.0	10.0	25.0	4.0	50.0
5	0.0	0.0	0.0	0.0	0.0	0.0
6	18.0	3.5	15.0	15.0	2.0	53.5
All Components	**265.0**	**43.0**	**150.0**	**150.0**	**13.0**	**621.0**
Components	**Share of Project Resources by Component (percentage)**					**Phase 3**
1	10.75	41.16	33.33	26.67	30.77	22.50
2	30.57	22.10	20.00	33.33	0.00	27.45
3	48.30	26.28	30.00	13.33	23.08	33.38
4	3.77	2.32	6.67	16.67	30.77	8.05
6	6.79	8.14	10.00	10.00	15.38	8.62
All Components	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Regional Nature of Phase 3

36 The following is a description of three cross-cutting aspects of Phase 3, namely: (a) its regional nature, (b) its gender focus, and (c) its climate co-benefits.

37 **Phase 3 of the MPA has a strong regional focus.** Indeed, most Phase 3 investments will develop and disseminate solutions to common regional challenges including the impacts of climate change on regional agriculture and low levels of agricultural productivity and commercialization; contribute to regional public goods like food security, climate change adaptation and mitigation, and natural capital; and facilitate multi-country cooperation. Most of Phase 3 funding is channeled through national governments and support national and local investments, specially focusing on those investments needed to build food systems resilience and food security at the regional level. At the same time, Phase 3 will intervene directly at the regional level by engaging and strengthening a third regional organization, the AU—Phase 1 is already engaging with IGAD and CCARDESA.

38 **Regional investments under Phase 3** more specifically include ones that will: (a) strengthen climate-smart agricultural research and extension systems; (b) develop replicable or multi-country digital agriculture platforms and solutions (Box 1); (c) strengthen the management of shared resources like regional fisheries (Box 2); (d) increase the supply and commercialization of regionally traded staple foods such as rice and maize; (e) improve the management of cross-border food safety, plant and animal pathology, and zoonosis risk; (f) specifically help address chronic food insecurity and displacement in the HOA, helping convert its negative socioeconomic spillovers into positive ones within it and the wider region (Box 3); (g) drive cross-border research, learning, and knowledge exchange; (h) link early warning and other information systems; (i) harmonize legal and regulatory frameworks and other trade integration efforts; and (j) enable transnational policy dialogue and other collective initiatives.

Box 1. Digital Agriculture - Breaking down Regional Boundaries and Constraints

Digital agriculture remains at an early stage of development across the countries of Phase 3, where, despite starkly different country contexts, it is hampered by several common challenges. Those challenges include low levels of rural broadband connectivity, mobile penetration, and digital literacy; the limited digitization of sector-relevant data; and private digital service providers' limited access to finance and long-term capital. Phase 3 will help strengthen the foundations of digital agriculture in participating countries and the wider region by for example supporting the digitization of relevant data, including by helping develop the requisite systems, platforms, and policies, as well as helping incubate and accelerate public and private digital agriculture initiatives such as e-commerce platforms and other digital solutions across the region.

Box 2. Fisheries - A Regional Resource

Fisheries in the region, including Southwest Indian Ocean fisheries covered under Phase 3 of the MPA, rely on shared resources whose health and sustainability depend on the regional coordination of national activities. In capture fisheries, for example, some of the targeted fish species are migratory and straddle the exclusive economic zones of several countries, and regional cooperation on monitoring, control, surveillance, and other activities is needed to ensure the effective management of fisheries regulations. Coordination is also helpful in relation to port development, including to ensure that compatible measures are adopted by port authorities in different coastal states. Meanwhile, for a small island developing state like the Comoros, a Phase 3 participant, regional cooperation can have a transformative effect on its ability to manage fishery and marine resources at the national level. Phase 3 of the MPA will involve key organizations that play a pivotal role in facilitating regional cooperation on fisheries: the Indian Ocean Commission (IOC), and the Southwest Indian Ocean Fisheries Commission (SWIOFC).

Box 3. Setting the Stage for a New Dynamic in the HOA to Have Positive Regional Spillover Effects

Beset by FCV and some of the highest rates of poverty and food insecurity in the world, the HOA is highly vulnerable to food systems shocks, including ones triggered by extreme weather, pest and disease outbreaks, market volatility, and political instability and conflict. These shocks are tending to become more frequent and severe as the climate changes, limiting the possibility of recovery and putting growing numbers of people at risk of both chronic and acute forms of food insecurity. By fueling displacement and food dependence, this situation is putting growing pressure on the wider regional food systems. This crisis is playing out in a context of already low agricultural productivity and commercialization. More positively, building on an improvement of interstate relations, Djibouti, Ethiopia, Kenya, Somalia, and Eritrea came together in 2019 to launch the HOA Initiative, which aims to deepen collaboration in addressing common development challenges and accelerate regional integration and growth. Phase 3 is strategically placed to further strengthen regional cooperation in the subregion by boosting the Program's contributions to building food systems resilience and stemming chronic food insecurity in the HOA and with positive potential spillovers in AFE and in a wider region.

C. Project Beneficiaries

39 **Direct beneficiaries include farmers (with attention to women and youth), small-scale producers and processors, and agricultural (M)SMEs.**[36] The total number of Phase 3 direct beneficiaries is estimated at 984,400 people, where at least 40 percent of them will be women. Additional beneficiaries will include other food systems actors such as government line ministries, regional organizations (IGAD, CCARDESA, and others), and other public and private institutions. The Results Framework presents a breakdown of beneficiaries in each participating Phase 3 country. Phase 3 also aims to reach a large number of indirect beneficiaries spanning the range of food systems actors, from producers to consumers.

D. Rationale for Bank Involvement and Role of Partners

40 **The World Bank has unique expertise and experience to support the development and implementation of integrated, multi-sectoral approaches and tackle food insecurity and malnutrition across the region's wide variety of contexts, and it is well placed to make the most of available development resources to build food systems resilience in the region**. The World Bank has extensive experience in agricultural development, sustainable natural resources management (NRM), climate change mitigation and adaptation, social protection, innovation and trade policy, and private sector development—including in violence- and conflict-affected countries. For example, past operations in the

[36] MSMEs = Micro, small, and medium enterprises; SMEs = Small and medium enterprises.

region and beyond demonstrate the World Bank's expertise in national and transboundary watershed and landscape management and regional agricultural research and productivity enhancement.[37] Thus, the WBG is well placed to leverage the lessons, experience, relationships, and presence to build this regional program. The WBG is also well placed to make the most of available development resources to build food systems resilience in the region. In particular, it can leverage its broad portfolio of projects as well as its power to convene stakeholders in the region to identify investment synergies that maximize development impact, including the ones involving other development partners. The African Union Commission (AUC), with its technical expertise and convening power, will be a key partner in ensuring coordination, cross-learning among participating countries. The project is also being coordinated with the EU's Horn of Africa Initiative through the Intergovernmental Authority on Development (IGAD).

E. Lessons Learned

41 **The MPA design incorporates several lessons from past and ongoing operations and programs in the region.** These include lessons learned from the West Africa Food Systems Resilience Program (Phases 1 and 2; P172769 and P178132, respectively), Phase 1 of the present MPA for AFE (P178566), and crucial analytical studies that have been carried out in the region.

42 **The flexibility of the MPA Program approach allows to design a medium- and longer-term regional program addressing the main drivers of food insecurity and the constraints to livelihoods.** A multi-country, regional program is well suited to both accommodate a diverse set of clients, allowing them to tailor interventions to their needs and limitations and, at the same time, effectively address common regional challenges and interdependencies.

43 **Implementing a food systems approach at the regional level rests on developing a shared vision.** Hence, it is critical that the Program involve and leverage the strengths of regional organizations, development partners, and other stakeholders who can facilitate collaboration, generate high-level political buy-in, and manage expectations to build a common vision around more resilient regional food systems.

44 **Key role of regional organizations in supporting collaboration and learning.** Collaboration and cross-learning must be dynamic and adaptable, based on the priorities of the participating countries. Some of these priorities may evolve as more countries join the MPA. Experience of Phase 1 of the MPA has shown that this collaboration needs the logistical and technical support from regional organizations. The AU, therefore, in partnership with IGAD and CCARDESA will help set up working groups representing participating countries, to share knowledge and information on strategically relevant themes. Such technical/thematic groups can range from aligning definitions and methodologies for monitoring and evaluation (M&E) so that project indicators can be aggregated, to sharing experience on support to implementation of Productive Alliances (PAs) or disseminating knowledge on CSA.

45 **Solutions must address the structural underpinnings of food systems vulnerability and do so in an integrated fashion.** Regional food systems have suffered from multiple interacting shocks that are threatening food security and sustainable development. To help them recover and build resilience to future shocks, the Program needs to address, in tandem, multiple structural sources of vulnerability including climate change; the unsustainable use of natural resources; weak public infrastructure, services,

[37] West Africa Agricultural Productivity Program (WAAP, P094084), East Africa Agricultural Productivity Project (EAAPP, P112688), and Agricultural Productivity Program for Southern Africa (APPSA, P164486) projects.

and institutions; and multiple other factors impeding food production and livelihoods. The integrated and multi-sectoral approach offered by the pillars of the MPA and the components of Phase 3 are designed to address this need.

46 **Food systems grow more resilient when public institutions are strengthened to respond effectively to crises.** For public institutions to respond effectively, data systems and policy mechanisms need to be in place to generate and decipher up-to-date data and use it in decision-making and the planning of coordinated responses. Across the region, several agencies are engaged in seasonal forecasting and monitoring, but regional coordination mechanisms need reinforcement. There is an urgent need to adopt regionally coordinated data collection services that use harmonized indices and are able to generate information based on single-country and multi-country requests. Increased use of modern technologies including geospatial models, harmonized management information systems (MISs), and digital platforms could better support communication and knowledge exchange among AFE countries.

47 **The adoption of innovative technologies and practices by farmers is of central importance to increasing agricultural productivity, but it is not sufficient for achieving food systems resilience; stronger innovation systems and capacity, stronger public and private institutions, and more vibrant markets are also needed to build food systems resilience in the long term.** Data analytics, 'agriculture intelligence', and digital extension are essential tools for promoting the adoption of modern CSA technologies by a greater number of farmers. Even though a large stock of technologies and innovations has become available to support a potential increase in agricultural production and processing, the main challenges lie in supporting the capacity for adaptive research to provide the basic data for accelerating the adoption of climate-smart and profitable technologies and innovations by sector stakeholders. At the same time, to build durable resilience, the Program envisions specific actions to improve rural households' and enterprises' capacity to access formal markets in a profitable and sustainable manner.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

Country-Level Implementation

48 **At the country level, project implementation will be the responsibility of the respective recipients and conducted through either newly established Project Implementation Units (PIUs) or ones already in place.** Where needed in each PIU, country-based implementation structures will be strengthened through, inter alia, the recruitment of additional staff and consultants who will be made responsible for project management tasks including administration, M&E, communication, procurement, financial management (FM), and environmental and social aspects of the project (including GBV and sexual exploitation and abuse and sexual harassment -SEA/SH), as well as experts from the different relevant technical disciplines (such as agronomy, integrated landscape management, water management, irrigation, and hydrometeorology). The specific arrangements for each participating recipient (presented in detail in the respective country annexes 1-5) is summarized as follows:

(a) **COMOROS**. The project will be under the supervision of Ministry of Agriculture, Fishery, Environment, Tourism and Handcrafts (MAPETA). The existing PIU of the ongoing Integrated Development and Competitive Project (PIDC; P164584) will coordinate and manage the project at the national level, which will be strengthened with additional technical staff to be recruited not

later than 3 months after effectiveness (including a national livestock specialist, a fisheries specialist, an agriculture specialist, a GBV specialist, and an Environment specialist).

(b) **KENYA**. The overall responsibility for implementation of the project will be with the Ministry of Agriculture and Livestock Development (MoALD), including collaborating with other relevant ministries, departments and agencies, and county governments. To ensure effective implementation of subcomponents 1.1 and 1.2, the recipient, through the MoALD, will enter into an arrangement with the Kenya Agriculture and Livestock Research Organization (KALRO), in form and substance satisfactory to the Association. The PIU will be established building on the existing PIU of the ongoing Climate Smart Agriculture Project (P154784).

(c) **MALAWI.** The Ministry of Agriculture (MoA) will be responsible for prompt and efficient oversight and coordination of the implementation of activities, at all times during the implementation of the project. The existing PIU, under the MoA, and currently implementing the ongoing Malawi Agricultural Commercialization Project (AGCOM; P158434), will be the main implementing agency and responsible for the overall implementation and coordination of project activities.

(d) **SOMALIA**. The overall responsibility for project implementation (except for financial transactions handled by the EAFS Unit) will be with the Federal Ministry of Agriculture and Irrigation (MoAI), in coordination with the Ministry of Livestock, Forestry and Range (MoLFR) and the relevant line ministries of participating Federal Member States (FMS). The MoAI will establish, no later than three months after the effective date, and thereafter maintain throughout the period of project implementation, a National Project Coordination Unit

(e) **AU**. The AUC-DARBE will coordinate the work at the national and regional levels in direct partnership with AUDA-NEPAD. A Project Implementation Unit (PIU), to be responsible for day-to-day implementation of the project will be established.

49 **Each country will establish a national Steering Committee (SC) to provide policy and project implementation guidance.** The committee will meet at least twice a year to, among other actions, review and approve the draft annual work plan and budget (AWPB) and review the annual report and the status of implementation progress. This SC will include representatives of the ministries of agriculture, water, and environment. Each country will also prepare a detailed Project Implementation Manual (PIM) that will incorporate all operational details at the national level including a description of technical and M&E activities as well as administrative, Environmental and Social Framework (ESF), and fiduciary procedures.

50 **For investments at the local level, communities will be involved in the selection of priority activities and validation and implementation of the activities.** Investments will be identified, prioritized, and selected through joint-agency (multi-ministerial) visits in the communities. Seeing the different state actors aligned and presenting a unified interface with the communities is also an important element of restoring communities' trust in the government agencies. To support these efforts, nongovernmental organizations (NGOs) or facilitators working with local organizations (or both) will be hired, depending on the country context.

51 **Given the broad geographic coverage of the Phase 3 of the Program, the implementation arrangements used by participating countries will necessarily vary.** Participating countries facing FCV or natural disaster conditions may need to take advantage of alternative implementation arrangements,

particularly if they first need to stabilize the food security situation to enable the longer-term work on food systems resilience. In such cases, participating countries may choose to contract a third-party implementation agency (TPIA) (for example, a United Nations [UN] agency) to implement their project in part or in whole (expected only in Somalia for Phase 3). Standard output agreements already negotiated between the World Bank and several UN organizations could enable participating governments to sole source contract an agency, which would then report to the PIU as it carries out the contract. In the event of extreme insecurity or fragility in a participating country, full third-party implementation may be explored. In rare cases, the Phase 3 will accommodate such an arrangement to the extent that it can help stabilize the system and enable the country to move to a resilience agenda.

Regional-Level Implementation

52 **The regional MPA activities will continue to be implemented by various regional organizations including:** the Intergovernmental Authority on Development (IGAD); the Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA); the AU (through the Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment (AUC-DARBE) of the African Union Commission (AUC); the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA); and the Food, Agriculture, and Natural Resources (FANR) of the Southern Africa Development Community (SADC). Each participating regional organization has its own Financing Agreement (FA) operationalized under the different phases of the MPA, with clear accountabilities to monitor and coordinate the implementation of its respective part of the Program. These organizations have managed World Bank-funded projects in the past; have the capacity to deal with fiduciary arrangements, including procurement and FM; and have experience with the World Bank's ESF. As part of their responsibilities, these organizations will continue to provide support cross-country learning, M&E, and analytical work under Phase 3.

The World Bank's Supporting Role

53 **At the World Bank level, the MPA is monitored by a World Bank team comprising a task team for the overall MPA and country task team leaders.** The World Bank team facilitates coordination among World Bank country task teams and focal points in operational and technical units as needed. It also monitors the implementation of individual projects and keeps World Bank management informed. The World Bank team operates as a unified cross-country team to address key issues. It may, for example, help align the implementation of different country-level operations, monitor Program achievements and its use of key indicators, facilitate knowledge exchange and communication, develop harmonized reporting mechanisms, identify gaps in monitoring, report to and coordinate with different partners and stakeholders, and develop adaptive strategies.

B. Results Monitoring and Evaluation Arrangements

54 **To provide timely and reliable information to facilitate informed decision-making in program management, an M&E framework for Phase 3 has been developed.** At the country level, Results Frameworks included both overall Project- and country-level indicators. The latter will be based on the project activities that participating countries decide to pursue. Countries participating in Phase 3 will report on a common Results Framework. Additional auxiliary country-level indicators will also be developed to monitor progress by each participating recipient. The data will be disaggregated by gender wherever possible at the project level. In addition to being an important management tool, the M&E system will be a valuable source of learning and a knowledge management mechanism.

55 **The regional partners and national PIUs will be responsible for the internal monitoring of Phase 3 outcome and output indicators as defined.** Each M&E unit, as well as all key implementing entities, will produce semiannual progress reports along with notes synthesizing information on risks, resilience, and food security at the level of Project beneficiaries. Within each country, the results-based M&E activities will be built on its existing M&E system and arrangements of implementing ministry including knowledge management guided by Project knowledge management strategy and comprehensive M&E manual. The main M&E activities will be adjusted to each country's needs and capacities, but will include the following main concepts: (a) a project-specific MIS using the country's existing online M&E MIS platform and linked with the implementing agency's broader database system; (b) using the Geo-Enabling Initiative for Monitoring and Supervision (GEMS) KOBO Toolbox to collect real-time and geotagged data for the project investment mapping and monitoring; (c) detailed M&E requirements will be included in the PIM based on the specific results indicators to guide the overall M&E system implementation; and (d) baseline survey will be conducted during the onset of Phase 3 implementation, and additional surveys will be held at the midterm review (MTR) stage and Phase 3 completion.

56 **Regional knowledge sharing and networking events will be organized among participating countries and regional organizations and impact evaluation studies at the country level will be carried out (whenever possible).** These events will involve countries that plan to join subsequent phases. The objectives of regional knowledge and networking events will be to (a) take stock of the implementation progress and share lessons, (b) disseminate country-specific knowledge and experiences, and (c) promote cross-sectoral and peer learning. Additional technical assistance will be explored to develop a consistent methodology for measuring food insecurity and explore collaboration with regional or global research partners. This will involve setting up a data system to track key market, productivity, and food security indicators at a high frequency to capture responses to climate shocks and evaluate the extent to which project interventions support the capacities of target communities to absorb these shocks and recover

C. Sustainability

Technical and Financial Sustainability

57 **All MPA Program interventions, including Phase 3, will strive to have a lasting impact.** Under Component 1, for example, the Phase 3 projects seek to involve private providers in the delivery of technical services through self-sufficient business models. Under Component 2, community engagement in meaningful participatory planning will reinforce community ownership of project activities. Under Component 3, Phase 3 projects will maximize private sector leadership by following whenever possible a competitive public-private partnership (PPP) process and involving private partners in collaboration with the IFC and relying on existing commercial structures (for example, financial institutions) to deliver support. Finally, under Component 4, the regional research systems will be consolidated to operate under a model that is not dependent on project funding.

Institutional Sustainability

58 **The MPA Program aims to work with and build on the current institutional ecosystem already working to build food systems resilience.** At the regional level, activities dedicated to capacity building will further enhance the Program's sustainability by strengthening human and material resources in agencies that are responsible for formulating and overseeing food policies with a resilience focus. At the subnational level, the strong engagement of the different sectoral institutions (agriculture, water, and environment) in the preparation and implementation of specific investments will further strengthen

ownership and, in turn, institutional sustainability of the food systems-based approach. The medium-term horizon of the Program will help generate buy-in for structural approaches and build institutional capacity and capital. Regional institutions will enhance their business models, make strategic capacity-building investments (for instance, in digitalization), and transition toward financial sustainability, to play their role and reinforce the regional agenda. Studies consistently indicate that regional institutions play a key role in regional food systems.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic, and Financial Analysis

59 **Economic and Financial Analysis (EFA).** Phase 3 is expected to generate a cascade of likely effects, ranging from increased capacity to respond to and recover from food shocks, improved management of natural resources, enhanced market efficiency and improved access (with attention to smallholder farmers' inclusion), value addition, and enabled policy environment to support food security and food systems resilience. The financial analysis of the proposed investment models indicates viability from the perspective of private stakeholders, while the economic analysis intends to measure the economic worth of the project from the perspective of society. Moreover, the EFA integrates other relevant economic benefits, particularly some positive spillovers linked to climate co-benefits (CCB). The time horizon of the EFA is 20 years, comprising 6 years of project implementation and 14 years of capitalization. The social discount rate has been set at 6 percent.[38] The incremental costs and benefit streams per country, considering the regional interventions, are then integrated to estimate regional performance indicators. At the country level, the EFA accounts for the total project costs and prorated additional costs from the FSRP support activities conducted at the regional level (through the AU).

60 **Economic viability.** The analysis shows that the MPA Phase 3 is an economically viable investment for society. Economic performance indicators by country confirm economic viability for the Comoros, Malawi, Kenya, and Somalia. At the regional level, the aggregated economic net present value (ENPV) of the countries' incremental net benefit streams, discounted at 6 percent (economic discount rate), is US$1,143 million, with an economic internal rate of return (EIRR) of 24 percent for the baseline scenario. Two additional economic performance scenarios were analyzed, by integrating the economic value of the Phase 3 GHG emissions balance with a low carbon price (LCP) assumption and a high carbon price (HCP) assumption. Under the LCP scenario, the EIRR is 36 percent and the ENPV is approximately US$1,924 million. Under the HCP scenario, the EIRR is 50 percent and the ENPV is approximately US$2,706 million.

61 **Sensitivity analysis.** The robustness of these indicators was tested with a sensitivity analysis based on switching values for costs and benefits. The switching values for reductions in benefits are 50 percent, 42 percent, and 30 percent under the HCP, LCP, and baseline scenarios, respectively. The switching values for cost increments are 100 percent, 71 percent, and 42 percent under the HCP, LCP, and baseline scenarios, respectively. The switching values indicate the economic performance of Phase 3 is robust to diverse shocks that might affect the achievement of intended results, therefore, representing an economically worthwhile investment from the perspective of society.

62 **GHG results.** As the quantification of GHG emissions is an important step in estimating contributions to benefits for the society, an assessment of GHG balances was conducted at a country level and then

[38] In line with the Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects.

aggregated to provide a global value for the MPA Phase 3 (following the WBG policy on GHG emissions accounting for investment project financing). The Project leads to a reduction of tCO_2e emissions annually and per hectare when compared to a business-as-usual baseline scenario. After 20 years, and for the whole MPA Phase 3, GHG mitigation benefits would amount to a reduction of 22 million tCO_2e (1.1 million tCO_2e per year). The main results of this GHG analysis are presented in detail in Annex 7.

B. Rationale for Public Sector Provisioning/Financing

63 **The Phase 3 core role lies in providing public goods across national borders and addressing market failures.** At the same time, it will seek to leverage private investments from farm households, agribusinesses, and climate finance for securing results-based investment beyond the Project duration. The main reasons for public sector financing are: (a) **Reduction of environmental externalities in transboundary watersheds.** Phase 3 targets transboundary watersheds where downstream users are considerably affected by upstream activities (for example, land degradation and water pollution) and where climate mitigation benefits constitute a clear public good. Also, the low probability of investments in the long-term provision of environmental services under market conditions justifies public investments. (b) **Climate data and early warning services.** These are widely considered to be public goods, where public provision would create opportunities for the private sector to deliver a wide range of value-added information services for enhancing end users' climate resilience. (c) **Strengthening regional integration and collaboration.** By harmonizing the regional policy and regulatory framework, Phase 3 will facilitate value chain development and facilitate regional trade. (d) **Investments in rural infrastructure.** They are undersupplied due to both coordination and market failures. While the initial investments are needed for public goods and typically justified as publicly financed, they would create opportunities for further private participation.

C. Fiduciary

Financial Management

64 **The FM assessment of the national and regional implementing entities has been conducted following the World Bank's IPF directive, concluding that the Project arrangements build on existing arrangements and are able to meet project-specific requirements.** The fiduciary responsibilities of the Project will be managed either by the already established national and regional entities that have experience in managing World Bank-financed operations (Comoros and Malawi), or by establishing new project implementation units (Kenya, Somalia and AU), acceptable to the Association, shortly after project effectiveness (with adequate mitigation measures to meet the World Bank's minimum FM requirements).The AU will assume the overall fiduciary responsibility for the implementation of its project in coordination with African Union Development Agency-New Partnership for Africa's Development (AUDA-NEPAD). Accounting policies and procedures will be guided by existing procedures for institutions and projects and will have systems in place to produce timely and reliable financial reports. The project will have quarterly interim financial reports (IFRs) for national and regional implementers to be submitted to the World Bank within deadlines set out in each project participating recipient's Disbursement and Financial Information Letter (DFIL) and audited financial statements within six months of the year-end. Funds will flow into Designated Accounts (DAs) to be opened, from which transfer to local currency accounts will be made for decentralized operations. Detailed disbursement arrangements will be provided in the DFILs. Detailed FM arrangements are discussed in each of the country annexes 1 to 5.

Procurement

65 **Procurement procedures.** Procurement activities under the project will be carried out in accordance with 'The World Bank's Procurement Regulations for IPF Borrowers' (Procurement Regulations), dated November 2020; the 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', dated October 15, 2006, revised in January 2011 and on July 1, 2016, as well as the provisions stipulated in the respective Financial Agreements (FAs).

66 **Project Procurement Strategies for Development (PPSD) and Procurement Plans (PP).** The capacity assessment carried out by the World Bank rated the actual procurement risk as **Substantial**, given capacity, procurement scope, and market-associated risks identified. The implementing entities have all prepared their respective PPSDs which set out the procurement arrangement and market approach options both for high-value/high-risk and low-value/low-risk procurement activities in the project. The PPSDs also incorporate an initial PP for the first 18 months of the project life. The PPSD will be updated in agreement with the World Bank, at least annually, or as required, to reflect changes in the procurement arrangement which might be required due to a change in requirements, market conditions, procurement environment, and so on. The implementing agencies will prepare a Procurement Manual, which will be part of the PIM, to elaborate procurement arrangements, roles and responsibilities, methods, and requirements for carrying out procurement under the project. Full details of the special details for each participating client are presented in the respective country annexes 1 to 5.

D. Legal Operational Policies

67 Phase 3 of the MPA Program triggers OP 7.50 - Projects on International Waterways because some of the proposed investments under the Malawi FSRP concerning irrigation schemes, catchment management, and last-mile infrastructure will use water from Lake Malawi and the Shire River that are part of the Zambezi River system, which is an international waterway according to OP 7.50. In accordance with the policy, other riparian countries were notified of the Project on March 22, 2023. Until the end of the notification process (April 19, 2023) no responses had been received from the riparian countries. Any activities that involve the use or potential pollution of international waterways under Kenya and Somalia FSRPs will not be eligible for Program financing. The respective PIM will reflect this as part of eligibility criteria.

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

E. Environmental and Social

68 **The overall environment and social risk of Phase 3 is rated Substantial.** Overall, Phase 3 will bring about positive benefits such as increasing rural employment opportunities and improving rural livelihoods through improved agricultural productivity. Its positive environmental outcomes include resilient and sustainable water supply for productive food system and water and soil moisture conservation and soil

health investments. Phase 3 recognizes that building resilience is a long-term process that requires links across levels (regional, national, subnational, and local).

69 **Assessment of the environmental and social risks of Phase 3.** Activities under the respective components include various types of civil work that could lead to land acquisition and possibly involuntary resettlement. Under these components, Phase 3 projects may invest in small-scale irrigation (SSI) schemes, small dams, water points, market infrastructure, and small feeder roads. The main associated environmental and social risks and impacts include risks associated with land acquisition, poor labor conditions and child labor, occupational health and safety (OHS), waste generation, hazardous material management, noise and vibration, wastewater discharges, and air quality as well as community health and safety including transmission of communicable diseases, such as HIV/AIDS, SEA and SH, and other forms of GBV. Given that the civil works are expected to be minor and rely largely on national contractors, Phase 3 is not expected to lead to significant labor influx.

70 There is also potential for activities to be implemented in locations where Sub-Saharan African Historically Underserved Traditional Local Communities (SSAHUTLC) are present for seasonal use or occupy lands and natural resources (this is relevant for Kenya and potentially also for Somalia). Project activities may also create or exacerbate the existing tension and conflicts, social discrimination or exclusion, and vulnerability of these SSAHUTLC as well as other disadvantaged and vulnerable groups in the project area. Other potential social risks could be related to operational concerns due to remoteness and insecurity, including monitoring and supervising social and environmental risks including grievance management; security issues in some of the project countries; and weak implementation capacity especially at grassroots level with limited functional structure and trained manpower.

71 **Phase 3 environmental risk rating is Substantial.** The Project presents substantial environmental risks, such as those related to construction, and OHS in areas that will see infrastructure developments, dam safety, and community and health safety. There are also risks to natural habitats and biodiversity and cultural heritage. In addition, agricultural production and processing may result in solid and liquid waste generation with the attendant impacts on soil and water pollution, while digital interventions may result in e-waste from digital activities. Other environmental risks include soil erosion, siltation, flooding emanating from irrigation designs, water and soil salinity, water-related vector-borne diseases if irrigation systems are not properly maintained, and hydrological flow impacts of irrigation schemes operation. Even though some of the implementing institutions have some capacity to address some of the risks, the scope of the project warrants an environmental risk rating of Substantial. It is important to note that the participating countries are all vulnerable to climate change. This may affect the project and require management and mitigation to safeguard investments. Given the risks mentioned above, the following Environmental and Social Standards (ESS) apply: ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10. Other risks and impacts include those associated with the operational phase of the improvements/new construction/rehabilitation as well as with the subprojects of the matching grant program (mainly, beneficiary selection, child and forced labor, poor labor conditions, OHS, water and energy consumption, hygiene and food requirements, land and water management, the use of pesticides, and manure and veterinary waste management).

72 The project activities to be implemented by the AU are of type 2 TA; they will be undertaken in compliance with the World Bank's Advisory Note on Technical Assistance and the ESF. For the downstream impacts and risks associated with the development of a continental framework, drafting policy documents, development of appropriate training programs, and strategy development, a systematic examination of environmental and social risks and impacts that is, strategic environmental and social

assessment (SESA) will be prepared in consideration of the full range of ESS. The SESA will be designed to scope the full measure of the environmental and social risks and impacts as well as the depth and breadth of benefits of the project. The assessment will establish the baseline for all the countries, screen and evaluate the impact of the planned investments in food systems, identify the institutional capacities and challenges as well as environmental and social risks, review the impact and risks monitoring measures, and make recommendations to be implemented by the AU in partnership with the participating countries.

73 The Environmental and Social Management Framework (ESMF) will outline: (a) the selection process and beneficiary eligibility criteria; (b) screening process for subprojects; (c) requirements and process to develop subsequent environmental and social assessments and/or plans for the planned civil works, once these are identified; and (d) a checklist to monitor implementation of mitigation measures (that is, review of bidding and contractual documents and field supervision mission). The ESMFs will avoid high-risk subprojects through the screening process that will include an exclusion list. Furthermore, screening will be conducted and site-specific risks management instruments and plans (including Environmental and Social Management Plan [ESMPs], Environmental and Social Impact Assessments, Resettlement Plans, and Vulnerable and Marginalized Group [VMG] Plans depending on the nature and scope of the subprojects) will be prepared during project implementation, following the requirements of the ESF. Associated facilities, if any, will be clearly identified, and the ESMFs will also cover the potential risks and mitigation measures of the associated facilities.

74 **Phase 3 social risk level is Substantial.** The social risk is rated Substantial due to the scope of the activities, including the TA activities and planned civil works which may lead to impacts that are mostly temporary, predictable, and/or reversible. There is a medium to low probability of serious adverse effects to human health and there are known and reliable mechanisms available to prevent or minimize such incidents. The classification also considers contextual aspects such as project intervention in conflict-prone areas, weak client capacity, and remote locations. Overall, the intended beneficiaries are expected to benefit from the Project through the creation of job opportunities (for youth and women) as a result of enhanced resilience of farmers, increased agricultural yields, increased access to diverse food and nutrition, improved livelihoods, improved access to finance, and an overall improved skill base. However, the project is also expected to induce adverse social risks and impacts, in particular: (a) land acquisition; involuntary resettlement, land take or restrictions on land use in particular, loss of land or other assets, social and gender exclusion, inadequate consultations and engagement, lack of compensation at replacement cost, lack of access to grievance mechanisms, and so on; (b) creation or exacerbation of the existing tension and conflicts, social discrimination or exclusion and vulnerability of SSAHUTLC as well as other disadvantaged and vulnerable groups in the project areas, and insufficient community and other stakeholder engagement; (c) labor influx and associated risks including risks on community health and safety, SEA/SH, and other forms of GBV, as well as transmission of communicable diseases, such as HIV/AIDS; (d) potential risks of employer noncompliance with OHS requirements and terms and conditions of employment, as well as risks associated with the use of forced/trafficked labor and child labor, which is known to be present in the agricultural sector; (e) project activities that may be implemented in areas where people meeting the criteria of ESS7 are present and may negatively affect such persons; and (f) unknown cultural heritage that may be encountered during project activities. Other risks that have been considered are operational concerns due to remoteness and insecurity, including monitoring and supervising social risks including grievance management, and weak implementation capacity especially at grassroots level with limited functional structure and trained manpower.

75 **SEA/SH risk rating is also Substantial.** The SEA/SH risks have been assessed and rated as Substantial. The main drivers for the substantial rating are the activities being implemented in the participating countries where Phase 3 will be implemented nationally including in remote or rural settings, and areas experiencing FCV, in particular Somalia. There could be limited access to quality and safe services for survivors of GBV; conflict that exacerbates the risk of GBV, induced by competition over agricultural resources, for example, productive land, agricultural inputs, and water resources for irrigation; inadequate community participation; and elite capture. Moreover, Phase 3 components that support civil works including rehabilitation of existing infrastructure and the construction of market and rural infrastructures, including SSIs and household irrigation, rural feeder roads and bridges, warehouses, and value chain infrastructures, may lead to an influx of labor (skilled and semiskilled) into Phase 3 areas that may in turn induce or increase risks related to SEA/SH and other forms of GBV in the rural communities.

76 **Stakeholder engagement and information disclosure.** These concepts are at the heart of Phase 3 and are envisaged as a continuous, ongoing process throughout its lifecycle. This approach will ensure participation, inclusiveness, and transparency. Details of the stakeholder engagement activities are outlined in the Stakeholder Engagement Plans (SEPs) prepared by the participating countries and the AU, and integrated in the Environmental and Social Commitment Plan (ESCP). The SEPs present the engagement methods to be undertaken with relevant stakeholders ensuring that the techniques are culturally appropriate and relevant local languages are used to ensure meaningful stakeholder engagement and information disclosure. Engagement activities are likely to include community meetings and focus group discussions as well as one-to-one meeting as needed, learning training, demonstration session, and sharing workshop. The needs of vulnerable groups will be fully considered in designing the engagement processes including timing, location, accessibility, and use of written materials. The SEPs also clearly outline and define approaches to disseminate beneficiary eligibility criteria and the selection process. All participating recipients have already disclosed their respective ESCPs and SEPs, acceptable to the Association, as per the following detail, while the remaining instruments required by the Environmental and Social Framework (ESF) will be finalized and disclosed in accordance to the legal covenants in the respective financial agreements (for further details see the country annexes 1 to 5). In addition, all participating countries' ESCPs and SEPs were disclosed on the World Bank's external website on April 1, 2023. The details for each recipient are as follows:

(a) **Comoros**: The project ESCP and SEP were disclosed on the Government's website (*http://dnsae.gouv.km/agriculture/list_rapport/*) on April 4, 2023.
(b) **Kenya:** The ESCP and SEP were disclosed on the Government's website (*https://www.kcsap.go.ke/fsrp-documents*) on April 3, 2023.
(c) **Malawi**: The ESCP and the SEP were disclosed on the Government's website on April 3, 2023 (*https://www.agcom.gov.mw/downloads/policies-and-guidelines*).
(d) **Somalia**: The ESCP and SEP were disclosed on the Government's website on April 3, 2023. (*https://moa.gov.so/ministry-of-agriculture-and-irrigation-food-systems-resilience-project-fsrp-p177816/* and *https://moa.gov.so/ministry-of-agriculture-and-irrigation-food-systems-resilience-project-p178566-stakeholder-engagement-plan-draft/*).
(e) **AU**: The ESCP was disclosed by the client on April 6, 2023 (*https://au.int/en/documents/20230406/environmental-and-social-commitment-plan-escp*).

F. Gender

77 **The overall MPA Program is committed to addressing gender inequities within the agricultural sector that leave women less well-off and resilient than men.** The MPA Program is particularly focused on narrowing gender gaps in agricultural productivity, therefore addressing some of its main drivers, including women's limited access to: (a) high-value crops, (b) agricultural inputs, and (c) credit and land. The success of Phase 3 and the wider MPA Program in closing all gender gaps will be measured both by dedicated indicators in the Results Framework, and by the gender disaggregation of other indicators. In addition, Phase 3 projects will systematically report on the specific activities they are undertaking to address identified gender gaps.

78 **Phase 3 will specifically strive to address key drivers that continue to widen the productivity gap between male and female farmers in participating countries.** Gender productivity gaps vary across and even within countries, which pose severe constraints to women's equitable and gainful participation in the agricultural sector. Furthermore, the cost of a gender gap in agricultural productivity reveals a worrying trend that is bound to have an impact on Africa's structural transformation. The annual gender gap has been estimated at US$100 million for Malawi, US$105 million for Tanzania, and US$67 million for Uganda. Closing the gender gap in Ethiopia, for example, is estimated to lead to a US$182 million increase in agriculture GDP and a US$203.5 million increase in total GDP and lift over 1 million people out of poverty.[39] Addressing this gender gap across Phase 3 countries is expected to lead to economic gains, reduce poverty levels, and improve nutrition outcomes. In each participating country where they are relevant, Phase 3 projects will generally address physical, economic, and social constraints to women's participation in farm-level decision-making, land ownership, and commercial and higher-value agricultural activities and their access to agricultural input and output markets, agricultural services (including financial services), and education and training opportunities, among others.

79 **Consistent with the requirements of the overall MPA, an assessment of gender gaps addressed by Phase 3 country projects and an action plan are presented in Annex 8.** The action plan homes in on the following gender gaps drivers, which are salient in Phase 3 participating countries: (a) women's limited access to high-value crops; (b) women's limited access to agricultural inputs; and (c) women's limited access to credit and land. Phase 3 projects will address these gaps in a variety of ways, including by proactively recruiting women farmers and value chain actors to benefit from project trainings and other in-kind offerings and tailoring those offerings to match and account for women's constraints and knowledge or other needs, as well as considering organizational inclusiveness as a criterion in grant-making.

G. Climate Co-Benefits.

80 Phase 3 will achieve significant climate co-benefits as its activities have systematically been designed to accelerate climate change adaptation, rebuild land-based carbon stocks, and mitigate agricultural GHG emissions at every opportunity. Further details of these activities included in each country project are presented in Annex 6.

81 Activities under the project include measures to improve carbon sequestration; prevent land degradation; restore landscapes; conserve marine and coastal ecosystems; and promote climate-smart technologies, innovations, and management practices (with high potential for mitigation co-benefits). The

[39] UN Women. 2015. "The Cost of the Gender Gap in Agricultural Productivity."

project's interventions on agricultural production and landscapes, including digital solutions that improve smallholders' access to extension services, climate-resilient input and market information, research products, farming knowledge, planting material, inputs, land, water, digital tools, and finance as well as climate services, enable farmers to make climate- and weather-informed decisions, all of which contribute toward climate adaptation. Phase 3 projects will for example help farmers plant more drought-tolerant crops, build more productive (carbon-rich) and drought-tolerant soils, use agrometeorological data to farm more strategically in a context of increasingly harsh and uncertain climatic conditions, conserve and store scarce water resources, better manage resource competition, and prevent and prepare for floods. By supporting producers' and other value chain actors' agricultural earning potential—through its varied interventions supporting value addition, quality, collective action, marketing infrastructure and systems, and commercialization—the project will help put its beneficiaries in a better position to invest in CSA and grow less vulnerable crops (to inevitable weather- and climate-related market shocks to come).

82 Additionally, improved access to digital agriculture solutions and near real-time climatic information will enable actors within the food systems to make informed decisions, improve productivity and incomes, and therefore improve adaptive capacity. The project's regional focus will enhance regional integration efforts, improving transboundary cooperation and establishing cross-border initiatives and preparedness that are critical to climate resilience. Meanwhile, many of the adaptive farming and resource management approaches promoted by the project will mitigate agricultural and other land-based GHG emissions, increase carbon storage above and below the ground, and curb the carbon intensity of livestock production.

H. Citizen Engagement

83 **Designed to be beneficiary oriented, Phase 3 will use as many as three citizen engagement (CE) approaches.** The first CE approach involves consultation, encompassing all beneficiaries during Phase 3 life-cycle (preparation, ESF, implementation, and closing). Consultation activities would be based on countries' specific objectives, and it would be regularly conveyed to beneficiaries how the feedback was considered. The second CE approach is grievance redress. The effective and efficient Grievance Redress Mechanisms (GRMs) will be established at the project level with the capacity to receive and respond on time to grievances at various levels. The third CE approach involves collecting, recording, and reporting on inputs received from beneficiaries through beneficiary satisfaction surveys. In addition, Phase 3 projects will explore a 'thick CE approach' that provides citizens and communities with resources and decision-making powers with respect to the O&M of water and other community infrastructure, equipment, or landscape restoration by involving water users' associations (WUAs) and farmer-based organizations (FBOs). The beneficiary feedback indicators included in the Results Framework are "beneficiaries satisfied with the Phase 3's interventions" and "percentage of grievances registered through the project GRM and addressed." The SEP elaborated by each participating recipient presents in detail the proposed CE approaches.

I. Mobilizing Finance for Development

84 **The MPA design recognizes the key role of the private sector in achieving food systems resilience as well at its potential to leverage finance, expertise, and innovative solutions to support sustainable growth.** Phase 3 foresees a spectrum of activities that will enhance the policy and regulatory environment for private investment. From the MFD perspective, important enabling activities to be undertaken by

Phase 3l include: (a) developing regulations for SPS services, harmonizing phytosanitary data management, and forecasting systems along with certified laboratories to improve regional trade; (b) creating incentives and providing matching grants that encourage the private sector to provide some of the services whose provision is currently dominated by the public sector; (c) strengthening regional research capacity and increasing the adoption of innovative technologies with more private sector participation; (d) facilitating public-private dialogue and studies that help catalyze policy reforms and foster a business-friendly climate; (e) working with commercial banks and microfinance institutions to expand access to credit, while also supporting the preparation of business and investment plans; and (f) constructing and rehabilitating market infrastructure that supports value addition, food safety, and reductions in food loss and waste (including investments in storage, cold chain, processing, and marketing). In these and other ways, Phase 3 is expected to mobilize private sector investment and participation in the region's agri-food value chains.

V. GRIEVANCE REDRESS SERVICES

85 **Communities and individuals who believe that they are adversely affected by a World Bank-supported project may submit complaints to existing project-level GRMs or the World 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 recipients 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.

VI. KEY RISKS

86 **The overall risk for Phase 3 is rated Substantial.** The overall risk for Phase 3 reflects the aggregation of project risks for all the participating recipients (four countries and AU) in AFE, which is one of Africa's most fragile subregions where 22.5 million people currently face severe food insecurity, and 10.8 million people experience forced displacement and armed conflict. The risk ratings by country are as follows: Somalia, High; the Comoros, Kenya and Malawi, Substantial; and AU, Moderate. To manage these risks, Phase 3 will, among others: (a) follow a standardized technical design with quality assurance elements to help country teams in project implementation and promoting dissemination of ideas and solutions across countries; (b) provide TA in key areas to help anticipate and solve common issues and remove key constraints; (c) use emergency procedures, such as direct contracting, expedited contract approvals, and use of specialized UN agencies for strengthening the fiduciary functions, when needed; and (d) manage a learning agenda to raise the quality of implementation across all participating countries.

87 **Political and Governance risk is rated Substantial.** This risk in Somalia and the Comoros is rated High, while in the rest of the countries it is Moderate. In addition, Somalia has a high level of risk derived from its security situation. In several countries, there are risks derived from potential political crises and

conflicts, with the increased level of instability. Also, implementation will take place in some areas that are characterized by having security risks, which may affect field activities and field visits. In addition, large sectors of the population are likely to face high levels of food insecurity, which is threatening the normal adoption of new technologies and the expansion of lucrative investments in the areas. Phase 3 will minimize the political and governance risks by setting up the mechanisms for coordination across different levels of government, specialized entities, and stakeholders.

88 **Macroeconomic risk is rated Substantial.** Although the countries involved have been experiencing some level of economic growth (even with some fluctuations) supported by relatively prudent macroeconomic management, recent economic developments have been challenging because of various external shocks, such as cyclones and other extreme weather events, and the COVID-19 pandemic that has affected economies in the region. Russia's invasion of Ukraine may continue to deteriorate the countries' current account balances, either by affecting direct imports/exports from Russia or Ukraine or by ripple effects on global markets (availability of supplies and price increases). Phase 3 is mitigating these risks by supporting vulnerable households through temporary income support and support to Productive Alliances (PAs), as well as strengthening selected and profitable value chains. At the same time, the region's fragility and exposure to climate impacts pose risks to the countries' macroeconomic situation, which Phase 3 will help mitigate by strengthening the capacity of key institutions at all levels during rollout, in addition to increasing resilience by key investments and the adoption of climate-smart technologies and practices.

89 **The Institutional Capacity for Implementation and Sustainability risk is rated Substantial.** Phase 3 design, with its relative complexity and multiple institutional stakeholders, in addition to the geographical coverage, represents a considerable level of risk. The Project would mitigate these risks by delegating technical functions to agencies with technical experience and leadership in those specific areas, as well as by establishing effective cross-sectoral coordination mechanisms across countries and institutions, in addition to several ministries and multiple agencies at national and subnational levels.

90 **Fiduciary risk is Substantial.** Differences in capacity for procurement, FM, and project management among participating countries could lead to uneven progress in implementing activities and achieving targets. Fiduciary assessments have been conducted for each recipient (countries and the AU), and provisions have been made to strengthen the procurement and FM capacity for both the newly recruited and existing staff. Implementation will be centralized for countries where capacity limitation, staff turnover, and limited oversight capacity could affect fiduciary compliance. Based on the procurement capacity assessments carried out, the procurement risks are related to lack of adequate procurement capacity (structure and staffing) to accommodate the workload associated with the new project and lack of experience in the implementation of procurement activities. Absence of adequate skills in preparing bidding documents and evaluating bids and contract management, as well as inaccessibility of the complaint management process and associated delays, may affect the integrity of the procurement system. These constraints will be mitigated through centralized implementation in national PIUs where local capacity limitations, staff turnover, and limited oversight capacity will be strengthened under Phase 3, together with intensive training and TA to staff, and implementation of strategies aiming at retaining best performing staff.

91 **The environmental and social risks are rated Substantial.** The environmental risk rating is Substantial, even though the direct environmental risks of the Phase 3 projects are expected to be predictable, reversible, and site specific and are not likely to be highly significant. The social risk rating is also Substantial in most countries given the contextual risks including the security situation in AFE, the

risk of conflict which can be unpredictable, and social tensions that exist in many countries between groups and factors such as challenges in access to land, labor, and markets and the implementation of mitigation measures associated with measures to increase inclusion of groups of the population. Each project activity will have a specific location and salient physical, biological, and socioeconomic characteristics that will need to be understood as part of the environmental and social assessment. The Phase 3 will have positive environmental and social outcomes involving the management of water resources for resilient and sustainable water supply for productive food systems and water and soil moisture conservation as well as improved livelihoods and the ability to respond to shocks. However, there are also several inherent risks including the exclusion of VMGs, the potential for social conflict over rights to land and natural resources, physical and economic displacement, and elite capture by members of society leading to unequal distribution of assets and benefits. Risks associated with SEA/SH may occur because of project activities, notably in association with the influx of labor, with even relatively small numbers potentially leading to increased risks. Female workers may be at risk of SEA/SH in the workplace (for further details, see section IV. E).

92 The participating countries will prepare Environmental and Social Management Frameworks (ESMFs), which will be designed to evaluate the full measure of the environmental and social risks and impacts and provide context-appropriate mitigation measures. Environmental and social due diligence and assessments done during the preparation of the ESMFs will establish the baseline for all the countries, screen and evaluate the impact of the planned investments in food systems, identify the institutional capacities and challenges as well as environmental and social risks, review the impact and risks monitoring measures and make recommendations to be implemented by the AUC in partnership with the participating countries. SEA/SH risk factors will be further outlined under the country specific SEA/SH Action Plans prepared as part of the ESMFs and will include risk mitigation measures proportionate to the overall SEA/SH risk classification for each country. In addition, the participating countries have already prepared and disclosed Stakeholder Engagement Plan (SEP) and have put in place measures to retain or procure qualified and experienced environmental and social specialists to implement the mitigation measures enumerated in the ESF instruments. The participating countries will further prepare and disclose Labor Management Procedures (LMP), Integrated Pest Management Plans (IPMPs), Resettlement Policy Frameworks, and Vulnerable and Marginalized Groups Framework (VMGF).

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Eastern and Southern Africa

Food Systems Resilience Program for Eastern and Southern Africa (Phase 3)

Project Development Objective(s)

The objectives of the Project are to increase resilience of food systems and the Recipient's preparedness for food insecurity in Project areas, and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Increased preparedness for food security in participating countries								
Reduction of food insecure people in Project-targeted areas (Percentage)		0.00	13.50					27.00
Comoros (Percentage)		0.00	2.00					3.00
Kenya (Percentage)		0.00	10.00					20.00
Malawi (Percentage)		0.00	5.00					10.00
Somalia (Percentage)		0.00	5.00					10.00
Increase the resilience of food systems in participating countries								
Farmers adopting resilience-enhancing technologies and practices (Number)		0.00	150,000.00	300,000.00	450,000.00	511,600.00		611,600.00
of which are female		0.00	40.00	40.00	40.00	40.00		43.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
farmers (Percentage)								
Comoros (Number)		0.00	100.00	1,000.00	3,000.00	6,000.00	9,000.00	12,000.00
of which are female farmers (Percentage)		0.00	20.00	30.00	40.00	40.00		40.00
Kenya (Number)		0.00	50,000.00	100,000.00	200,000.00	300,000.00		300,000.00
of which are female farmers (Percentage)		0.00	15.00	20.00	30.00	45.00		50.00
Malawi (Number)		5,000.00	35,000.00	45,000.00	50,000.00	75,000.00		89,600.00
of which are female farmers (Percentage)		0.00	20.00	30.00	40.00	45.00		50.00
Somalia (Number)		0.00	75,000.00	150,000.00	165,000.00	175,000.00		210,000.00
of which are female farmers (Percentage)		0.00	5.00	15.00	20.00	25.00		30.00
Land area under sustainable land management practices (Hectare(Ha))		0.00	185,000.00	250,000.00	350,000.00	500,000.00		596,600.00
Comoros (Hectare(Ha))		0.00	0.00	100.00	1,000.00	4,000.00	7,000.00	10,000.00
Kenya (Hectare(Ha))		0.00	15,000.00	50,000.00	50,000.00	100,000.00	150,000.00	250,000.00
Malawi (Hectare(Ha))		0.00	8,000.00	15,000.00	20,000.00	25,000.00	30,000.00	36,600.00
Somalia (Hectare(Ha))		0.00	35,000.00	150,000.00	185,000.00	200,000.00	285,000.00	300,000.00
Increase in volume of agricultural production sold in domestic and regional markets (Percentage)		0.00	0.00	10.00	10.00	20.00		30.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
of which sold in the domestic market (Percentage)		0.00	0.00	30.00	40.00	50.00		70.00
of which sold in regional markets (Percentage)		0.00	0.00	15.00	20.00	25.00		30.00
Comoros (Percentage)		0.00	3.00	4.00	5.00			6.00
of which sold in the domestic market (Percentage)		0.00	3.00	3.00	3.00			6.00
of which sold in regional markets (Percentage)		0.00						0.00
Kenya (Percentage)		0.00	5.00	10.00	15.00			20.00
of which sold in the domestic market (Percentage)		0.00	20.00	45.00	55.00	65.00		70.00
of which sold in regional markets (Percentage)		0.00	15.00	20.00	25.00	25.00		30.00
Malawi (Percentage)		0.00	10.00	15.00	20.00	25.00		30.00
of which sold in the domestic market (Percentage)		0.00	5.00	8.00	12.00	16.00	18.00	20.00
of which sold in regional markets (Percentage)		0.00	3.00	7.00	10.00	10.00		10.00
Somalia (Percentage)		0.00	5.00	10.00	15.00	20.00		25.00
of which sold in the domestic market		0.00	3.00	4.00	5.00	8.00	10.00	10.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
(Percentage)								
of which sold in regional markets (Percentage)		0.00	6.00	11.00	14.00			15.00
Policy products adopted with Project's support related to agriculture, natural resource management, and food systems resilience (Number)		0.00	20.00	30.00	35.00	40.00		45.00
AU (Number)		0.00	3.00	8.00				10.00
Comoros (Number)		0.00	1.00	2.00	3.00	4.00		5.00
Kenya (Number)		0.00	0.00	1.00	2.00	4.00		5.00
Malawi (Number)		0.00	1.00	2.00	3.00	4.00		5.00
Somalia (Number)		0.00	5.00	15.00				20.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
1. (Re-) Building Resilient Agricultural Production Capacity								
Climate-smart agriculture technologies and practices transferred to extension services with Project		0.00	125.00	200.00	285.00	300.00		365.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
support (Number)								
of which gender-sensitive technologies and practices (Number)		0.00	15.00	20.00	25.00	30.00		36.00
of which Comoros (Number)		0.00	1.00	2.00	3.00	4.00	5.00	5.00
of which Comoros gender-sensitive technologies and practices (Number)		0.00	1.00	2.00	2.00	2.00		2.00
of which Kenya (Number)		0.00	50.00	100.00	150.00	200.00		200.00
of which Kenya gender-sensitive technologies and practices (Number)		0.00	15.00	30.00	45.00	60.00		60.00
of which Malawi (Number)		5.00	7.00	9.00	10.00			10.00
of which Malawi gender-sensitive technologies and practices (Number)		1.00	2.00	3.00	4.00			4.00
of which Somalia (Number)		0.00	75.00	100.00	135.00	140.00		150.00
of which Somalia gender-sensitive technologies and practices (Number)		0.00	10.00	15.00	20.00	25.00		30.00
Farmers accessing agrometeorological data information and advice, market information, or other digital support		0.00	250,000.00	500,000.00	875,000.00	900,000.00		980,000.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
services on climate and market risk management (Number)								
of which female (Number)		0.00	75,000.00	175,000.00	250,000.00	300,000.00	350,000.00	419,000.00
of which Comoros (Number)		0.00	2,000.00	5,000.00	7,000.00			10,000.00
of which Comoros female (Number)		0.00	1,000.00	2,000.00	2,800.00	3,000.00		4,000.00
of which Kenya (Number)		0.00	50,000.00	150,000.00	300,000.00	500,000.00		600,000.00
of which Kenya female (Number)		0.00	25,000.00	75,000.00	150,000.00	250,000.00		300,000.00
of which Malawi (Number)		0.00						20,000.00
of which Malawi female (Number)		0.00	3,000.00	5,000.00	7,000.00	9,000.00		10,000.00
Somalia (Number)		0.00	150,000.00	200,000.00	300,000.00	300,000.00		350,000.00
of which Somalia female (Number)		0.00	45,000.00	65,000.00	85,000.00	90,000.00		105,000.00
Change in the households dietary diversity score (HDDS) among targeted beneficiaries (Percentage)		0.00	5.00	10.00				15.00
Comoros (Percentage)		0.00	5.00	8.00				10.00
Kenya (Percentage)		0.00	0.00	5.00				10.00
Malawi (Percentage)		0.00	2.00	3.00				5.00
Somalia (Percentage)		0.00	3.00	9.00	18.00	20.00		25.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Decrease in yield gap between program beneficiary female and male farmers (Percentage)		0.00	25.00	25.00	25.00	25.00		25.00
Comoros (Percentage)		0.00	10.00	15.00	20.00			25.00
Kenya (Percentage)		0.00	25.00	25.00	25.00	25.00		25.00
Malawi (Percentage)		0.00	25.00	25.00	25.00	25.00		25.00
Somalia (Percentage)		0.00	25.00	25.00	25.00	25.00		25.00
2. Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes								
Agricultural landscape and natural resource management plans developed with Project support (Number)		0.00	50.00	100.00	138.00	150.00		166.00
of which implemented with Project support (Number)		0.00	20.00	25.00	75.00	95.00		114.00
of which Comoros (Number)		0.00	7.00	10.00	10.00	10.00	10.00	10.00
of which Comoros implemented with Project support (Number)		0.00	0.00	1.00	5.00	7.00	10.00	10.00
of which Kenya (Number)		0.00	0.00	26.00	52.00	78.00		104.00
of which Kenya implemented with Project support (Number)		0.00	0.00	13.00	26.00	39.00		52.00
of which Malawi		0.00	2.00	2.00				4.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
(Number)								
of which Malawi implemented with Project support (Number)		0.00	2.00	3.00				4.00
of which Somalia (Number)		0.00	15.00	25.00	35.00	40.00		48.00
of which Somalia implemented with Program support (Number)		0.00	15.00	25.00	35.00	40.00		48.00
Land area restored, reforested or afforested (Hectare(Ha))		0.00	175,000.00	350,000.00	525,000.00	72,800.00		96,447.00
Comoros (Hectare(Ha))		0.00	150.00	325.00	625.00	875.00		1,000.00
Kenya (Hectare(Ha))		0.00	0.00	2,000.00	6,000.00	12,000.00		20,000.00
Malawi (Hectare(Ha))		0.00	100.00	300.00	350.00	425.00		447.00
Somalia (Hectare(Ha))		0.00	185,000.00	275,000.00	52,000.00	65,000.00		75,000.00
Water users' associations and farmer or community organizations established or strengthened for agricultural water and landscape management (Number)		0.00	175.00	265.00	485.00	525.00		580.00
Comoros (Number)		0.00	1.00	2.00	2.00	2.00	2.00	2.00
Kenya (Number)		0.00	0.00	25.00	100.00	150.00		275.00
Malawi (Number)		1.00	1.00	2.00				3.00
Somalia (Number)		0.00	50.00	125.00	200.00	250.00		300.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Area provided with new/improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	1,895.00	3,750.00	5,850.00	6,500.00		7,044.00
Area provided with new irrigation or drainage services (CRI, Hectare(Ha))		0.00	1,250.00	2,850.00	3,550.00	4,850.00		5,244.00
Area provided with improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	500.00	785.00	1,200.00	1,500.00		1,800.00
of which Comoros area provided with new irrigation or drainage services (Hectare(Ha))		0.00	0.00	5.00	20.00	60.00	100.00	100.00
of which Comoros area provided with improved irrigation or drainage services (Hectare(Ha))		0.00	0.00	5.00	20.00	60.00	100.00	100.00
of which Kenya area provided with new irrigation or drainage services (Hectare(Ha))		0.00	0.00	200.00	400.00	600.00		800.00
of which Kenya area provided with improved irrigation or drainage services (Hectare(Ha))		0.00	0.00	50.00	100.00	150.00		200.00
of which Malawi provided with new irrigation or drainage services (Hectare(Ha))		0.00	850.00	2,200.00	2,900.00	3,000.00		3,844.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
of which Somalia area provided with new irrigation or drainage services (Hectare(Ha))		0.00	100.00	325.00	450.00			500.00
of which Somalia area provided with improved irrigation or drainage services (Hectare(Ha))		0.00	450.00	895.00	1,101.00	1,325.00		1,500.00
3. Getting to Market								
Marketing infrastructure constructed or rehabilitated (Number)		0.00	155.00	195.00	285.00	335.00		352.00
Comoros (Number)		0.00	0.00	2.00	7.00	10.00	16.00	16.00
Kenya (Number)		0.00	0.00	6.00	12.00	16.00		26.00
Malawi (Number)		100.00	155.00	195.00	250.00			280.00
Somalia (Number)		0.00	10.00	15.00	20.00	25.00		30.00
Agrifood SMEs and or cooperatives supported by the Project (Number)		0.00	350.00	565.00	895.00	1,000.00		1,205.00
Comoros (Number)		0.00	0.00	0.00	3.00	5.00	5.00	5.00
Kenya (Number)		0.00	0.00	60.00	120.00	240.00		340.00
Malawi (Number)		275.00	300.00	335.00	350.00	450.00		560.00
Somalia (Number)		0.00	75.00	125.00	200.00	250.00		300.00
4. Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking								
Regionally harmonized policy frameworks and legislation facilitated by Regional Economic		0.00	2.00	6.00	9.00			16.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Communities (RECs) through the Project (Number)								
AU (Number)		0.00	1.00	2.00				3.00
Comoros (Number)		0.00	0.00	0.00	1.00	1.00	1.00	1.00
Kenya (Number)		0.00	1.00					1.00
Malawi (Number)		0.00	1.00					1.00
Somalia (Number)		0.00	4.00	7.00				10.00
Regional knowledge sharing mechanisms established by the Project (Number)		0.00	5.00	18.00	25.00	30.00		37.00
AU (Number)		0.00	1.00	3.00	5.00	8.00		12.00
Comoros (Number)		0.00	0.00	1.00	2.00	2.00		2.00
Kenya (Number)		0.00	0.00	1.00	1.00	2.00	2.00	2.00
Malawi (Number)		0.00	1.00					1.00
Somalia (Number)		0.00	5.00	10.00	15.00			20.00
5. Program Management								
Direct program beneficiaries reached (Number)		0.00	285,000.00	550,000.00	850,000.00	900,000.00		984,400.00
of which women (Number)		0.00	125,000.00	265,000.00	300,000.00	350,000.00		407,200.00
Comoros (Number)		0.00	2,000.00	10,000.00	30,000.00	50,000.00	100,000.00	150,000.00
of which Comoros women (Number)		0.00	800.00	4,000.00	12,000.00	20,000.00	40,000.00	60,000.00
Kenya (Number)		0.00	50,000.00	100,000.00	200,000.00	350,000.00		350,000.00

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
of which Kenya women (Number)		0.00	25,000.00	50,000.00	100,000.00	175,000.00		175,000.00
Malawi (Number)		40,000.00	95,000.00	114,000.00	120,000.00	128,000.00		134,400.00
of which Malawi women (Number)		20,000.00	20,000.00	30,000.00	40,000.00	55,000.00		67,200.00
Somalia (Number)		0.00	100,000.00	180,000.00	230,000.00	300,000.00		350,000.00
of which Somalia women (Number)		0.00	50,000.00	75,000.00	80,000.00	95,000.00		105,000.00
Beneficiaries satisfied with the Project's interventions (Percentage)		0.00	85.00	85.00	85.00	85.00		85.00
AU (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00
Comoros (Percentage)		0.00	80.00	80.00	80.00	80.00		80.00
Kenya (Percentage)		0.00	75.00	75.00	75.00	75.00		75.00
Malawi (Percentage)		0.00	80.00	80.00	80.00	80.00		80.00
Somalia (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00
Grievances registered through the Program GRM and addressed (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00
AU (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00
Comoros (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00
Kenya (Percentage)		0.00	90.00	90.00	90.00	90.00		100.00
Malawi (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00
Somalia (Percentage)		0.00	90.00	90.00	90.00	90.00		90.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Reduction of food insecure people in Project-targeted areas	This indicator measures the reduction of food insecure people in the program targeted areas. Food insecure people are those in phase 3.a and 5 based on the Integrated Food Insecurity Phase Classification (IPC).	Baseline, Mid-term, End-of Program.	HH Survey Report /Baseline, Midterm and End-of Program surve y report.	Rigorous sampling process to select the survey households and data collection following the IPC methodology and survey design.	Survey firms
Comoros					
Kenya					
Malawi					
Somalia					
Farmers adopting resilience-enhancing technologies and practices	This indicator measures the number of targeted beneficiaries who have adopted technologies/practices that lead to improved climate resilience, disaggregated by gender, as well as the number of resilience technologies and practices.	Bi-annual	Country Program Progress Reports	Sum of the total number of beneficiaries who have adopted CSA technologies/practices after receiving advisory services or/and training from the Program.	Country Program M&E Teams

	"Adopting" refers to the change of practice or change in the use of a technology promoted or introduced by the program.				
of which are female farmers					
Comoros					
of which are female farmers					
Kenya					
of which are female farmers					
Malawi					
of which are female farmers					
Somalia					
of which are female farmers					
Land area under sustainable land management practices	This indicator measures the total area of land (ha) restored, reforested or afforested with Program support.	Bi-annual	Country progress reports	Data obtained from the PIUs	Country M&E Teams
Comoros					
Kenya					
Malawi					

Somalia					
Increase in volume of agricultural production sold in domestic and regional markets	This indicator measures the percentage increase in volume of agricultural production sold with the Program's support in both domestic and intra-regional markets.	Annual	Country Program Progress Reports	National trade: Data obtained from the Program Implementation Units Intra-regional trade: Statistics from Customs and the Ministry of trade	Country Program M&E teams
of which sold in the domestic market					
of which sold in regional markets					
Comoros					
of which sold in the domestic market					
of which sold in regional markets					
Kenya					
of which sold in the domestic market					
of which sold in regional markets					
Malawi					
of which sold in the domestic market					
of which sold in regional markets					
Somalia					
of which sold in the domestic market					

of which sold in regional markets					
Policy products adopted with Project's support related to agriculture, natural resource management, and food systems resilience	This indicator measures the number of completed and adopted policies, policy studies, strategies, laws, regulations, and sector plans, and instruments that serve to meet or enhance the Program's development outcomes to support food system resilience.	Annual	Country and regional organizations' Program progress reports.	Data obtained from PIUs.	Country Program M&E Teams
AU					
Comoros					
Kenya					
Malawi					
Somalia					

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Climate-smart agriculture technologies and practices transferred to extension services with Project support	This indicator measures climate-smart agriculture (CSA) technologies and practices (disaggregated by gender-sensitivity) that	Bi-annual.	Country Program progress reports.	Sum of the total CSA gender sensitive technologies transferred to extension from each country's progress	Country Program M&E Teams, HH Survey /Firm level survey

	lead to improved resilience, transferred with Program support to public extension services and disseminated to beneficiaries. CSA technologies and practices will include those developed with Program support that have reached the stage of being promoted to public extension services, as well as other existing ones available for immediate transfer to extension services. Gender sensitive CSA technologies are defined as: (i) technologies based on needs and interests of female farmers; (ii) technologies that reduce time and labor for women farmers; and (iii) technologies that are accessible to and affordable for women farmers.			report.	

of which gender-sensitive technologies and practices					
of which Comoros					
of which Comoros gender-sensitive technologies and practices					
of which Kenya					
of which Kenya gender-sensitive technologies and practices					
of which Malawi					
of which Malawi gender-sensitive technologies and practices					
of which Somalia					
of which Somalia gender-sensitive technologies and practices					
Farmers accessing agrometeorological data information and advice, market information, or other digital support services on climate and market risk management	The indicator will measure the number of farmers who access a range of information systems including agrometeorological data information and advice, market information, or other digital support services on climate and market risk management. Information systems could include real-time food price and market data; animal	Bi-annual	Country progress reports		Country M&E teams

	and plant health data (e.g., pest or animal disease outbreaks and management); soil data; hydromet data (based on real-time weather, water, early warning, and climate information); agricultural production and food supply data; and other information.				
of which female					
of which Comoros					
of which Comoros female					
of which Kenya					
of which Kenya female					
of which Malawi					
of which Malawi female					
Somalia					
of which Somalia female					
Change in the households dietary diversity score (HDDS) among targeted beneficiaries	The household dietary diversity score (HDDS) reflects the social and economic ability of a household to access a variety of food categories.	Baseline, Mid-term, End-of-Program	HH Survey Report/Baseline, Midterm and End-of-Program survey report	The HDDS indicator provides a glimpse of a household's ability to access food as well as its socioeconomic status based on the previous	country Program M&E Teams

	This indicator will assess and compute the changes of the dietary diversity score before and after program intervention for households directly benefiting from the Program.			24 hours. Each food group is assigned a score of 1 (if consumed) or 0 (if not consumed). The household score will range from 0 to 12 and is equal to the total number of food groups consumed by the household.	
Comoros					
Kenya					
Malawi					
Somalia					
Decrease in yield gap between program beneficiary female and male farmers	This indicator measures the percentage decrease in yield gap between beneficiary female and male farmers in the participating countries. Each participating country will aim to reduce at least 25% of its yield gap between female and male farmers.	Annually	Country Program progress reports		Country Program M&E teams
Comoros					

Kenya					
Malawi					
Somalia					
Agricultural landscape and natural resource management plans developed with Project support	This indicator measures the number of communities with agricultural landscape and natural resource management plans developed and implemented with Program support. These plans are expected to guide project interventions at the local level to support participatory local land use planning at the watershed level.	Bi-annual	Country Program progress reports		Country Program M&E Teams
of which implemented with Project support					
of which Comoros					
of which Comoros implemented with Project support					
of which Kenya					
of which Kenya implemented with Project support					
of which Malawi					
of which Malawi implemented with Project support					

of which Somalia					
of which Somalia implemented with Program support					
Land area restored, reforested or afforested	This indicator measures the total area of land (ha) restored, reforested or afforested with Program support	Bi-annual	Country Program progress reports		Country Program M&E Teams
Comoros					
Kenya					
Malawi					
Somalia					
Water users' associations and farmer or community organizations established or strengthened for agricultural water and landscape management	This indicator assesses the functionality of Water Users' Associations (WUAs), Farmer Based Organizations (FBOs) and Community Organizations and their effective management of water and other community infrastructure/equipment/land. Functional WUAs/FBOs/Community Organizations are associations that: (i) are registered; (ii) have trained members; (iii) have bylaws (rules for consumption of	Bi-annual	Country Program progress reports		Country Program M&E Teams

	irrigation water and fee collection); (iv) collect fees; and (v) have at least 30 percent women members. Managing effectively refers to: (i) effective maintenance and operation of the community infrastructure/equipment/land; (ii) development of specific scheduling of water delivery; and (iii) delivery of water to farmers plots in the right quantity and at an appropriate time.				
Comoros					
Kenya					
Malawi					
Somalia					
Area provided with new/improved irrigation or drainage services	This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area	Bi-annual	Country Program progress reports		Country Program M&E teams

	provided with improved irrigation and drainage services, expressed in hectare (ha).				
Area provided with new irrigation or drainage services	Measures in hectares the total area of land provided with new or improved irrigation or drainage services in operations supported by the World Bank.	Bi-annual	Country Program progress reports		Country Program M&E teams
Area provided with improved irrigation or drainage services	Measures in hectares the total area of land provided with new or improved irrigation or drainage services in operations supported by the World Bank.	Bi-annual	Country Program progress reports		Country Program M&E teams
of which Comoros area provided with new irrigation or drainage services					
of which Comoros area provided with improved irrigation or drainage services					
of which Kenya area provided with new irrigation or drainage services					
of which Kenya area provided with improved irrigation or drainage services					
of which Malawi provided with new irrigation or drainage services					
of which Somalia area provided with new irrigation or drainage services					
of which Somalia area provided with improved irrigation or drainage services					

Marketing infrastructure constructed or rehabilitated	This indicator measures the number of marketing facilities constructed or rehabilitated by the Program that may include but are not limited to: (1) storage/improved packaging facilities; (2) processing facilities; (3) slaughterhouses; (4) collection centers.	Bi-annual	Country Program progress reports		Country Program M&E Teams
Comoros					
Kenya					
Malawi					
Somalia					
Agrifood SMEs and or cooperatives supported by the Project	The indicator measures the number of Program supported Agri-food Small and Medium Enterprises (SMEs) and or cooperatives, and assesses the sustainability of their businesses. The SMEs and cooperatives will be counted as businesses running sustainably when: (i) its members make profits with the activity they undertake as an	Bi-annual	Country Program progress reports		Country Program M&E Teams

	enterprise and individual in the business; (ii) the enterprise itself makes profit; and (iii) the reserves of the group are increased until they are sufficient to cover the costs of a full business cycle.				
Comoros					
Kenya					
Malawi					
Somalia					
Regionally harmonized policy frameworks and legislation facilitated by Regional Economic Communities (RECs) through the Project	This indicator measures the number of regionally harmonized policy frameworks and legislations facilitated by RECs through the Program.	Annually	RECs	Data obtained from RECs	RECs
AU					
Comoros					
Kenya					
Malawi					
Somalia					
Regional knowledge sharing mechanisms established by the Project	This indicator measures the number of mechanisms established by the Program	Annual	RECs	Data obtained from RECs	RECs

	to strengthen regional knowledge sharing.				
AU					
Comoros					
Kenya					
Malawi					
Somalia					
Direct program beneficiaries reached	This indicator will measure the combined total number of direct beneficiaries from the participating countries' target areas which are provided with agricultural assets, services and knowledge by the Program. "Direct" beneficiaries are people or groups in the Program targeted countries who will directly derive benefits from the Program. Agriculture assets or services in the context of this indicator refer to infrastructure, goods and services that are provided				

	as a result of Program interventions. Services include, for example, early warning advice, agriculture advices or trainings. The values of this indicator will be measured as totals and disaggregated by gender and country.				
of which women					
Comoros					
of which Comoros women					
Kenya					
of which Kenya women					
Malawi					
of which Malawi women					
Somalia					
of which Somalia women					
Beneficiaries satisfied with the Project's interventions	This indicator measures the share of beneficiaries in the target countries who express satisfaction with the services provided by the Program. It is expected that a survey to measure this indicator will be	Mid-term, and End-of-Program	Surveys		Country Program M&E teams

	carried out twice during the Program implementation. The sample size should be representative of the total number of beneficiaries and will be disaggregated by gender and by country.				
AU					
Comoros					
Kenya					
Malawi					
Somalia					
Grievances registered through the Program GRM and addressed	This indicator measures the percentage of grievances relayed through the GRM and addressed during Program implementation.	Bi-annual	GM activity reports	Review of GM activity reports	Country Program M&E teams
AU					
Comoros					
Kenya					
Malawi					
Somalia					

ANNEX 1: The Union of the Comoros Food Systems Resilience Project

I. PROJECT DESCRIPTION

A. Project Development Objective

1. **The PDO of the Union of the Comoros FSRP is to increase the resilience of food systems and the Recipient's preparedness for food insecurity in Project areas, and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.**

2. Consistent with the overall Food Systems Resilience Program MPA's focus on increasing resilience of the food systems and gender, special emphasis will be placed on empowering women and youth.

Climate Vulnerability Context

3. **The Union of the Comoros ("Comoros") is a fragile archipelagic state and highly vulnerable to climate change and natural disasters, which exacerbates the risk of food insecurity and poverty.** The country's location and topography place it among the most climate vulnerable in the world. About 59 percent of the land is highly exposed to natural disasters, as are approximately 54 percent of the population. According to a recent report,[40] droughts pose a significant additional threat to both the population and natural resources, as the rainy season has become more irregular and has shortened in duration (from six months to around three months per year). In addition, the country's capacity to respond to emergencies remains weak; in April 2019, Cyclone Kenneth left 6 dead, more than 150 injured, and at least 11,000 persons displaced, with considerable damage to houses, agriculture, and infrastructure. The latest Comoros Poverty Assessment highlighted the correlation between poverty and exposure to the cyclone, further underlining the multidimensional vulnerability to shocks.[41] About 44 percent of the population is considered poor, and low growth over the past decade has resulted in limited poverty gains, and the country remains heavily dependent on remittances.[42] Poor Comorians are more likely to be young, with lower levels of education, living in rural areas, and particularly exposed to food insecurity.

4. **Agriculture is a key sector in the Comorian economy, engaging more than 50 percent of the population.** Despite the crucial role of agriculture in the economy and for employment, the domestic agricultural sector is struggling to provide the food needs of the population. Comoros imports a huge share of its rice consumption, which is the main staple. The poor performance of the agricultural sector is explained by land degradation, where more than half of the total land is degraded, and erosion affects the vast majority of agricultural land. Current agricultural practices reinforce soil degradation and climate change further exacerbates the already weak agriculture sector. Agriculture remains highly dependent on rainfall and significantly affected by climate-induced hazards. Increasingly erratic rainfall together with shorter and shifted rainy seasons affect the agroecologies and crop calendar. Fisheries is also facing a modification and reduction of marine habitats, as well as the proliferation of toxic algae and the disappearance of nursery areas for marine wildlife, including corals and mangroves. While drought may not be a common occurrence in Comoros, water scarcity certainly is. Projected increase in temperature, the prolongation of drought periods, the change in rainfall patterns, sea level rise and ocean acidification, and the emergence of new pests and diseases increase the vulnerability of households.

[40] World Bank. 2022. "Country Environmental Analysis."
[41] World Bank. 2021. *Comoros Poverty Assessment Report*.
[42] Ibid.

5. **Marine ecosystems and protected areas.** As highlighted in the recent Country Environmental Analysis, the coastal ecosystems of Comoros harbor rich biodiversity and natural assets, including mangroves, seagrass beds, coral reefs, many demersal and pelagic fish species such as snappers and groupers, and neritic and tropical tunas. This biodiversity and the marine and coastal ecosystems and services they provide are under growing threat and being degraded by coastal erosion, pollution, the extraction of natural resources, natural disasters, and climate change. However, past efforts to protect these resources have produced encouraging results, and coral reefs in Mwali National Park (a marine protected area established in 2001) appear to be in comparatively good condition, and high densities and species richness of fish have been observed.

6. **The PROBLUE multi-donor trust fund co-financing will strengthen and intensify the integration of the two main components of the Blue Economy in Comoros: Fisheries and the Sustainable and Integrated Management of Marine and Coastal Ecosystems.** Through PROBLUE support, the project in Comoros will focus on building capacity to enhance the financial sustainability of the fisheries sector (sustainable captures, value chain, governance, management, and monitoring control and surveillance) and to foster integrated coastal management through a "land-to-sea" approach or 'whole-of-ecosystem' management approach.

B. Project Results Indicators

7. Project results indicators are harmonized for all Phase 3 participants and are presented in the consolidated Results Framework for the entire MPA Phase 3 (section VII of this PAD).

C. Project Components

8. The project includes four technical components aligned with Pillars 2–5 of the MPA, a Contingent Emergency Response Component (CERC), and a project management component. To address inequities that persist between women and men in terms of access to resources and economic opportunities, the project will adopt methodologies designed to address common intra-household gender barriers that limit beneficiary household well-being, including GBV.

Component 1: Building Resilient Agricultural Production Capacity (US$17.7 million of which IDA US$15.7 million equivalent and PROBLUE US$2 million)

9. Aligned with Pillar 2 of the MPA, this component aims to strengthen the productivity and resilience of domestic food production to shocks and stressors by supporting the development and adoption of improved agricultural inputs and services and climate-smart and gender-sensitive farming technologies by producers in the crops, livestock, and fisheries sectors. It will also help develop cross-cutting capacity in digital agriculture and information systems.

Subcomponent 1.1: Quality Seed Systems and Climate-Smart Technologies for Food Crops (IDA US$5.2 million equivalent)

10. This subcomponent aims to strengthen the entities involved in developing and delivering improved seed for growing food and fodder crops with a focus on varieties that are high yielding, climate resilient, gender sensitive, and rich in nutrients. It will also scale up CSA technologies, innovations, and

management practices (TIMPs). In relation to seed systems, it aims to reduce farmers' reliance on costly imported seed and its erratic distribution systems, which sometimes detract from farmers' ability to plant at the optimal time. The project will support local seed production, by supporting commercial and community-driven seed multiplication as well as R&D on improved varieties, including biofortified ones, adapted to particular regions and resistant to floods/droughts, pests, and high temperatures. The subcomponent will also strengthen controls over the importation of plant material, including by helping set up a plant quarantine park, acquiring laboratory equipment and materials, and training seed system actors.[43] To scale up climate-smart TIMPs and build the adaptive capacity of smallholder farmers, the subcomponent will support farmer field schools (FFSs). Climate-smart TIMPs will include hedging or *embocagement* —a technique already piloted in Comoros— integrated crop-livestock systems, crop rotation, crop associations that aid soil fertility and pest management, 'soil defense and restoration' and conservation farming, and various sustainable land and water management practices. These and other technologies are expected to increase the yields of domestically consumed food, leading to a reduction in rice and maize imports from the IOC region. The subcomponent will also support nutrition awareness campaigns (including increasing awareness of climate risk impacts and adaptation measures within the context of food and nutrition security), the customization of dietary guidelines, and trainings on growing and cooking, mainly tailored to women. In addition to its climate adaptation contribution, this sub-component would generate a net GHG emission reduction of 354,539 tCO_2e in 20 years of assessment, and thus significant contribution to climate mitigation outcomes.

Subcomponent 1.2: Livestock Sector Productivity and Safety (IDA US$4 million equivalent)

11. This subcomponent aims to increase the livestock sector's productivity, resilience to climate change, and safety by supporting its professionalization, biosecurity surveillance systems, breeding services, preventive health and immunization campaigns for livestock, and management of antimicrobials. Recent and projected climatic trends in the Comoros show that the livestock sector is exposed to extreme temperatures and low and irregular precipitation. This has a major impact on the availability of water and livestock feed. Extreme temperatures are also likely to increase livestock disease outbreaks.[44] To help professionalize the agricultural sector, it will support climate-smart livestock production[45] training and rural employment of livestock technicians and veterinary nurses, as well as the establishment of an energy-efficient animal feed mill and other activities related to fodder production (already piloted by FAO). The Project will promote invests in specific renewable sources of energy (when filed conditions are appropriate) such as solar milk cooling, solar-powered water drinker for animals, or other renewable energy sources that can be used to minimize the need for more traditional (non-renewable energy sources) along the livestock value chains. The project will increase farmers' access to breeding services within the 10 targeted Rural Economic Development Centers (*Centre Rurale de Developpement*

[43] The project will train seed producers and technicians from Rural Center for Economic Development (*Centre Rurale de Developpement Economique* - CRDE) and the National Institute for Agriculture Research (*Institut Nationale de Recherche pour l'Agriculture, la Pèche et l'Environnement* - INRAPE).

[44] There are many climate-sensitive livestock diseases; virtually any that are dependent on vectors or are waterborne could be included on this list. To narrow the scope, three of particular economic and health importance are usually highlighted: Rift Valley fever (RVF), Bluetongue (BT), and East Coast fever (ECF). Reducing climate-sensitive livestock disease risks overall can be aided by understanding how both animals and humans are vulnerable to climate change so that collaborative and comprehensive systems can be developed to increase resilience. In: World Bank. 2020. *Reducing Climate-Sensitive Disease Risks*. https://openknowledge.worldbank.org/server/api/core/bitstreams/e4213612-883f-5d86-8283-eb8bbd3996d3/content.

[45] Climate-smart livestock (CSL) solutions can contribute to a reduction of GHG emissions through improved livestock productivity, efficient use of natural resources, carbon sequestration, and integration of livestock into the circular bioeconomy (FAO, 2021).

Economique – CRDEs). It will also promote more resistant breeds such as Kuroiler chicken that has been successfully piloted in the Comoros. It will also help establish an early warning system for detecting and responding to animal pathology, linked to an animal disease surveillance system. The project will help establish the latter by building a network of border posts, laboratories, production centers, and other organizations in a position to work together to monitor the quality of livestock product imports (including the health of live animals) as well as emerging and cross-border diseases, which the country frequently faces, and by budgeting for a potential crisis. The subcomponent will also fund vaccination and deworming campaigns (in collaboration with IFAD). In all cases, these facilities and labs will consider the use renewable sources of energy (such as wind or solar generated). Finally, it will support the surveillance, governance, awareness, and prevention of antimicrobial resistance (AMR) linked to the use of antimicrobials by the livestock sector, with a focus on enabling better government oversight over antimicrobial product markets and restricting their use for sanitation purposes. Climate change is contributing to worsening rates of AMR through increasing temperatures, while also is linked to food safety issues. Support will also include awareness raising and improving capacity and knowledge on the interconnectedness of climate risk and AMR with animal health with the objective of enhancing resilience. The climate-smart training and technologies will help farmers increase productivity, enhance animal health, strengthen resilience, and reduce GHG emissions. Support for improved feeding, waste management and animal breeding and health management are expected to contribute to climate mitigation outcomes over time.

Subcomponent 1.3: Resilient Fisheries (US$6 million of which IDA US$4 million equivalent and PROBLUE US$2 million)

12. Overall, the subcomponent aims to improve: (a) production; (b) postharvest practices and the value and health of catches; (c) the investment climate for the private sector; and (d) overall fisheries governance at the regional and national levels. The main objective is to strengthen sustainable fisheries management and value chain, building on the progress achieved under the SWIOFish1 Project and coordinating with other development partners active in the sector including the European Union (EU), FAO, the Japanese International Cooperation Agency (JICA), the *Agence Française de Développement* (France's development agency, or AFD), and the African Development Bank (AfDB). Some of the activities planned around monitoring, control, and surveillance would help resolve concerns relating to illegal, Unreported and Unregulated (IUU) fishing —resulting in the EU's issuance of a 'red card'— thus helping fish exports, revenue generation and the resumption of sectoral investments. This subcomponent will strengthen and scale up the existing production and management systems for different targeted species at the national and regional levels, while also supporting the ability of actors in the value chain (catch and post-catch) to access and use data to better manage weather risks and make better-informed decisions. Support from the PROBLUE TF will strengthen the sustainability of the IDA-funded activities beyond the lifetime of the project, through support to policy reform and capacity building designed to ensure that Comorians are trained in the fundamental building blocks of fisheries management, including stock assessments, Water Sanitation and Hygiene (WASH), value chain assessments and improvements (including comprehensive fish approaches) and access to foreign markets. This additional support will also include technical assistance to help make the case for the adequacy of national budget allocation for fisheries governance, management and development. The project will scale up achievements under the SWIOFish1 Project including strengthening capacities for priority fisheries management primarily targets policies, strategies, institutions, legal frameworks, and actions by the public sector necessary to improve

priority fisheries management and performance and sustain regional marine environmental health and climate resilience.

Subcomponent 1.4: Digital Agriculture and Information Services (IDA US$2.5 million equivalent)

13. This subcomponent will strengthen and scale up the existing pilot systems used to manage agricultural production, price, and weather data at the national and regional levels. Furthermore, this subcomponent would also build the right tools and strengthen advisory systems to support farmers' and other value chain actors' ability to access and use these data to better manage weather and market risk and make better-informed decisions. The data will pertain to real-time weather or forecasted weather; crop production and food supply; animal and plant health (such as pest or animal disease outbreaks); the prices and availability of seeds, fertilizers, and food stocks and other market information; forest cover, land degradation, and soil health; and fish stocks and sea conditions, as well as other relevant information that would facilitate better climate risk management and adaptation planning. The investments in digital agriculture and information services will contribute to deliver reliable and timely climate information towards supporting improved decision making for improved agriculture production, marketing, early warning systems and improved long-term response and preparedness to climate and disaster risk. The project support to improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics, including support on informed decisions on various topics with climate adaptation and mitigation outcomes (see Annex 6 for detail).

Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (US$9.5 million of which IDA US$8.5 million equivalent and PROBLUE US$1 million)

14. Aligned with Pillar 3 of the MPA, this component aims to promote participatory planning and more sustainable natural resources and irrigation infrastructure management by communities, thus helping build resilience and mitigate the adverse impacts of climate change. It will intervene in the areas of landscape and watershed management (land-to-sea approach) by reducing land degradation, improving agricultural water management through increased storage and irrigation expansion, and enhancing coastal and marine resources management through enhanced reliance on sound scientific data.

Subcomponent 2.1: Resilient Landscape and Watershed Management (IDA US$3 million equivalent)

15. The subcomponent will support integrated watershed and landscape planning and management including the development of watershed management plans land-to-sea (approach promoted in coordination with other partners) and the implementation of related natural resource management (NRM) activities, including agroforestry activities, reforestation, restoration of degraded areas including mangroves, invasive plant control, and water source protection. The participatory planning at the watershed scale with an integrated landscape approach will ensure that interventions are interconnected and harmonized among the various actors and that the various sectors complement each other. In the watershed management plan, different zones will be identified for agriculture, livestock, agroforestry, reforestation, and natural forests, among others. This integrated approach will guarantee that the different sectors involved in the project at the watershed level have common ultimate objectives that converge toward food security and the elements that support it, notably water management and sustainable land management, thus contributing to farm and rural community climate adaptation by

restoring ecosystem functions that play a protective role. The participatory planning approach considered in this subcomponent will be based on the different experiences and achievements of other projects before, especially for the case of Moheli which already has an island-wide development plan. In the case of Grand Comoros and Anjouan, the watershed management plans will feed into future discussions for the development of a comprehensive management plan at each island scale.

Subcomponent 2.2: Resilient Water Management (IDA US$4.5 million equivalent)

16. This subcomponent will build farms' resilience to climate change by investing in small-scale water harvesting and water storage, improving irrigation infrastructure (on and off farms) to reduce water losses and improve overall water-use efficiency, and strengthening water governance institutions and systems at the local and national levels. To strengthen water governance at the local level, the subcomponent will build the capacity of CRDEs by funding staff trainings, systems development, and equipment purchases (computers, internet access, and basic field equipment). In all possible cases, the field equipment will use renewable sources of energy (for example, wind or solar). At the national and regional levels, it will help establish the Agricultural Water Development Unit in MAPETA and support relevant institutional and policy reforms.

17. By developing SSI, the subcomponent aims to expand the national annual harvested area under irrigation by 167 percent, from the current 300 ha to 500 ha. An area of 100 ha of existing irrigation will be rehabilitated and a further 100 ha of new irrigation with storage will be developed. The storage will enable double cropping of 100 ha mainly with high-value horticultural and vanilla crops and highly nutritious food crops. Irrigation expansion therefore needs investment in on-farm water harvesting and storage infrastructure to reduce leakages and enhance water-use efficiency. Support for on-farm irrigation development will be limited to hand watering and basic hose systems to prioritize investments in critical storage and limit unit costs. The subcomponent will support individuals in the planning and construction (and potentially some rehabilitation[46]) of stormwater runoff and rainwater harvesting systems with 100–200 cubic meter tanks. Support will be provided for farmer awareness, participatory planning, and site selection in coordination with the watershed development component. Farmers may be required to contribute a co-payment (approximately 25 percent) that could be in the form of sweat equity. The development and diffusion of climate-smart agricultural water management solutions will also be supported by identifying and piloting small solar pumps and low-cost, low-pressure water application technologies.

Subcomponent 2.3: Resilient Coastal and Marine Resources Management (US$2 million of which; IDA US$1 million equivalent and PROBLUE US$1 million)

18. This subcomponent will support the Government of the Comoros (GoC) through TA as it expands its efforts to conserve coastal and marine resources, helping the country adapt to the effects of climate change on coastal areas (for example, sea level rise, increased sea temperatures, and ocean acidification) building on the progress made with support from other development partners working in the sector, in particular the French Development Agency (AFD). These activities will include restoring and protecting healthy marine habitats, such as mangroves, seagrass beds, and coral reefs, the cultivation of seaweed and seagrass, and habitat protection programs. This will also include establishing and managing a network

[46] Modernization of the few existing small gravity schemes may be included if cost benefit is justified.

of marine protected areas and empowering local communities to co-manage conservation and sustainable fisheries management schemes. These activities will draw on ongoing PROBLUE-supported activities designed to help the GoC assess and monetize its blue carbon capital sequestered in critical coastal and marine ecosystems. In 2017, the GoC approved the National Parks Strategy, formulating its intention to manage over 25 percent of the national territory with a community-based approach and to establish three new marine national parks, in line with the Blue Economy Strategic Framework's objective to "protect coastal aquatic and marine ecosystems" (Union des Comores 2018). The PROBLUE support will focus on the fundamentals of a blue economy approach, including reducing and mitigating anthropogenic impacts such as sand mining, with an emphasis on contributions to the Global Biodiversity Framework, through transformative actions to halt and reverse biodiversity loss for the benefit of nature and people. This will be done through integration watershed management and coastal management, including through Marine Spatial Planning and other key components of a "land-to-sea" approach. PROBLUE support will also be deployed to enhance possible connectivity between the country's three national marine parks.

Component 3: Getting to Market (IDA US$11.3 million equivalent)

19. Aligned with Pillar 4 of the MPA, this component will promote the inclusion of smallholder farmers and rural communities in food crops, livestock, and fisheries value chains and more efficient food markets.

Subcomponent 3.1: Post-Harvest, Post Capture Handling and National and Regional Market Links (IDA US$1 million equivalent)

20. This subcomponent aims to develop, adapt, and deliver climate-smart post-harvesting and agroprocessing technologies, including fisheries, that enhance the availability and quality of healthy food products and related income opportunities, thereby contributing to household climate resilience. Proposed postharvest facilities and infrastructure for agriculture products (including fisheries products and abattoirs) will be informed by climate design standards—considering wind, rain, and energy availability—and energy efficiency considerations such as promoting the use of renewable energy (wind and solar energy, both promising for the Comoros[47]) and energy-efficient processing equipment (electric motors and/or cooling equipment). The improved climate-resilient postharvest facilities will ensure enhanced productivity, reduced postharvest losses, and increased value of the products while addressing climate vulnerabilities such as exposure and susceptibility of commodities to extreme weather conditions or energy security for producers. Improved commercialization is a core adaptation strategy and can be pursued to enhance nutritional outcomes. While stimulating the development and consumption of higher-quality, nutrient-rich, and healthy foods, this subcomponent will support new income generation and employment opportunities, including among women and youth. This will potentially decrease the beneficiaries' dependence on natural resources and increase beneficiaries' climate adaptation potential through improved access to technologies and diversification of incomes, and also increasing their food security and capacity to cope with climate variability and extreme events. This subcomponent will support climate-smart and energy-efficient cold chain facilities and postharvest storage infrastructure (using renewable sources of energy wherever possible). It will establish a platform for the aggregation, marketing, and promotion of cash crops. Building on the experience of the Integrated Development and Competitiveness Project (*Project Intégré de Développement et de la Compétitivité*, PIDC), it will use

[47] https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Comoros_Africa_RE_SP.pdf.

matching grants to help finance activities, materials, and equipment that improve processing and add value to agricultural and fisheries products.

Subcomponent 3.2: Rehabilitation of rural feeder roads for improved market access (IDA US$10.3 million equivalent)

21. Working jointly with the Comoros Interisland Connectivity Project (P173114), this subcomponent will finance the rehabilitation of feeder roads to facilitate the transportation of agricultural products to markets. Poor rural connectivity weakens links between coastal markets and highland production basins. Investments that facilitate internal trade will enhance the competitiveness of perishable crop, livestock, and fisheries products, enabling some import substitution. Rural roads are vulnerable to damage from extreme weather events such as floods, landslides, storms, and cyclones. Climate change will likely compound remoteness of farm villages and lack of adequate road infrastructure to further exacerbate the vulnerability of smallholder farmers. Across the country, roads are in very poor condition with the majority being unpaved and difficult to access, especially during the rainy season, resulting with many communities lacking roads that connect them to other regions or villages. The livelihood implications of this isolation are significant as farmers have difficulty getting their products to markets as well as limiting their access to agricultural inputs and services. This activity will prioritize climate-resilient infrastructure and planning (for example, improving drainage systems, reinforcing roads with appropriated materials, and protecting coastal roads from erosion) that is designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions while improving the resilience of rural communities that depend on these roads for access to critical services and economic opportunities. The project will finance the rehabilitation of 50 km of a key feeder road network in the production areas covered by CRDEs. It will include the financing of technical design studies along with environmental and social risk management, civil works and works supervision (informed by climate change considerations). This network will be identified by overlaying the coverage areas of the 19 CRDEs with the rural roads prioritized by the National Road Transport Master Plan of 2015[48] and the MEAPE Plan of 2018.[49] These rural roads are connected to the primary road networks which are in average or good condition. This subcomponent will capitalize on experiences acquired from ongoing projects such as the PIDC.

Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (IDA US$1 million equivalent)

22. Aligned with Pillar 5 of the MPA, this component will handle cross-cutting policy efforts supporting food systems resilience at the national and regional levels. It will assist the Government at every stage of policy development, from formulation to implementation.

Subcomponent 4.1: Strategies, standards, regulations, and institutional framework (IDA US$0.2 million equivalent)

23. The subcomponent will support the development of appropriate policies and the coordinating mechanisms required for enhancing climate resilience by mainstreaming climate risk, impact, and adaptation options. It will support activities that are essential to provide the basic pillars supporting the

[48] *Plan directeur national du transport routier en Union des Comores pour 2015–2025,* 27 mai 2015, p76.
[49] *Programme de réduction des contraintes à la production et création de nouvelles opportunités pour le monde agricole Comorien***,** Ministère de l'Energie, de l'agriculture, de la Pêche et de l'Environnement (MEAPE), p8.

development of technologies and practices that would contribute to improving resilience to climate change. This subcomponent will support: (a) the elaboration of the national seed strategy; (b) compliance with international SPS and measures to control crop and animal pathologies; (c) rice sector liberalization reforms; (d) the finalization of the draft animal health strategy and new legislation on veterinary services addressing animal health issues arising from climate change, among others, increased incidence of infectious diseases, change in distribution of disease vectors, increased stressors, thus supporting the development of appropriate policies and coordinating mechanisms required for enhanced climate resilience; (e) the revision of proposals for a new 'livestock code'; (f) the revision of the national antimicrobial resistance action plan, based on an assessment of national priorities and an assessment of current needs to identify priority activities to be implemented; (g) the validation of the national strategy for combating invasive plants and strengthened legislation on the introduction of exotic species, while addressing climate vulnerabilities, especially those related to biodiversity and ecosystem services; (h) the development of the regulatory framework on biosafety in accordance with the Cartagena Protocol; (i) the review and validation of the national strategy on the valorization of genetic resources in accordance with the Nagoya Protocol; and (j) the review and validation of the framework law on the environment. It will also support the creation of an irrigation unit within the Directorate of Agriculture and the recruitment of qualified technicians at the island level (that is, the local level) to assist farmers with the O&M of irrigation infrastructure. These interventions will be in synergy with other partners interventions including the AfDB and the EU. Climate impacts will likely exacerbate existing vulnerabilities and inadequacies in the country's animal health and food safety systems while introducing additional burdens on the capacities of institutions functioning in a reactive manner and under limited coordination mechanisms for the preparedness and response to emerging new diseases. Promotion of intersectoral and integrated system-based approach to animal health through the One Health Framework will reduce existing vulnerabilities while enhancing resilience.

Subcomponent 4.2: Agrifood System Stakeholder Capacity Building (IDA US$0.5 million equivalent)

24. This subcomponent will strengthen the technical knowledge and skills of staff across public institutions involved in the agri-food systems, including the Ministry of Agriculture, Fisheries, Environment and Tourism (*Ministère de l'agriculture, de la pêche de l'environnement et du tourisme*, MAPETA) and key research and technical institutions such as INRAPE, CRDEs, the University of Comoros, and the National Center of Documentation and Scientific Research. It will fund short- and long-term technical training (including PhDs and master's degrees in science) and provide training on topics like climate-adapted crops and livestock; CSA practices and technologies; identification, control, and management of living modified organisms and invasive species; sustainable fisheries; climate change risk modeling; agrometeorological forecasting; and big data analytics (for example, methodologies for estimating changes in agricultural productivity, net carbon sequestration, net GHG emissions, soil erosion, vegetation cover, meteorological and hydrological modeling, area-based weather forecasting, and cloud-based data management). Training may be offered in collaboration with national and regional partners, including the CGIAR centers (Africa Rice, International Institute of Tropical Agriculture, and others), and the region's fisheries research institutes.

Subcomponent 4.3: Regional Integration Efforts (IDA US$0.3 million equivalent)

25. This subcomponent will support direct collaboration with regional neighbors and organizations around food systems resilience research and policy. It will (a) support regional collaboration with other

members of the IOC to strengthen early warning systems, climate risk management, and intra-regional trade; (b) facilitate partnerships to strengthen research and innovation systems for improved productivity and climate resilience with regional and global agricultural research organizations such as CCARDESA and One CGIAR, which will enable the development and implementation of policy actions to scale up CSA techniques in the region, promoting research in low-carbon technologies (instrumental to achieving full decarbonization) while addressing climate vulnerabilities through promoting knowledge and experience sharing on climate adaptation techniques, identifying common frameworks for research and innovation on adaptation, and leveraging peer-to-peer learning; (c) scale up ongoing EU-supported efforts to build digital information systems for the Indian Ocean under the SANOI[50] project; and (d) support collaborative fisheries governance including coordination on policy measures related to climate adaptation. With respect to fisheries, it will facilitate (a) joint stock assessment and data collection; (b) the GoC's participation in the SWIOFC and Indian Ocean Tuna Commission (IOTC); and (c) closer cooperation with neighboring countries on the monitoring, control, and surveillance of illegal, unreported, and unregulated (IUU) fishing.

Component 5: Contingent Emergency Response Component (CERC) (US$0)

26. This component will finance eligible expenditures in the event of a disaster-related emergency. The activation of CERC, by request of the Government, will allow funds to be disbursed rapidly to reduce damage to productive infrastructure, ensure business continuity, and speed up recovery. An immediate response mechanism operations manual (IRM-OM) will be developed by the Government stipulating the fiduciary, environmental and social, monitoring, and reporting requirements relating to CERC as well as other coordination and implementation arrangements. In the event of CERC activation, funds from other project components may be reallocated to finance immediate response activities as needed.

Component 6: Project Management (IDA US$3.5 million equivalent)

27. This component will support all aspects of project management. It will fund activities relating to project start-up; activity coordination; knowledge management; communications; M&E; and compliance with fiduciary, procurement, environmental, and social requirements including corporate commitments such as citizens' engagement. It will also cover staff costs.

D. Beneficiaries and Areas of Intervention of the Project

28. **The primary beneficiaries of the Comoros FSRP will be small- and medium-scale farmers and fishers.** At least 150,000 are expected to benefit directly from project interventions, and at least 40 percent will be women. The project will specifically target farmers growing food crops (including tubers, cereals, and fruit) and livestock, fishers, and unemployed rural youth. Key public institutions involved in agricultural support services will also benefit from the project.

29. **The project will be implemented nationwide.** However, value chain activities will be focused on selected CRDEs in coordination with ongoing projects and programs (such as the World Bank-funded PIDC and the African Emergency Food Production Facility (AEFPF) funded by AfDB).

[50] SANOI: Food Nutrition Security in Indian Ocean (*Sécurité Alimentaire et Nutritionnelle en Océan Indien*).

E. Project Costs

Table A1.1. Costs and Financing for the Comoros FSRP (US$43 millions)

Component/Subcomponent	IDA[51]	PROBLUE TF	Total
	US$ millions		
Component 1. Building Resilient Agricultural Production Capacity	**15.7**	**2.0**	**17.7**
Subcomponent 1.1. Quality Seed Systems and Climate-Smart Technologies for Food Crops	5.2	--	5.2
Subcomponent 1.2. Livestock Sector Productivity and	4.0	--	4.0
Subcomponent 1.3. Resilient Fisheries	4.0	2.0	6.0
Subcomponent 1.4. Digital Agriculture and Information Services	2.5	--	2.5
Component 2. Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes	**8.5**	**1.0**	**9.5**
Subcomponent 2.1. Resilient landscape and watershed management	3.0	--	3.0
Subcomponent 2.2. Resilient water management	4.5	--	4.5
Subcomponent 2.3. Resilient Coastal and Marine Resources Management	1.0	1.0	2.0
Component 3. Getting to Market	**11.3**	**--**	**11.3**
Subcomponent 3.1. Post-harvest handling and national and regional market linkages	1.0	--	1.0
Subcomponent 3.2. Rehabilitation of rural feeder roads for improved market access	10.3	--	10.3
Component 4. Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking	**1.0**	**--**	**1.0**
Subcomponent 4.1: Strategies, standards, regulations and institutional framework	0.2	--	0.2
Subcomponent 4.2: Agrifood System Stakeholder Capacity Building	0.5	--	0.5
Subcomponent 4.3: Regional Integration Efforts	0.3	--	0.3
Component 5. Contingent Emergency Response Component (CERC)	**0.0**	**--**	**0**
Component 6. Project Management	**3.5**	**--**	**3.5**
TOTAL	**40.0**	**3.0**	**43.0**

II. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

30. **The Comoros FSRP will be under the supervision of the Ministry of Agriculture, Fisheries, Environment and Tourism (*Ministère de l'agriculture, de la pêche de l'environnement et du tourisme*, MAPETA).** Most of the project activities will be implemented by a national Project Implementation Unit (PIU). The national PIU of the ongoing PIDC (P164584) will ensure the implementation of the Comoros project, while additional technical staff will be recruited for the implementation of the Comoros FSRP (including livestock specialist, agriculture specialist, fisheries specialist, NRM specialist, and GBV specialist), not later than three months after grant effectiveness. The PIU will also recruit a Financial Management Specialist and an Accountant. For procurement, the PIU will recruit international experts as needed to strengthen the team for the procurement and management of certain complex contracts. At

[51] Includes US$10 million from the Crises Response Window.

the island level, technical focal point for each island will implement the project. For certain activities, the MAPETA will associate with the ministry responsible for public works. Reporting and performance arrangements will be provided in the PIM that will be prepared to guide project implementation to be adopted not later than three months after grant effectiveness.

31. **The project will be guided by a Project Steering Committee (PSC).** The PSC will provide strategic oversight of the project and include representatives of key stakeholders including the MAPETA and representative of directorates in charge of environment and of marine resources and Ministry of Finance, Ministry of Transport, island governors, representatives of producers, and local communities and organizations. The PSC will be chaired by the Secretary General of the MAPETA, and it will be responsible for the strategic direction, operational oversight, and overall governance of the project—including approving annual budget and action plans by the PIU. This committee will meet in ordinary sessions twice a year, or once every six months, at the invitation of its chairperson.

32. **Technical focal points will be recruited in each of the two islands.** Depending on the specificity of the island, the technical focal points could be technicians in the following fields: agriculture, livestock environment, infrastructure engineer, and fisheries. More specifically, Component 3, which includes investments in physical infrastructure, will be implemented by the national PIU through contractors and services providers procured in accordance with World Bank guidelines.

B. Monitoring and Evaluation

33. **The project will develop a system for monitoring, evaluation, and dissemination of project achievements.** It will have a robust M&E system to track and evaluate project progress toward the PDO, provide useful information for project management, and document and share project learnings. The system will build on the MAPETAs existing M&E and knowledge management systems and will be guided by a project knowledge management strategy and M&E manual—both to be developed at project start-up. The review committee, PIU, and M&E specialist will oversee project M&E activities. The latter will collect real-time and geotagged data, including data that can be used in carbon accounting and understanding changes in carbon sequestration in soils and on land. The information generated will help assess the potential to mobilize climate finance to sustain funding beyond the project's life. As part of its reporting requirements, the PROBLUE Secretariat will be kept informed of the progress of country-specific indicators.

34. **The project will develop a manual of procedures for M&E and knowledge management covering M&E arrangements.** Internal monitoring will be carried out by the M&E manager using the dashboard developed for this purpose. A survey will be conducted in the first year of the project to collect baseline data and verify the targets presented in the Results Framework. In addition, an M&E mechanism will be put in place to monitor emergency response activities. Periodic activity reports will be produced as required (quarterly and annually). Joint supervision and monitoring missions, an MTR, a final review, a completion report, and specific or thematic studies will be organized during the project implementation period. With the support of implementing partners, the PIU will ensure that insights are synthesized and shared at the project and Phase 3 levels and beyond. Project evaluation will pay particular attention to evaluating project impacts on farmers' food security, resilience to various (economic, health, and climate) shocks, access to market, upgrade to facilitate regional trade integration, household nutritional status, and women and youth empowerment.

III. APPRAISAL SUMMARY

A. Fiduciary

35. **FM.** The FM arrangements provided for the PIU to be established under the ministry in charge of the agriculture sector (MAPETA) are compliant with the FM Manual for the World Bank-financed Investment Operations dated September 7, 2021, and are deemed adequate for the implementation of the Comoros FSRP. PIDC (P164584[52]), currently implemented by the PIU within the MAPETA, is broadly in compliance with FM requirements and the FM performance is satisfactory. However, weaknesses have been observed lately in planning, treasury management, and contract management. The PIU is implementing corrective actions to address these issues. The overall residual risk rating is Substantial mainly due to the nature of activities to be financed, the level of decentralization of the project activities, and the limited capacity of the PIU. The existing PIU will be strengthened to be able to support the management of the project implementation.

36. **To further improve the project FM arrangements, the PIU will implement the following mitigation measures:** (a) develop the PIM considering the existing procedures applied to the PIDC, as well as the specifics of this project, which will pay particularly attention to set clear organization between the implementing unit at the national level and the regional implementing units; and (b) recruit qualified finance officer, accountant, and internal auditor with ToR agreed with the World Bank to support the PIU. These mitigation measures will strengthen the internal control environment and maintain the timeliness and the reliability of information produced by the PIU. The mitigation measures will be implemented no later than three months after the Project's effectiveness date.

37. **In addition, the following FM arrangements will apply at the PIU level.** The PIU will rely on qualified FM staff throughout the lifecycle of the project. It will open a separate DA to receive project funds from the World Bank. The IDA funds will be disbursed on a transaction basis using the following methods: reimbursement, advances, direct payments, and special commitments. Retroactive financing for eligible expenditures made prior to the signing date of the Financing Agreement, but on or after November 30, 2022, may be made up to an aggregate amount not to exceed SDR 100,000. The MAPETA will purchase accounting software that will be used at the national and regional levels to record the project's transactions and to report upon. The PIU will prepare quarterly unaudited IFRs and provide such reports to the World Bank within 45 days of the end of each calendar quarter. The project financial statements will be audited annually by a private auditor recruited according to agreed ToR. The audit report will be submitted to the World Bank no later than six months after each fiscal year-end.

38. **Procurement Rules and Procedures.** All project procurement will be in accordance with the "World Bank Procurement Regulations for IPF Borrowers", dated November 2020 (Procurement Regulations). The project will be subject to the "Guidelines for Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", October 15, 2006, revised in January 2011, and as of July 1, 2016.

39. **Procurement Capacities and Arrangements.** The Project Implementation Unit (PIU) under the supervision of the Ministry of Agriculture, Fisheries, Environment and Tourism (MAPETA) will be in charge

[52] IDA 64230: effective on May 26, 2022, and disbursed at 46.5 percent - Closing date July 31, 2024.

of all activities relating to procurement for the project, from the implementation strategy and planning of each contract to the payment and archiving of documents. As the PIU of PIDC, which will close in 2024, this unit has proven experience with the World Bank's rules, procedures, documents and standard contracts. The PIU will recruit international experts as needed to strengthen the team for the procurement and management of certain complex contracts.

40. **Project Procurement Strategy for Development (PPSD) and Procurement Plan (PP).** In accordance with World Bank regulations, the PIU prepared, with the support of the World Bank, the PPSD and the PP for the first 18 months of project implementation. The PPSD identified the selection methods and market approaches following the analysis of the capacity of the local and international market to meet the needs of the project, and on the basis of the risks inherent in the country context and the project in its entirety. The PPSD and PP will be updated at least semi-annually, or as needed, to reflect changes to the procurement system that may be required due to changing needs, market conditions, and the procurement environment.

41. **Systematic Tracking of Exchanges in Procurement (STEP).** The project will use the World Bank's STEP system to plan, record and monitor procurement transactions. STEP will enable the automatic publication of each Bank-approved procurement plan, tender notices and contract award information on the World Bank's external website and on the UNDB. STEP has clear roadmaps for the implementation of each project-funded activity, with activity start and end dates, and is a tool for monitoring delays, measuring performance in procurement procedures, as well as the detection and reporting of any excluded companies when bidder information is uploaded into the system. In addition to the monitoring of contract management, STEP also allows the monitoring of complaints relating to the award and execution of contracts.

42. **Procurement risks.** Overall, the procurement risk is rated substantial and will be updated during the implementation phase. The main risks relate mainly to: (i) the resources required to manage the procurement planned for the first two years of implementation of this regional project: the team in charge of procurement composed of a manager and an assistant will manage activities relating to the PIDC project, which is scheduled to close in 2024. It is planned to recruit international experts sporadically to support the PIU in awarding and monitoring the performance of certain complex contracts. The PIU is also in the process of training interns who will gradually be operational to strengthen the current team; (ii) the substantial risk relating to conflicts of interest and fraud and corruption. The PIU will benefit from training and close support from the World Bank, and will only use standard Bank documents and contracts for procurement.

43. The risks relating to the supply chain and the weak capacity of the local market in terms of the number of bidders and the quality of services and products will be mitigated by good planning of activities and good identification of procurement methods. The PIU will consolidate activities as much as possible in order to minimize the number of contracts to be awarded, to optimize the management of contracts and sometimes benefits from reduced prices due to economies of scale, and to attract international suppliers and consultants.

B. Environmental and Social

44. **For the Comoros Phase 3 project, the environmental and social risk is Substantial.** The project will have significant positive environment and social impacts as activities to be financed aim to invest in support services, climate-resilient agricultural production, and market access infrastructure to raise farm productivity, build smallholder resilience, and improve food and nutrition security and will promote participatory planning and more sustainable, community-led natural resources and irrigation infrastructure management, to reduce or reverse the adverse impacts of climate change. However, there are also various environmental and social risks that need to be properly managed. The relevant standards that have been identified through the environmental and social risk screening are as follows: ESS1: Assessment and Management of Environmental and Social Risks and Impacts; ESS2: Labor and Working Conditions; ESS3: Resource Efficiency and Pollution Prevention and Management; ESS4: Community Health and Safety; ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS8 Cultural Heritage; and ESS10: Stakeholder Engagement and Information Disclosure. The PIU—with the guidance of its environmental and social specialists, and technical support from the World Bank—will be responsible for the preparation of the relevant ESF assessment documents and other appropriate ESF tools. Monitoring checklists will be prepared based on mitigation plans.

45. **Activities to be financed under Component 1 (associated with strengthening agriculture research and providing grants) could lead to increased demand for agrochemicals and will require measures to manage wastes that may be generated by animal health care services under Component 2.** The project will also finance the rehabilitation of infrastructures (storage, cold chain, and gravity-fed irrigation sites) and feeder roads. These activities could result in various environment, health, and safety risks and impacts including: (a) inappropriate use and disposal of agrochemicals and agricultural research laboratory chemicals; (b) health and safety risks and impacts during construction works; (c) inappropriate use of water resources and agrochemical contamination, affecting water quantity and quality in neighboring communities and downstream; (d) physical and chemical degradation of soils from unsuitable land management techniques; (e) adverse impacts on biodiversity and ecosystems through an introduction of invasive species; and (f) though site specific and small in scale in the context of this project, construction of infrastructure and associated adverse externalities (air pollution, construction waste pollution, noise pollution, and water pollution). Agricultural activities produce GHG emissions including methane, nitrous oxide, and carbon dioxide; however, the activities to be financed by this project are community-driven development (CDD) types of activities and not expected to generate significant emissions. The small irrigation schemes to be financed by the project will meet the World Bank's requirements for small dams. The project will be implemented on existing agricultural land and hence will not lead to the conversion of natural habitat. Considering the nature of the activities and the client's capacity to manage risks, the environmental risk is rated Substantial**.**

46. **The project is expected to result in social benefits, but its social risk is Substantial.** In particular, it is expected to increase rural employment opportunities (including for youth and women), improve livelihoods, enhance the resilience of farmers, improve access to finance, increase agricultural yields, and increase access to diverse and nutritious foods. However, the social risk of the project is considered Substantial because of the project's extensive scope and country context. In addition, the project-supported activities could result in land acquisition—notably for the construction of agricultural infrastructure such as small-scale and household irrigation, market infrastructure, and rural feeder roads

and bridges. The latter may trigger involuntary resettlement (physical and economic displacement), restrictions on access to land, and a loss of livelihoods within affected communities. In addition, although the exact location of the investments will be determined during the project implementation stage, project activities will be implemented in highland and lowland areas with complex socioeconomic and political contexts.

47. **Other forms of social risk.** In this context, other risks may arise, for example: (a) insufficient community and stakeholder engagement and elite capture; (b) potential exclusion of vulnerable groups and individuals from project benefits due to poorly designed and/or disseminated or nontransparent beneficiary selection process or eligibility; (c) social tensions and conflict induced by competition over agricultural resources including irrigation water resources and contextual security risks in conflict-affected areas; (d) labor influx and associated community health and safety risks, SEA/SH, and other forms of GBV; (e) the failure to comply with labor standards, especially within activities financed by matching grant, and the potential use of forced and child labor; (f) operational concerns due to remoteness and insecurity, including challenges in monitoring social risks and handling grievance management; and (g) weak implementation capacity, especially at the grassroots level due to limited functional structures and trained manpower.

48. **To identify and manage the potential environmental, social, health, and safety risks, the respective national MAPETA will prepare specific environmental and social instruments.** They include: (a) an ESMF to screen project activities and guide the development of site-specific instruments, (b) an Integrated Pest Management Plan (IPMP) to mitigate potential risks and impacts associated with the application of pesticides, and (c) a Resettlement Policy Framework (RPF). An ESCP has been developed to outline measures to be implemented including implementation arrangements and monitor and report on the implementation of environmental and social risk management tools and plans in line with the ESF. The ESCP and the SEP, acceptable to the Association, have been disclosed on the Government's website (*http://dnsae.gouv.km/agriculture/list_rapport/*) on April 4, 2023.

49. **The project will take measures to mitigate and manage these risks.** Draft Labor Management Procedures (LMP) including a workers' GRM, draft ESMF including IPMP, and RPF have been developed and disclosed in-country, on April 26, 2023, for public consultation. The finalization of these documents will be a condition for disbursement for activities under Components 1, 2, and 3; the adoption of a grant manual will be a condition of disbursement for certain activities under Components 1 and 3; and the completion of the World Bank's standard CERC-related conditions will be a condition of disbursement for CERC activities.

50. **The project will take measures to ensure social inclusion, gender equity, and CE.** In accordance with corporate directives on CE in IPF projects, the project will emphasize approaches that maximize outreach and participation of communities and broader public awareness of project activities. The project will have two CE indicators: one related to beneficiaries' feedback and the other linked to the project GRM. In accordance with ESS10 and the guidelines for citizen involvement in projects throughout the preparation and implementation processes, the project will further promote CE and the establishment of a process for processing community feedback. These aspects are included in the SEP, which also covers the establishment and operationalization of a project GRM. Grants under Component 2 supporting infrastructure development and income diversification opportunities will be identified through demand-driven processes. Participatory assessment and planning approaches will ensure that all groups, including

those that are historically marginalized such as women and youth, are engaged in planning and decision-making processes. Local authorities will present final plans and advise on the selection of grant proposals that will be financed under the project.

51. **Measures to mitigate environmental and social risks and impacts (Table A1.2).**

Table A1.2. Environmental and Social Risk Mitigation Measures for the Comoros FSRP

Nature of the Impact	Mitigation Measures
Decreased soil fertility	• Restoration of degraded soils • Contribution of organic matter • Better use and management of mineral fertilizer recommended by research • Fight against deforestation • Erosion control • Use of nitrogen-fixing plants • Use of technology and sustainable land management practices • Awareness and training of producers
Pollution and poisoning	• Adequate training of all actors in the input use chain • Dissemination of environmental and social information on agricultural activities (such as pesticide management) • Adhesion to recommendations on the sound management and use of fertilizers and pesticides • Compliance with pesticide management conditions • Awareness raising around the risks of food poisoning • Adhesion to protective measures for mixing and using pesticides • Monitoring of pesticide residues in crops • Management of hazardous waste (veterinary and laboratory and used batteries)
Reduction of biodiversity	• Promotion of biological control • Promotion of intensive organic farming • Sound management of wetlands and natural habitats • Reduction of uncontrolled expansion of agriculture
Development of waterborne diseases	• Improved water quality • Avoided use of undeveloped water sources • Improved accessibility and security of water supplies • Reduced need for contact with infected water • Reduced feco-urinary pollution of surface waters • Controlled mollusks and cyclops
Spread of invasive species	• Plant and animal breed quarantine park setup
Pests and disease outbreaks	
Construction impacts	• Development and implementation of a site ESMP according to the nature and scope of the work • Preference given to existing quarries and their restoration after the work is completed • Awareness and protection of personnel • Ecological management of construction waste
Land acquisition and temporary displacement	• Avoidance and limitation of encroachments on dwellings and plots of crops • Compensation of those affected by losses of goods and economic activities
Community and workers health and safety risks	• Implementation of a health/safety frame • Provision of personal protective equipment and other suitable equipment to all workers on sites • Health, safety, and environment inductions for staff and signing of code of conducts

C. Key Risks

52. **The overall risk rating for operation is Substantial.** The risks for political and governance, macroeconomic, institutional capacity for implementation and sustainability, and environmental/social, are rated Substantial or High, while all other risks are rated Low or Moderate. This results in a Substantial overall risk rating for the project. The description below is provided for risk categories assessed as Substantial or High.

53. **Political and governance risk is rated High.** While this risk is largely outside the project's control, the level is considered High. The project will be implemented during pre- and post-2024 elections period. Historically, the Comoros has experienced recurrent political crises and conflict between its islands since its independence in 1975. Although political instability decreased after the adoption of the Fomboni Agreement in 2001, sociopolitical tensions remain persistently high in some areas, especially after the constitutional referendum in 2018, which altered the Presidential rotation system among the islands to a unitary system. The risks related to politics and governance will be mitigated by supporting the Government in the implementation of the project activities which will be carried out across the country.

54. **Macroeconomic risk is Substantial.** Although the Comoros has been experiencing steady economic growth with prudent macroeconomic management for the last decade, economic developments since 2019 have been challenging because of various external shocks, such as Cyclone Kenneth and COVID-19. Russia's invasion of Ukraine may also deteriorate the country's current account balance. Although the Comoros does not depend on direct imports from Russia or Ukraine, the country imports many food commodities, of which global price increases cannot be offset by the Comoros limited export base. The project itself is mitigating these risks by supporting vulnerable households through temporary income support.

55. **Institutional capacity for implementation and sustainability risk is Substantial.** Because the project is comprehensive, with activities as diverse as the rehabilitation of irrigation infrastructure, promotion of climate and nutrition-sensitive agriculture, and the improvement of the enabling environment in the food sector, it will require spatial coordination and careful sequencing. It will be anchored in the ministry in charge of agriculture, which has experience with the World Bank-financed projects through the implementation of PIDC (P164584). The MAPETA will be responsible for coordinating project implementation by working closely with local governments (island level) and other project stakeholders. The Project Steering Committee will include the ministry in charge of transport and meteorology, with the MAPETA acting as committee chair.

56. **The environment and social risk is Substantial.** The relevant standards that have been identified through the environmental and social risk screening are as follows: ESS1: Assessment and Management of Environmental and Social Risks and Impacts; ESS2: Labor and Working Conditions; ESS3: Resource Efficiency and Pollution Prevention and Management; ESS4: Community Health and Safety; ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS8 Cultural Heritage; and ESS10: Stakeholder Engagement and Information Disclosure. The associated risks and mitigating measures are described above in section III. B, paragraphs 44-51.

ANNEX 2: Kenya Food Systems Resilience Project

I. PROJECT DESCRIPTION

A. Project Development Objective.

1. **The PDO of the Kenya FSRP is to increase resilience of food systems and the Recipient's preparedness for food insecurity in project areas and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.**

Climate Sector Vulnerability

2. **Climate change is gradually increasing the level of risk faced by Kenya's agricultural sector and adaptation measures are lagging**. The climate change and disaster risk screening conducted for the project suggests that the exposure to climate risks is high due to the combined effects of droughts, floods, and extreme temperatures. Kenya's average annual temperature increased by 1°C between 1960 and 2003, and by up to 1.5°C in dry parts of the country[53]. Rising temperatures have led to increasingly erratic weather patterns and a general decline in rainfall during the main growing season. About 82 percent of Kenya receives less than 700 mm of rain per year[54] and increasingly erratic rainfall patterns and severe dry spells are fueling competitive tensions over resources. The long-term fiscal liabilities caused by floods and droughts have been estimated to cost Kenya 2–2.8 percent of GDP per year.[55] Going forward, climate change is expected to detract heavily from Kenya's food and nutritional security as yields of crops are expected to decline by 40–45 percent by 2050, leading to the loss of income and food prices increases of 75–90 percent by 2055.[56] As of 2010, about 5 percent of Kenya's roughly 8 million hectares of agricultural land was irrigated (ASTGS 2019–2029), while it is estimated that about 54,000–241,000 hectares of small-scale irrigation could be developed.[57] Given current and future extreme temperature and precipitation projections for Kenya the food crop and livestock sectors are particularly vulnerable to climate stress (e.g., due to heat stress and reduced availability of water), reducing yields and increasing likelihood of disease outbreaks. In addition to the impact on farmers in terms of yield declines, given the current and future temperature and precipitation projections (based on the climate disaster risk screening), the food crops and livestock sectors in Kenya is also particularly vulnerable in terms of available of water, increased disease outbreaks and heat stress, all of which make extremely critical efforts for building up food systems resilience.

3. **At the same time, the agricultural sector is a net emitter of greenhouse gases (GHGs).** The agriculture sector accounts for 59 percent of national GHG emissions and the livestock sector alone

[53] World Bank and CIAT. 2015. "Climate Smart Agriculture in Kenya." CSA Country Profiles for Africa, Asia and Latin America and the Caribbean series.
[54] Njoka, Jesse, Yanda Pius, Maganga, Faustin, Liwenga, Emma, Kateka, Adolphine, Henku, Abdallah, Mabhuye, Edmund, Malik, Nico, Bavo, Cynthia; Kenya: Country Situation Assessment, Working Paper, 2016.
[55] UNDP. 2012. "Climate Risks, Vulnerability and Governance in Kenya: A Review."
[56] World Bank and CIAT. 2015. "Climate Smart Agriculture in Kenya." CSA Country Profiles for Africa, Asia and Latin America and the Caribbean series.
[57] Youet al. 2014. "Irrigation Potential and Investment Return in Kenya." *Food Policy* 47:34-45.

accounts for over 95 percent of agricultural emissions and about 56 percent of national GHG emissions[58]. Kenya still lags significantly in climate change mitigation and adaptation, ranking 154 out of 192 countries for readiness to adapt to climate change[59]. Climate resilient food systems require digital agriculture solutions that that have a potential to improve efficiency and productivity of the food systems.

4. **The Kenya Climate Smart Agriculture Project (KCSAP, P154784), the National Agricultural and Rural Inclusive Growth Project (NARIGP, P153349), and the Emergency Locust Response Project (ELRP, P173702) have already laid strong foundations for building climate resilience in the agricultural sector.** The three projects have mobilized nearly 1.3 million farmers, most of them smallholders, into 50,000 common interest groups (CIGs) and into nearly 650 community-driven development committees (CDDCs) at the ward level. Further, the federation of the CIGs into nearly 500 farmer producer organizations (FPOs) has facilitated access to both input and output markets. Over 20,000 community-level extension workers are training farmers on 900 climate-smart TIMPs developed by the Kenya Agricultural and Livestock Research Organisation (KALRO) across 21 value chains. The over 20,000 micro-projects deployed have built capacity of farmers providing a platform for TIMPs' adoption. This has enhanced smallholder productivity. KALRO has established the Big Data Platform, which includes a robust farmer database with spatial data and farmer details to provide farmers and other stakeholders access to integrated agrometeorological and market advice. In addition, the project mobilized agri-tech actors under the One Million Farmer Disruptive Agriculture Technologies (DAT) platform to support the provision of digital services relating to production, data analytics, and market and financial links. Going forward, efforts are still needed to systematize the deployment of digital services across value chains.

B. Project Results Indicators

5. Project results indicators are harmonized for all Phase 3 participants and are presented in the consolidated Results Framework for the entire MPA Phase 3 (section VII of this PAD).

C. Project Description

Component 1: (Re-) Building Resilient Agricultural Production Capacity (IDA US$50 million equivalent)

6. This component aims to strengthen the resilience of Kenya's domestic food supply to climate change and other shocks and stressors by fostering more climate-resilient agricultural production and related supporting services.[60] It is organized around the following three subcomponents.

Subcomponent 1.1: Data and Digital Agriculture Systems at the National and County Levels (IDA US$15 million equivalent)

7. The subcomponent aims to develop and strengthen data and digital systems that support agricultural resilience and climate adaptation planning**.** It will do this by improving and scaling up existing digital solutions and platforms including the Kenya Agriculture and Livestock Research Organization's (KALRO)

[58] World Bank and CIAT. 2015. "Climate Smart Agriculture in Kenya." CSA Country Profiles for Africa, Asia and Latin America and the Caribbean series
[59] ND-GAIN Country Index on vulnerability to climate change and readiness, available at https://gain-new.crc.nd.edu/country/kenya
[60] FAO. 2011. "Women in Agriculture: Closing the Gender Gap for Development."

existing "big data" platform. The platform, while continuing to provide climate and market information services to farmers, will also be leveraged to monitor animal and plant health including pest and animal disease outbreaks, in coordination with regional organizations and provide agronomic and pest advisory services to farmers, including greater uptake by female farmers, thereby further enhancing climate adaptation. The big data platform will be integrated with the Kenya Integrated Agriculture Management Information System (KIAMIS) of MoALD to ensure full alignment with the data and digital needs and services of MoALD. The focus will be on developing those digital services (including pest monitoring and climate and market information services) that have the potential to be scaled or replicated across national border. The subcomponent will also support the digitization of agricultural statistics, research outputs, and farmer registries, and build the capacity, within the Ministry of Agriculture and Livestock Development (MoALD), Counties and KALRO, to use statistics and data science to enhance decision-making and enable more climate-adaptive programming, as well as monitoring climate trends, and assess impact of shocks on of rural areas. The subcomponent will technically support the implementation GoK's agriculture insurance program.

Subcomponent 1.2: Climate-Smart Agriculture Technologies and Services (IDA US$10 million equivalent)

8. This subcomponent aims to increase farms' productivity and resilience by developing and disseminating climate-smart agriculture (CSA) technologies and services to farmers, including climate-smart seed systems and gender sensitive technologies, addressing Kenya's vulnerabilities to extreme weather trends. The development of CSA technologies[61] will be prioritized for crops and livestock that are important to food security and regionally traded. Focusing on CSA technologies that are relevant across the Horn of Africa region (including MPA participants, Ethiopia, Somalia, and Kenya). The subcomponent will leverage and build on the 900 climate-smart TIMPS already developed by KALRO and support farmers' uptake of them using participatory extension approaches like farmer field schools (FFS) and pastoral field schools. The climate-smart TIMPS in question include the development of climate smart seeds (crops) and breeds (livestock) that are climate resilient and farming practices and services that support soil health and water conservation, carbon sequestration, and GHG mitigation. In addition, the project will support the development of climate-smart seed systems by building the capacity of farmers to undertake seed production and supporting KALRO's seed unit, thus reducing import dependency and strengthening local markets.

9. *Subcomponent 1.3: Community Engagement and Technology Transfer Including through Digitization (IDA US$25 million equivalent)*

10. This subcomponent aims to strengthen community engagement and enhance the uptake of digital solutions at the farm level with the objective of enhancing climate resilience and productivity, particularly among women farmers. In terms of strengthening community engagement, the project will support: the (a) mobilization of new Community-Driven Development Committees (CDDCs) and Common Interest Groups (CIGs) as well as the strengthening of the existing CDDCs and CIGs and (b) identification and periodic training of lead farmers at the CIG level. In order to scale up the uptake of digital solutions, the project will support the scaling up of existing partnerships involving disruptive agricultural technology

[61] Including manure composting and application, improved pastures management, drought-tolerant crop varieties and other techniques mentioned on Kenya's CSA Country Profile (https://climateknowledgeportal.worldbank.org/sites/default/files/2019-06/CSA%20KENYA%20NOV%2018%202015.pdf)

(DAT) service providers, farmers, pastoralists, and agro-pastoralists, building on the One Million Farmer Platform. The project will support farmer mobilization, technical assistance, training, capacity building, and digital equipment that enables farmers to access climate information services, climate-smart TIMPs, climate-resilient inputs (seeds, breeds, and balanced fertilizers), digital finance, and markets. The project will also support agro-entrepreneurs that act as both "last-mile" extension service providers and agro-dealers, effectively bundling advisory services with climate-smart inputs, information and financial services, and even market linkages.[62]

Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (IDA US$30 million equivalent)

11. This component aims to enhance the sustainable management of natural resources by investing in water conservation and rangeland management interventions identified as priorities by county integrated development plans. At the same time, it will proactively look for ways to leverage available technologies, innovations, and management practices including ones developed by national and regional research institutions to address longstanding and emerging issues, including ones relating to the changing climate. This component will expand and rehabilitate irrigation infrastructure, improving irrigation services and operational and maintenance practices, restoring and afforesting watersheds, and generally optimizing water use and restoring ecosystem services through nature-based solutions.[63]

Subcomponent 2.1: Water Availability for Crops and Livestock (IDA US$15 million equivalent)

12. This subcomponent will improve farmers' access to water for crops and livestock, leveraging the famer led irrigation development (FLID) approach already being implemented in Kenya. It will build and improve the efficiency of water harvesting and help agriculture-dependent communities adapt to drought and build climate resilience. In relation to water harvesting, the subcomponent will finance the construction or rehabilitation of small farm ponds, multipurpose water pans, and other interventions designed to improve water availability and recharge. It will support farmers to develop and adopt a range of technologies related to water use efficiency that draw on multiple types of equipment and approaches, including drip irrigation, solar pumps, cover, perennial and deep-rooted crops, crop rotation, and reduced tillage, and supporting the efficient use and conservation of productive ground and surface water resources. Proposed infrastructure will be informed by climate resilient design standard considerations.

Subcomponent 2.2: Rangeland Management for Crops and Livestock (IDA US$15 million equivalent)

13. This subcomponent includes key activities to mitigate climate change (for example, rotational grazing, soil conservation, and agroforestry, which will increase soil carbon sequestration) and enhance climate resilience (for example, improving water infiltration and diversifying crops and livestock

[62] In most cases, agro-dealers are already working as extension service providers and advisors. The project will focus on ensuring that existing agro-dealers and new entrepreneurs are providing high-quality and relevant advice to local farmer. Agro-entrepreneurs are trained to maintain digital farmer databases and sales records and the project will monitor this data to identify potential cases of input overuse.

[63] Any activities that involve the use or potential pollution of international waterways, namely Lake Turkana and Juba-Shebelle system and connected aquifers, will not be eligible for Project financing. The POM will reflect this as part of eligibility criteria.

production systems), helping farmers overcome climate vulnerabilities derived of climate-related shocks, such as droughts or floods.

14. The subcomponent will support: (a) sustainable soil and land management, participatory grazing management schemes and participatory rangeland resource management; (b) the demarcation and restoration of livestock migration routes and common grazing lands, which are highly vulnerable to droughts (land restoration will increase climate-suited land for livestock); (c) the development of energy-efficient and climate-resilient feed and fodder storage infrastructure (informed by climate design standards, especially energy-efficient and rain-proof equipment) and strategic feed reserves; (d) climate-smart animal health infrastructure and services including disease surveillance and vaccination, holding grounds, and quarantine compartments—as climate change have a significant impact on animal health and diseases in the Kenyan agricultural sector, including outbreaks due to extreme temperatures, vector-borne diseases, and reduced feed availability, this activity will address these challenges by preventing and promptly responding to livestock diseases outbreaks, while providing access to improved animal housing, water and feed management, disease surveillance and control, and enhanced veterinary services; (e) livestock restocking programs with focus on drought resistant breeds and better suited for the country's adverse climate conditions; (f) crop-livestock integration including seed multiplication and bulking (crops and pasture) and improved breeding practices. The project will contribute to sustainable soil and land management including participatory grazing management schemes and participatory rangeland resource management. Detailed climate adaptation and mitigation outcomes are provided in Annex 6.

Component 3: Getting to Market (IDA US$45 million equivalent)

15. This component aims to improve physical and economic access to sufficient, safe, and nutritious food by improving crop and livestock farmers' access to domestic and international markets. It will do so by enhancing the capacity of producer organizations (POs) to meet market requirements including minimum volume requirements and quality standards. The component will also focus on establishing or upgrading agri-food distribution, logistics, and other marketing infrastructure in ways that will increase market connectivity and value addition. The component will also support access to relevant financial services.

Subcomponent 3.1: Strengthening of Farmer Producer Organizations (IDA US$15 million equivalent)

16. This subcomponent will help crop and livestock farmers connect better to markets by establishing or strengthening FPOs and the constellation of agro-enterprises that serve them, thus facilitating aggregation, quality control, and the marketing of agricultural products. While supporting FPOs, this component will enhance farmers' access to climate-adapted farming inputs, technologies, and knowledge and to diversified and more lucrative output markets, giving them better tools to manage farm-level climate risk and more resources to face climate shocks while reducing food loss and GHG emissions from waste by promoting commercialization of the total production. The subcomponent is expected to catalyze job creation and the inclusion of women, youth, and small-scale producers in value chain activities, helping to sustainably increase and diversify their income, thereby reducing vulnerability to climate change impacts. Using inclusion grants and TA, it will specifically support: (a) overall FPO capacity building; (b) the training of FPO leadership in FM; (c) the automation of FPO FM systems and transactions; (d) assessments of domestic, regional, and global market opportunities and value chain analyses and development plans; (e) the development and implementation of climate-informed Enterprise Development Plans (EDPs);

(f) subscription to climate information services and provision of real-time agrometeorological advisory and decision support services to members of these EDPs; and (g) training on reducing contamination and GHG emissions in livestock rearing. EDPs will devise systems for FPOs and their member farmers to access to high-quality and climate-resilient inputs (such as climate-adapted seeds and breeds) and formal finance and value addition.

17. *Subcomponent 3.2: Market Infrastructure and Enterprise Development (IDA US$5 million equivalent)*

18. This subcomponent will invest in market infrastructure to improve the postharvest handling of crop and livestock products and facilitate value chain actors' adherence to SPS standards. The improved climate-resilient postharvest facilities will ensure enhanced productivity, reduced postharvest losses, and increased value of the products while addressing climate vulnerabilities such as exposure and susceptibility of commodities to extreme weather conditions or energy disruption for producers. This subcomponent will establish or upgrade postharvest facilities used to aggregate, grade, sort, process, and store agricultural products, cold storage infrastructure and spot improvement for market facilitation, and spot improvement for market facilitation. These investments—which will privilege renewable energy and energy-efficient technologies (such as improved crop and food storage, packaging, and distribution)—are expected to enhance food systems resilience and climate change adaptation in the HOA by promoting regional food trade and reducing value chain losses, increasing productivity and income available to invest in adaptative capacity, and decreasing dependance on fossil fuels and energy prices shocks[64] while mitigating associated GHG emissions. The infrastructure will also be designed to withstand frequent and severe flooding thereby reducing exposure of commodities to extreme weather conditions.

Subcomponent 3.3: Creditworthiness of Crop and Livestock Farmers (IDA US$25 million equivalent)

19. The subcomponent will facilitate crop and livestock farmer' access to affordable financial products and services including savings, credit, and insurance by addressing both demand and supply side constraints. It will support: (a) the development and deployment of digital financial services to reduce information asymmetries, increase efficiency, and increase financial inclusion, which will help diversify livelihoods vulnerable to climate change impacts, supporting adoption of climate resistant varieties of crops and livestock; (b) existing and new local savings and credit cooperative organizations (SACCOs) to increase farmers' access to high-quality, climate-resilient inputs and infrastructure; (c) financial management systems and capacities, through a combination of training for members and the automation of SACCOs' management and financial systems; and (d) revolving funds (the financial inclusion matching grants) where the CIG/VMG savings will be matched and will be administered in the eligible SACCOs and provided by CDDCs, and primarily supporting CIGs/VMGs' adoption of climate-smart TIMPs and technologies and climate-resilient inputs. The project will engage with commercial banks, SACCOs, microfinance institutions, and digital financial service providers to build county-, regional- and national-level partnerships supporting sustainable and inclusive financial services, as well as to develop specialized credit products designed to support climate-smart agriculture.

[64] Climate Smart Agriculture Sourcebook (FAO). https://www.fao.org/climate-smart-agriculture-sourcebook/production-resources/module-b9-energy/chapter-b9-4/en/.

Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (IDA US$10 million equivalent)

20. This component will support efforts to bring a resilience focus to food-related public institutions, policies, and spending at the national and regional levels while building the organizational capacity within the public sector to pursue and implement them.

Subcomponent 4.1: Prioritization of Food Systems Resilience in Public Policy and Spending (IDA US$5 million equivalent)

21. This subcomponent will bring a climate resilience focus to food systems development plans, strategies, legal and regulatory frameworks, institutional arrangements, programs, budgets, and other food systems initiatives. Public policies and spending prioritizing food systems resilience can promote adoption of climate-smart agricultural practices, support development of resilient food value chains and build adaptive capacity of farmers and communities, addressing several climate vulnerabilities as drought, flooding, and food security. It will specifically support: (a) the mainstreaming of climate resilience objectives in Kenya's strategic food systems vision and priorities at the regional, national and county levels; (b) the development of relevant strategies, action plans, and other policy documents at the regional, national and county level; (c) efforts to align market and policy incentives with food systems climate resilience objectives as defined at the national or regional levels;[65] (d) the management of food reserves including systems for procuring, importing, storing, and monitoring food stocks, and for facilitating interagency coordination thereby reducing food losses and waste; (e) climate informed policy reforms aligned with regional trade integration, including the harmonization, improvement, and implementation of commercial regulations, standards, and customs and border procedures; (f) the inclusion of a climate resilience focus in M&E frameworks as well as the systematic collection of gender-disaggregated data relating to agricultural development and relevant natural resources management activities; and (g) the systematic inclusion of gender in strategies and policy documents.

Subcomponent 4.2: Institutional Capacity for the Implementation of Resilience-Enhancing Policies (IDA US$5 million equivalent)

22. This subcomponent will build the capacity of MoALD and the counties to prepare, review, and implement climate resilience-focused policies by developing relevant human as well as material resources. The subcomponent will offer TA and training to support (a) climate informed policy analysis and policy harmonization at the national, regional and county levels with a focus on enabling regional integration and regional cooperation; (b) the improvement of performance management and other administrative systems; (c) studies focused on climate resilience, communications, and knowledge management; and (d) competitive long-term training for PhDs and MScs in the priority areas for strengthening climate resilience of Kenya's food systems.

Component 5: Contingent Emergency Response Component (CERC) (US$0)

23. This component will finance eligible expenditures in the event of an emergency precipitated by a disaster. The activation of CERC, by request of the Government, will allow funds to be disbursed rapidly

[65] FAO. 2011. "Women in Agriculture, Closing the gender gap for development."

to reduce damage to productive infrastructure, ensure business continuity, and speed up recovery. An IRM-OM will be developed by the Government stipulating the fiduciary, ESF, monitoring, and reporting requirements relating to CERC as well as other coordination and implementation arrangements. In the event of CERC activation, funds from other project components will be reallocated to finance immediate response activities as needed.

Component 6: Project Management (IDA US$15 million equivalent)

24. This component will finance activities relating to project coordination at the national and county levels.

Subcomponent 6.1: Project Coordination (IDA US$10 million equivalent)

25. This subcomponent will finance national- and county-level project coordination units (PCUs), including salaries of contract staff, O&M expenses, office equipment, and audits. It will also finance project supervision and oversight by the National Project Steering Committee (NPSC) and the County Project Steering Committees (CPSCs) and oversight and intergovernmental coordination by the Joint Agriculture Sector Steering Committee and the Council of County Governors' structures for agriculture including the Committee on Agriculture, the Caucus of County Executive Committee Members (CECMs) for agriculture, and the Agriculture Secretariat.

Subcomponent 6.2: Project Monitoring, Learning, Knowledge Management, and Cross-Cutting Issues (IDA US$5 million equivalent)

26. This subcomponent will finance all activities relating to communications, including with project beneficiaries, government officials involved in project implementation, key policy makers, and citizens at large. As part of its commitment to CE, the project will intensively engage with the communities and enable their participation in and ownership of the planning, preparation, and implementation of value chain development plans, micro-project proposals at the CIG level, and EDPs at the FPO level. The subcomponent will also finance the implementation of fiduciary, environmental and social requirements (monitoring and compliance) along with routine M&E activities such as data collection, analysis, and reporting, and the development of an information and communication technology (ICT) based MIS. Finally, it will finance baseline, midpoint, and end-of-project impact evaluations and an implementation completion report.

D. Project Geography

27. The project will make investments at the national, county, and farm levels. National investments will include capacity building, TA, policy analysis, policy coordination, and targeted market infrastructure upgrades. County- and farm-level investments will be undertaken in 13 counties: Baringo, Marsabit, Wajir, Mandera, Garissa, Tana River, Lamu, West Pokot, Laikipia, Isiolo, Turkana, Samburu, and Elgeyo-Marakwet.[66]

[66] The criteria for the selection of these counties are clearly explained in the project implementation manual

E. Project Beneficiaries

28. The project aims to support 350,000 crop and livestock farmers, most of them operating at a small scale, of which at least 50 percent will be women. The project will also benefit many other value chain actors including extension workers, aggregators, logistics support providers, and various SMEs. Nearly 5,000 full time equivalent jobs are expected to be created by the expansion of FPO, anchor off-taker, SMEs, and agritech operations and the development of agro-entrepreneurship and market links.

F. Project Costs

Table A2.1. FSRP Phase 3 - Kenya Costs and Financing (US$, millions)

Component/Subcomponent	PBA	RI	TOTAL
Component 1: (Re-)Building Resilient Agricultural Production Capacity	**10**	**40**	**50**
Subcomponent 1.1: Data and Digital Agriculture Systems at the National and County Levels	0	15	15
Subcomponent 1.2: Climate-Smart Agriculture Technologies and Services	0	10	10
Subcomponent 1.3: Community Engagement and Technology Transfer Including through Digitization	10	15	25
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes	**10**	**20**	**30**
Subcomponent 2.1: Water Availability for Crops and Livestock	50	10	15
Subcomponent 2.2: Rangeland Management for Crops and Livestock	50	10	15
Component 3: Getting to Market	**20**	**25**	**45**
Subcomponent 3.1: Strengthening of Farmer Producer Organizations	50	10	15
Subcomponent 3.2: Market Infrastructure and Enterprise Development	0	5	5
Subcomponent 3.3: Creditworthiness of Crop and Livestock Farmers	15	10	25
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking	**0**	**10**	**10**
Subcomponent 4.1: Prioritization of Food System Resilience in Public Policy and Spending	0	5	5
Subcomponent 4.2: Institutional Capacity for the Implementation of Resilience-Enhancing Policies	0	5	5
Component 5: Contingent Emergency Response Component (US$0)			**0**
Component 6: Project Management	**10**	**5**	**15**
Subcomponent 6.1: Project Coordination	10	0	10
Subcomponent 6.2: Project Monitoring, Learning, Knowledge Management, and Cross-Cutting Issues	0	5	5
TOTAL	**50**	**100**	**150**

Note: PBA = Performance-based allocation; RI = Regional.

I. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

29. The project will benefit significantly from the existing implementation capacity and strong community institutions developed under KCSAP, NARIGP, and ELRP both at the national and county levels.

At the national level, a fully functional national project coordination unit (NPCU) has been established with subject matter, FM, procurement, and environment and social specialists that are supporting county implementation units. Each of the 13 counties already has fully functional implementation and coordination units—County Project Coordination Units (CPCUs) with trained specialists. The strong technical and fiduciary systems already developed under NARIGP, KCSAP, and ELRP will facilitate the Kenya FSRP's efficient implementation. The project will also leverage the existing three-tiered community-level institutional arrangement developed under KCSAP, NARIGP, and ELRP for implementation purposes.

30. The existing NPCUs of KCSAP and ELRP will be merged, and the integrated team will lead the Kenya FSRP's implementation at the national level. Similarly, the existing KCSAP, ELRP, and NARIGP teams in each of the 13 counties will be merged and the integrated teams will lead the Kenya FSRP's implementation at the county level. The NPCU and CPCUs will be strengthened by bringing in new staff (mainly through deployment) that have the appropriate expertise in newer focus areas such as in irrigation, financial services, data science, and digital technologies if it is found that existing staff lack the required expertise. The project will also strive to bring in highly qualified graduates from Kenya's leading agricultural, environmental science, and business schools (universities or vocational learning institutions) to work on discrete technical assistance assignments. As and when needed, the NPCUs and CPCUs will also hire technical support agencies, individual consultants, and other experts to strengthen technical assistance towards the project implementation.

31. **Project oversight, policy guidance, governance, and coordination.** At the national level, the GoK will be represented by the National Treasury (NT) and MoALD which will be the main implementing agency. Within MoALD, the State Department for Crops Development will assume responsibility for the Kenya FSRP in coordination with the State Department for Livestock Department (SDLD). Overall project oversight and policy guidance will be led by the National Project Steering Committee (NPSC) at the national level which will be co-chaired by the Cabinet Secretary (MoALD) and the chair of Council of County Governors' Agriculture Committee. At the county level, it will be led by the County Project Steering Committees (CPSCs) which is chaired by the county executive committee member (CECM) in charge of agriculture. In addition, the technical and advisory guidance to the NPCU at the national level will be provided by the National Technical Advisory Committee (NTAC) co-chaired by the Principal Secretary (MoALD) and a representative of the CECMs nominated by the Council of County Governors. Similarly at the county level, the technical and advisory guidance to the CPCU will be provided by the County Technical Advisory Committee (CTAC) chaired by the chief officer in charge of agriculture. The strong representation both in the NPSC and NTAC will ensure the full ownership of the participating county governments and also enable their full involvement in the decision-making process at the national level. The national and county-level steering committees and technical advisory committees will be established within ninety days of project effectiveness and maintained throughout project implementation

32. **Project implementation.** The core implementation roles will be carried out by a national project coordination unit (NPCU) at the national level, and by county project coordination units (CPCUs) at the county level and community-level institutions (CIGs, Vulnerable and Marginalized Group [VMGs], CDDCs, FPOs, and SACCOs) at the community level. Each of these three tiers has significant pre-existing implementation capacity and systems. The fully functional NPCUs established under KCSAP and ELRP will be merged, and this integrated team, headed by the national project coordinator (NPC), will be responsible for managing day-to-day project implementation. The NPC will also be the secretary to the NPSC and NTAC. The NPCU's staff will include among others community institution specialist, crop and

livestock specialists, agriculture finance specialist, agribusiness specialist, digital agriculture specialist and water resource management specialists, project accountant, procurement specialists, M&E expert, environmental and social specialists.-MoALD will develop a mechanism to closely coordinate with KALRO the implementation and oversight of certain activities, such as relevant research initiatives and digital agriculture efforts.

33. At the county level, CPCUs headed by the country project coordinator (CPC) will lead project implementation under the oversight of CPSCs. The CPCU led by the CPC will include, among others, community institution specialist, crop and livestock specialists, agriculture finance specialist, agribusiness specialist, digital agriculture specialist and water resource management specialists, project accountant, procurement specialists, M&E expert, environmental and social specialists. The CPC will serve as the secretary to the CPSCs. CPCUs, which will be embedded in county government structures, will be made up of the CPC, and subject matter specialists.

34. Project implementation will be backed by the strong institutional architecture developed at the community level under KCSAP, NARIGP, and ELRP. CIGs will serve as the primary interface between project interventions and smallholder farmers and play a crucial role in enabling the delivery of training and extension services and helping farmers mobilize savings. The recipient will prepare and adopt a Project Implementation Manual (PIM) not later than one month after project effectiveness.

B. Results Monitoring and Evaluation Arrangements

35. The Kenya FSRP will be underpinned by a solid monitoring, learning, and evaluation system that will feed into decision support systems, business analytics, and rigorous studies. The web-based M&E and MIS will be set up for data collection and information sharing at the national, county, and community levels. Their primary objective will be to enforce the culture of results-based project M&E and provide the foundation for an evidence-based decision-making process. These systems will be designed for data collection and provide concurrent feedback to key stakeholders about progress toward achieving the project's key results. Dedicated M&E staff at the national and county levels will be responsible for data collection, compilation, and reporting. The project will strengthen overall M&E capacity by investing in an ICT-based Agricultural Information Platform and training at all levels.

36. The Kenya FSRP will build on the experience of KCSAP and NARIGP, which successfully implemented a web-based and geotagged M&E system and MIS that include real-time monitoring images and data for the key project interventions. As much as possible, data collected will be disaggregated, analyzed, and reported by gender and the vulnerable and marginalized communities. An independent, rigorous, quantitative evaluation of impact will be carried out under the project, starting with a baseline and followed by midterm and end-of-project surveys. The objective of an impact evaluation will be to assess the transformational impact and inclusiveness of project interventions. The quantitative impact evaluation will be accompanied by qualitative studies as well as other specific analytical works as needed.

II. APPRAISAL SUMMARY

A. Fiduciary

37. **Financial Management.** The World Bank conducted an FM assessment of the implementing entity for the project, the Ministry of Agriculture and Livestock Development (MoALD), based on experiences of the Kenya Climate Smart and Adaptation Project (KCSAP) National Project Coordinating Unit (NPCU). The KCSAP NPCU has demonstrated their strong capacity through the successful implementation of the ongoing KCSAP project. At the county level, the respective county governments will be the executing agencies through the existing County Project Coordination Units either of KCSAP or ELRP. The presence of an existing strong CPCUs will further help in fast tracking project implementation. The NPCU, KARLO and the CPCUs will use the existing FM and Internal audit staff where the performance has been satisfactory. Where the capacity require enhancement, NPCU, KARLO and CPCU will ensure deployment of staff with adequate FM capacities to the units.

38. The Government (MoALD, NT, and the county governments) will ensure the established reporting and accountability mechanisms at counties and CDDCs are strengthened to ensure the funds disbursed to the counties are accurately accounted for and reported on time. The enhanced aspects will be documented in the Finance Manual as well as the memorandum of participation to be signed between the MoALD and the participating counties. Project design involves payments of community grants with inherent FM risks. A detailed Community Grants Manual (CGM) with requisite FM arrangements to govern the implementation of the project activities at the community level was prepared for KCSAP and NARIGP. There have been challenges in timeliness and quality of financial reports submitted by CDDCs to counties, which were attributed to capacity gaps by CDDCs' executive committees. To address the capacity gaps, KCSAP and NARIGP recruited wards administrators who have administrative roles at the CDDCs including support on financial reports preparations and ensuring compliance with all other fiduciary requirements. These staff are expected to also support the Kenya FSRP on financial reporting and ensuring compliance with fiduciary requirements by the CDDCs.

39. The FM arrangements have an overall risk rating of Substantial, which satisfies the World Bank's minimum requirements under World Bank Guidance to Financial Management Specialists on Financial Management Arrangements in World Bank Financed Investment Operations, OPCS5.05-GUID.02 issued on February 28, 2017, and, therefore, are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by IDA.

40. **Budgeting.** The project budgeting will be done in accordance with existing GoK procedures. The budget will be based on the AWPB developed by MoALD. The project planning and budgetary process will be implemented in accordance with the standard government fiscal year which begins on July 1 of each financial year as provided for by the Public Financial Management Act 2012 and the Government Financial Regulations and Procedures. This will form the basis for defining the project activities and ensuring that sufficient funds are allocated to achieve the agreed results. There are possible challenges remaining related to delays by some counties in capturing project activities in their budgets, coordination, and timing of the Government budgeting activities/calendar across the three project levels, as well as inadequate provisions in printed estimates which limit implementation of activities planned in the AWPB.

41. **Accounting.** There exists a Finance Management manual for KSCAP which will be enhanced and adopted for the FSRP project. A Community Grants Manual (CGM) with requisite FM arrangements to govern the implementation of the project activities at the Community Level was prepared for KSCAP which will routinely be revised to consider emerging FM/fiduciary issues. The current KSCAP designated qualified Accountants and Internal Auditors are expected to take up the same roles in the FSRP. KALRO will ensure there is a designated finance staff who will be coordinating processing of financial transactions for the project including financial reporting to NPCU as is currently done under KCSAP.

42. KCSAP has developed an MIS which will be used for project financial reporting in addition to the use of Integrated Financial Management Information System (IFMIS) for payments systems at both national and counties levels. The MIS system is already in use for KCSAP and will continue to be strengthened to effect financial reporting and budget monitoring according to the approved AWPB, matching the expenditure per categories, component, and detailed approved activities. FSRP will engage the system developer to modify or develop an MIS for the project similar to KCSAP which has been piloted and found crucial in fiduciary management of the project. The Government is also enhancing the IFMIS for project financial reporting, which once finalized will be adopted for the project.

43. **Internal controls.** The project expenditure initiation, authorization, and payments will be in line with Public Finance Management Act 2012 and PFM regulations (2015) of Kenya as elaborated and customized in the FM Manual and CGM. Project work plans will be integrated into the internal audit work plans. Internal audit reports covering project activities will be shared with the World Bank on a semiannual basis, that is, on June 30 and December 31. Regular internal audit, implementation support, monitoring, and reporting will be undertaken. Project and beneficiary information will be mapped out and monitored through the geographic information system-enabled MIS. It is a requirement that the internal audit function of the project at both counties and national levels samples 30 percent of all the FSRP-funded projects.

44. At the CDDCs' levels, the executive committee consisting of the chairperson, vice chairman, secretary, and treasurer who oversee the day-to-day operations of the society will be strengthened by the project through tailored capacity building based on identified weaknesses at each CDDC. Simplified checklists to enhance their work will be provided. The internal audit has been sampling and reviewing whether the CDDCs' executive committees are operating as expected and appropriate financial reports are provided. Their prior reviews of KCSAP indicated there are significant capacity weaknesses at CDDCs. The internal audit at both national and counties levels will continue to provide this assurance and recommendations for continued strengthening of internal controls. The MIS currently in use at KCSAP covers information up to counties, but for the project, it is recommended to enhance the MIS to capture details at the CDDC levels as well.

45. **Disbursements and funds flow.** The disbursements from IDA will be based on Statement of Expenditures (SoEs) where an initial advance with be disbursed based on initial cash flow requirement for at least three months but within the agreed ceiling for the Designated account. Subsequent disbursement will be based on utilization and documentation of expenditures. The banking arrangements for purposes of funds flow will consist of: (i) two (2) DAs denominated in US dollars as agreed with the NT (DA-A for county level activities and DA-B for national-level activities) to be opened by the NT at the Central Bank of Kenya (CBK) and managed by the NT; (ii) a Special Purpose Account and a Project Account in Kenyan shillings to be opened and managed by MoALD at the CBK or financial institution acceptable to IDA, from

which the project's payments will be made; (iii) a Special Purpose Account and a Project Account in Kenyan shillings to be opened and managed by the participating county at the CBK or financial institution acceptable to IDA, from which the project's payments will be made; (iv) for counties, MoALD will trigger transfer of funds from DA-A through the respective County Revenue Fund (CRF) accounts opened at the CBK and managed by the individual county governments, to the County Special Purpose Account and then to the County Project Account within 15 days; and (v) the beneficiary/community group bank accounts will be opened in commercial banks acceptable to the Bank and managed by community/group elected leaders. Triggers for the initial deposit/transfer from DA-A to CRF accounts will include the signing of the participation agreement, and approved county AWP&B. Subsequent transfers will be based on submitting the SoEs. For communities/groups, eligibility criteria will include having in place a community development plan/business plan of POs and an approved micro-project. Once communities/groups have met the eligibility criteria, funds will be disbursed by county governments from their County Project Accounts to the community/group accounts. The CRF accounts will be replenished from DA-A, and the PA from DA-B.

46. KCSAP initially experienced significant delays in transfers of funds from CRF accounts which has improved with regular follow-ups by the NPCU and introduction of sanctions for counties that delay in transferring funds. These sanctions will also be implemented for the FSRP. Counties are required to transfer funds from CRF to the project's special purpose account within 15 days, and those that fail have their subsequent disbursements withheld until funds are subsequently disbursed. The Council of County Governors will be supported on some activities which will be processed by the NPCU. There will be continuous engagement with the MoALD and the NT - Resource Mobilization Department to unlock challenges affecting the fund flows.

47. The project has financial inclusion matching grant (revolving fund) which will be paid from CDDCs account to a registered SACCO formed by project beneficiaries. These funds will be considered project expenditure at the point of payments to the SACCO and will be monitored separately as detailed in the Financial Inclusion Matching Grant operational manual. These funds are expected to revolve among the CIGs members. Transfer from the CDDCs bank accounts to a registered SACCO will be made in 2-3 tranches based on committed savings, maturity of member CIGs and other performance triggers to be detailed in the Financial Inclusion Matching Grant operational manual.

48. **Financial reporting. The** NPCU project accountant will be responsible for the preparation of financial reports for the project and will produce a consolidated financial report for the project. There have been regular trainings provided to counties teams for KCSAP which has improved financial reporting. The dedicated project accountants at the national and county levels will be provided with capacity-building trainings at the commencement of the project which will include refresher financial reporting requirements among other FM procedures. The NPCU finance team will regularly review financial reports by counties and identify any further tailored support that may be provided. The NPCU expects the required financial reports to be submitted (to NPCU) by the 15th of the following month after the period end or as may be directed and would further submit quarterly IFRs to the World Bank within 45 days after the end of the quarter. The MIS will help in streamlining the financial reporting for the project as the reports and supporting documents will be submitted electronically.

49. **Auditing.** On an annual basis, the financial statements for the project will be audited by the Office of the Auditor General and audited financial statements submitted to the World Bank within six months after

the financial year end in accordance with the World Bank's FM guidelines. The scope of audit has been limited, whereby the Office of the Auditor General is unable to conduct audit of project funds across all the counties. This will be addressed by having an incremental coverage of counties and alternating field reviews at counties to ensure all counties are covered. Risk-based selections of counties to be reviewed will also ensure all risky counties are covered.

50. **Procurement arrangements.** Procurement under the project will be carried out in accordance with the World Bank's 'Procurement Regulations for IPF Borrowers', dated November 2020 (fourth edition), hereafter referred to as 'Procurement Regulations'; the 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', dated October 15, 2006 revised in January 2011 and as of July 1, 2016; Guidance Note for Design and Management of Procurement Responsibilities in Community-Driven Development Projects dated March 15, 2012 and other provisions stipulated in the Financing Agreement The Government has prepared and submitted the Project Procurement Strategy for Development (PPSD) to address how procurement activities will support the development objectives of the project to deliver the best value for money (VfM) under a risk-based approach, which will be updated during the project implementation when needed. The PPSD includes 18-month procurement plan (PP), which sets out the procurement profile and the selection methods to be followed by the recipient during implementation for all procurement financed by the project. This PP will be updated at least annually or as required.

51. **STEP.** The project will use STEP during implementation, enabling automatic publication of the approved PP and publication of notices and contract award information on the World Bank's external website and United Nations Development Business (UNDB) online. The system has clear implementation road maps with activity start and end dates and is a tool for monitoring delays, establishing benchmarks, measuring procurement performance, and detecting and flagging any debarred firms when bidder's information is uploaded in the system.

52. **Market approach.** When approaching the international market, procurement will use the World Bank's SPDs. When approaching the national market, as detailed in the PP, the country's own procurement procedures will be used, as specified in paragraphs 5.3–5.6. of the World Bank Procurement Regulations related to National Procurement Procedures. At the community level, the CDD will apply according to Annex XII of the Procurement Regulations.

53. **Record keeping and management.** All records pertaining to the award of tenders, including bid notification, registers pertaining to sale and receipt of bids, bid opening minutes, bid evaluation reports and all correspondence pertaining to bid evaluation, communication sent to/with the World Bank in the process, bid securities, and approval of invitation/evaluation of bids, will be retained by the implementing agencies and uploaded in the STEP system on time. In addition, the implementing agencies will keep all complete procurement files for each activity with all the documents from the PP to contract completion including contract monitoring and payment records.

54. **PRAMS.** MoALD and the counties have been implementing NARIGP, KCSAP, and the ELRP and have experience in World Bank-financed projects. PRAMS for MoALD and a sample of counties was last conducted in March 2022, and based on the existing assessments, this procurement risk is rated Substantial. A detailed assessment will identify any weaknesses related to procurement regulatory

framework and management capability, integrity and oversight, procurement process and market readiness, and complexity of procurement activities.

B. Environmental and Social

55. **The environmental risk rating is assessed as Substantial.** The geographical coverage of the sub-projects to be implemented represents 13 counties in arid and semi-arid areas in the north, north-eastern, north-western, eastern and south-eastern parts of Kenya. These areas frequently experience weather extremes of drought and flooding, and other environmental challenges causing/resulting from land degradation. The type of sub-projects to be implemented include among others, water harvesting and supply infrastructure such as farm ponds, water pans and dams; livestock holding grounds and quarantine compartments; market infrastructure such as storage and processing facilities and spot improvement for market facilitation. The project will have an Environmental and Social Management Framework (ESMF), to provide general guidelines and procedures for assessing environmental and social risks and impacts during implementation. The ESMF will also include the security management plan (SMP) as an annex. The ESMF will be consulted upon, approved, and disclosed prior to project effectiveness. Upon finalization of sub-project details, the Recipient will also develop site specific ESMPs as relevant for the management of identified risks and impacts. Integrated Pest Management Plans (including emergency response measures) and Waste Management Plan will be consulted upon, adopted, and disclosed prior to project effectiveness.

56. The environmental risks and impacts from the project activities are likely to be temporary, site specific, and reversible and can be mitigated with the appropriate scope of measures. The anticipated environmental risks and impacts during implementation of the subprojects will mostly emanate from civil works and will include loss of vegetation from clearance of sites; air pollution from dust and exhaust emissions; noise pollution from use of heavy machinery/equipment; surface water and groundwater pollution from ingress of contaminants such as hydrocarbons; OHS risks for workers and community health and safety risks around construction sites; soil degradation from erosion, compaction, and sealing; and environmental pollution from generation and poor management of wastes. Given the context of volatility and insecurity in some of the counties participating in the project, additional risks touching on the security of workers and contractors that will be involved in the subprojects are anticipated.

57. **The social risk rating is assessed as Substantial.** This is mainly due to the vastness of the target area across 13 counties in the northern half of Kenya, comparatively low capacity of project implementation teams on social aspects at county level, agricultural activities being vulnerable to child labor and forced labor, existing tensions between communities regarding resources (water, community lands); presence of VMGs in all 13 counties; evidence that some subprojects will require agreement and consent from the communities to use community lands (and if VMGs are present on those lands, free prior and informed consent might likely be required); some sub project investments may lead to income loss/economic displacement, operational concerns due to remoteness and insecurity, including monitoring and supervising social risks including grievance management; The project team has broader understanding of managing social risks and impacts on World Bank-funded projects and experience of implementing NARIGP,KSCAP and ELRP. However, the NPCU, County teams and community institutions (CIG/VMG/CDDCs/FPO) will require intensive training and technical support for FSRP. During the preparation of County development Plans, exclusion criteria will be included for infrastructure investment which take into consideration social issues such as labor management, meaningful stakeholder

engagement in culturally appropriate manner, ascertaining land ownership/claims to land, management of economic loss, ensuring VMGs are consulted upon and benefit from the project, as well as approaches to avoid exuberating social conflict.

58. There are several social risks associated with the project activities specifically linked to water conservation and rangeland management interventions under the project including: (a) elite capture; (b) discrimination of women from accessing the services given their low literacy levels and limited access to land; (c) inadequate consultations given the fact that most of the activities will be channeled through the FPOs and CIGs; (d) insecure land tenure due to unregistered community land constraining land-based investments for better production or water conservation; (e) children resorting to work in project-supported activities; and (f) risk of SEA/SH on the project. The negative social impacts that could arise from infrastructure activities are: (a) conflict between and among communities mainly due to site selection and investments; (b) inadequate input into the selection of sites for infrastructure investment; (c)potential economic loss to occupants of land due to construction of micro-projects and multi-community investments; and (d) community health and safety (as outlined above under the Environmental section). No compulsory land acquisition is anticipated under the project.

59. These risks will be mitigated through implementation of the Stakeholder Engagement Plan (SEP) prepared for this project. The recipient has prepared the Stakeholder Engagement Plan and Kenya specific ESCP. The recipient will also finalize preparing an ESMF that will provide guidelines and procedures for assessing environmental and social risks and impacts during implementation following the identification of the subprojects. The recipient will also prepare LMP, VMGF and RPF. All these documents will be consulted upon, adopted and disclosed prior to project effectiveness, as well as the establishment of an accessible grievance redress mechanism (GRM), all acceptable to the Association.

60. As per the GBV Risk Assessment Tool the GBV/SEA risk is low. However, the recommended rating is being raised to substantial considering the widespread and rural nature of the project, the vulnerability of women due to poverty and poor access to land, unfavorable cultural norms and the introduction of outsiders to remote locations, and by female farmers taking active role community institutions. GBV and child abuse incidents are reported in the project counties prior to project. The SEAH Prevention and Response Plan will be consulted upon, adopted, and disclosed, and an SEA/SH consultant will be hired to the NPCU prior to project effectiveness.

61. People meeting the criteria of ESS7 are present in 13 counties (referred to as VMGs in Kenya). A VMG Framework will be developed, consulted upon, adopted and disclosed prior to project effectiveness. “Free prior and informed consent” might be required should any of the sub-project components: (i) lead to adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation; (ii) cause relocation of VMG from land and natural resources subject to traditional ownership or under customary use or occupation; or (iii) have significant impacts cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects. The screening checklist in the ESMF and RPF will screen out any sub-projects that could lead to situation (i) and (iii) above. The VMG Framework will outline the process for the preparation of 13 VMG Plans at the county level.

62. MoALD, KCSAP/ELRP NPCUs have experience in implementing World Bank financed projects under the ESF policies and the KCSAP/ELRP NPCUs has qualified and experienced environmental and social staff who will be supported by environmental and social focal points at the respective County Project

Coordination Unit (CPCU). Also, both the national and county teams have the knowledge and experience in undertaking environmental and social assessments for various typology of Projects and in developing and implementing ESF instruments, particularly ESMPs. In addition, the NPCU and the participating CPCUs will be required to engage the services of an experienced consultancy firms and individual experts to support preparation of required ESF instruments for the project. In addition, the World Bank and the NPCU will conduct targeted ESF trainings for the 13 participating CPCUs to enhance environmental and social risks management and to meet ESF requirements.

C. Key Risks

63. The overall project risk rating is Substantial. The macroeconomic, fiduciary, and environment and social risks are rated Substantial.

64. **Macroeconomic risk is rated Substantial.** Kenya's GDP has seen a marked sequential slowdown since the third quarter of 2021 as base effect dissipated and business confidence weakened because of the global commodity market shock, a long regional drought, and domestic political uncertainty in the run up to the August 2022 general elections. Kenya is subject to emerging shocks that may challenge the broad-based rebound. In mitigation of this risk, the initiatives to be implemented by this project will promote growth and development of the agriculture sector in Kenya which will contribute to sustained growth of the overall economy.

65. **Fiduciary risk is rated Substantial.** Project design involves payments of community grants with inherent FM risks, and therefore, the FM risk is rated as Substantial. The PRAMS for MoALD at the national level and sampled counties was conducted in March 2022, and based on the existing projects' assessment, the project procurement risk is rated Substantial. The following mitigation measures will be put in place: (a) advanced training of project accountants on the CGM and subsequent periodic training, (b) strengthening and capacity building of county project accountants and ward administrators to improve the quality of financial reporting by the CDDCs, (c) advanced training of procurement officers at the national and county levels on World Bank Procurement Regulations before the project starts and subsequent regular procurement clinics, and (d) simplification of the Procurement Manual at the community level conforming to the World Bank's guidance note for design and management of procurement responsibilities in CDD procurement.

66. **Environment and social risks are rated Substantial.** The environment and social risk has been rated Substantial on account of the potential risks and negative impacts of the activities to be implemented under the project. To mitigate the risk, the recipient has prepared, consulted upon, adopted and disclosed an ESCP that provides requirements and commitments for assessing environmental and social risks and impacts during implementation for all components of the project. Each project infrastructure investment will develop site specific environmental and social management plans and other relevant plans as per ESCP to guide management of identified risks and impacts. In addition, a SEP has also been prepared that outlines the key stakeholders to be consulted (including VMGs, female headed households, and people with disabilities), the communication and information flow, grievance management, and monitoring and reporting. The recipient will update the SEP no later than twelve months after project effectiveness, in manner and substance satisfactory to IDA.

ANNEX 3: Malawi Food Systems Resilience Project

I. PROJECT DESCRIPTION

A. Project Development Objective

1. **The PDO of the Malawi FSRP is to increase the resilience of food systems and the country's preparedness for food insecurity in project areas and, in case of an eligible crisis or emergency, to respond promptly and effectively to it.**

2. **Malawi's vulnerability to climate change is high due to both economic and geophysical reasons.** Malawi is highly vulnerable to climate shocks and ranked 157 out of 182 countries on the ND-GAIN Index in 2022.[67] It is already experiencing the effects of increasingly frequent extreme weather events, such as floods, strong winds (due to cyclones), and droughts that hit the country in 2015, 2016, 2019, 2022, and 2023.[68] Climate change scenarios indicate that Malawi will be severely affected by higher temperatures, more extended dry periods, and more erratic and intense rainfall events.[69] Extreme weather events exacerbate soil erosion and land degradation and increase levels of sedimentation in rivers. The effects of these events are generally amplified by the country's (80 percent of the population) dependence on poorly diversified rain-fed agriculture and more generally by high levels of poverty, natural resource dependence, and resource degradation. More than 60 percent of Malawi's territory is affected by soil erosion and nutrient depletion.[70] High dependence on rain-fed agriculture, poor agricultural practices, and overall limited adaptive capacity by smallholder farmers[71] have a great impact on agricultural yields.[72] Beyond agricultural production, climate change is having a significant impact in productive infrastructure, with effects along the food system, and in the overall country's economy.[73] In this context, Malawi's updated Nationally Determined Contributions (NDCs) identify agriculture, fisheries, livestock, ecosystems—particularly water resources—and infrastructure as key economic sectors at risk. It also proposes knowledge information and dissemination (I+D), information systems (including risk management), land property rights, water catchment management, increased irrigation capacity and efficiency, climate-proofing of infrastructure, CSA up-scaling, resilient value chains' and market's development, value addition, and financing and institutional strengthening as priority measures with a

[67] World Bank. 2022. *Malawi Country Climate and Development Report*.
[68] In 2019, Cyclone Idai cost the country an estimated 0.13 percent of GDP in losses. In January 2022, Tropical Storm Ana caused power outages and infrastructure damage throughout Malawi, and over 200 deaths and, in March 2023, Cyclone Freddy affected 2.3 million people and caused over 600 deaths across six districts.
[69] GoM (Government of Malawi). 2017. "Strategic Program for Climate Resilience: Pilot Program on Climate Resilience (PPCR)."
[70] Vargus, R., and C. Omuto. 2016. "Soil Loss Assessment in Malawi." FAO, UNEP, and UNDP. http://unpei.org/sites/default/files/Soil_Loss_Assessment_in 20Malawi.pdf.
[71] https://climateknowledgeportal.worldbank.org/sites/default/files/2019-06/CSA%20_Profile_Malawi.pdf.
[72] Staple and other key crops face a reduction in yields by 2030, due to climate change. In the case of rain-fed agriculture, yields will drop by 2.59 percent in one decade, from 2020 to 2030, and by 7.19 percent compared to 1995. These estimates are based on the IFAD Climate Adaptation in Rural Development (CARD) Assessment Tool, applying a moderate risk scenario. https://www.ifad.org/en/web/knowledge/-/publication/climate-adaptation-in-rural-development-card-assessment-tool.
[73] Economic modelling has estimated the direct overall costs due to climate change impacts equivalent to losing at least 5 percent of the country's GDP each year. On average, US$12.5 million or 1 percent of the GDP and US$9 million or 0.7 percent of the GDP is the annual cost of addressing droughts and floods, respectively. GoM. 2016. "National Climate Change Management Policy." Ministry of Natural Resources, Energy and Mining. Environmental Affairs Department.

focus on the most vulnerable populations and gender mainstreaming.[74] The project is designed to directly contribute to this structural transformation process by supporting several of those strategic shifts with a focus on building climate resilience in the agriculture sector.

B. Project Results Indicators

3. **Project results indicators are harmonized for all Phase 3 participants.** These indicators are presented in the consolidated Results Framework for the entire MPA Phase 3 (section VII of this PAD).

C. Project Components

4. **The Malawi FSRP builds upon many years of successful experience implementing the Agricultural Commercialization Project (AGCOM) (1.0), the flagship agri-food commercialization project of the Government of Malawi (GoM).** While the Malawi FSRP will introduce new elements, it will also seek to scale up many of the successful interventions and approaches of AGCOM (1.0). It will continue to increase the commercialization of primary and value-added agricultural products as a means of enhancing national and regional food systems resilience. It will also build food systems resilience by helping develop climate-smart farming and irrigation systems, including through investments in research, extension, and infrastructure, and by building the capacity of pivotal public institutions to undertake resilience-enhancing policy reforms. The project includes six components, in keeping with the structure and sequencing of Phase 3 of the MPA. Approximately 80 percent of the Malawi FSRP resources will cover activities under Components 2 and 3. The project will be co-financed by GAFSP funds to fill the financing gap and leverage multi-donor funding, provide TA to build capacity to ensure project sustainability and ownership by the communities, and also help reach smallholder farmers in some project areas that are otherwise difficult to reach, especially vulnerable populations (for example, women and youth) in remote areas.

Component 1: (Re-)Building Resilient Agricultural Production Capacity (US$28 million of which IDA: US$26 million equivalent, GAFSP: US$2 million)

5. This component will focus on developing and delivering national and regional information systems and agricultural technologies and services serving small farmers and other agri-food systems stakeholders. Three clusters of activities are proposed: (a) agricultural research, development, and innovation systems; (b) the development and upgrading of digital platforms; and (c) land demarcation and registration of farmland in the project area.

Subcomponent 1.1: Agricultural Research, Development, and Innovation Systems (US$13 million; of which IDA: US$12 million equivalent, GAFSP: US$1 million).

6. This subcomponent will support research activities that fill knowledge gaps relating to the productivity and resilience of high-value commercial crops and livestock to climate change and weather events, including the development of new varieties better adapted to climate change and weather shocks (flood/drought, increased temperature, and so on), and enabling adaptation by supporting research on agri-food systems. Also, the subcomponent will promote research in low-carbon technologies—instrumental to achieving full decarbonization—while addressing climate vulnerabilities such as droughts

[74] GoM. 2021. “Updated Nationally Determined Contributions.” https://unfccc.int/documents/497772.

and low levels of adaptative capacity, through promoting knowledge and experience sharing on climate adaptation techniques, identifying common frameworks for research and innovation on adaptation, and leveraging peer-to-peer learning. Research will include agri-food innovation systems, gender-sensitive technologies, emerging market niches, value chain demand, diagnostic studies, and strategic planning that identifies the catalytic investments and policy reforms that are needed. It will build on and add value to the contributions of APPSA[75] and ASWAp SP II[76] and strengthen the regional collaborations built with SADC and COMESA. It will also work with the regional organizations under FSRP, such as CCARDESA and the AU, which are supporting participating countries on these research areas. The Malawi FSRP will support data collection and other efforts to enable the sharing of knowledge and skills through the development of collaborative multistakeholder platforms and processes, as well as better-informed national and regional policy making.

Subcomponent 1.2: Digital Agriculture (US$10 million of which IDA: US$9 million equivalent, GAFSP: US$1 million)

7. The subcomponent aims at the development, piloting, and/or scaling up of information systems on agricultural production (production areas, systems, technologies, practices and key resources), weather data and market information at the national and regional levels, and making this information available to producers. The focus of these systems and its digital platform is to provide timely information to project beneficiaries in a way that supports informed decisions for improved agricultural productivity, increasing climate resilience (risk reduction and management measures and adaptation) and reducing GHG emissions. In terms of climate related information, the systems will address the main projected climate change impacts and risks, such as droughts, floods and pests and diseases. Together with the countries participating in the FSRP and with support from the AU and CCARDESA, this subcomponent will include: (a) upgrading the National Agricultural Management Information System developed under ASWAp SP II; (b) automating the cooperative registry; (c) establishing a virtual one-stop service center for agricultural climate-informed investment and trade; (d) scaling up the decentralized meteorological information system; (e) scaling up the Land Management Information System developed under AGCOM (1.0), which will be used to support decision-making for GHG emission reduction; and (f) developing a digital sanitary, phytosanitary, and food safety system. All facilities will incorporate renewable sources of energy, whenever possible. In addition, the feasibility of the introduction and contribution of regional data networks and cross-border information sharing will be assessed. Likewise, the contribution of the Malawi FSRP to regional coordination mechanisms will be discussed.

Subcomponent 1.3: Land Demarcation and Property Registration (IDA: US$5 million equivalent)

8. Building on success achieved by AGCOM (1.0), the Malawi FSRP will scale up and sustain the adjudication, demarcation, and registration of 110,000 land parcels. More than 560 POs are expected to directly benefit from this activity. By these activities, it will provide support to improve climate resilience through enhancing farmers' land security and driving investment incentives.

[75] Under the Agricultural Productivity Program for Southern Africa Project (APPSA, P094183), over 90 improved technologies for productivity and climate resilience were made available to farmers. Malawi FSRP will scale up these activities.
[76] The experience of the Second Agriculture Sector Wide Approach Support Project (ASWAp SP II, P164445) is relevant. Through ASWAp SP II, CSA practices and technologies have been adopted in 17,000 ha, and Malawi FSRP will expand the work initiated by ASWAp SP II.

Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (US$81 million of which IDA: US$79 million equivalent, GAFSP: US$2 million)

9. In alignment with Malawi's National Irrigation Policy and Master Plan, this component will finance the construction of medium- to large-scale irrigation schemes and gender-responsive TA for the management of their catchment areas. It will adopt a watershed or landscape approach to enhance the sustainable and resilient use of natural resources for food systems and livelihoods within priority areas.

Subcomponent 2.1: Medium-to-Large Scale Irrigation Schemes and Catchment Management (IDA: US$75 million equivalent)

10. This subcomponent will develop catalytic irrigation infrastructure selected for its potential to enhance climate resilience, private investment flows, access to markets, and value addition. Malawi's Irrigation Master Plan and Investment Framework 2016–2035 (IMPIF) highlights the need to invest in water storage to enable agricultural sector development in the context of the changing climate, increasingly erratic rainfall patterns, and the utilization of dry season river flows reaching its maximum. The Malawi FSRP specifically aims to develop six gravity-fed irrigation schemes (covering about 4,926 ha) that were pre-identified in the IMPIF (Table A3.1).[77] The proposed works include the construction of primary, secondary, and tertiary canals; drainage structures; and other related structures. The subcomponent will also support key investments around these irrigation schemes in landscape restoration and watershed management activities (riverbank embankment rehabilitation, soil conservation to minimize gully erosion, and tree planting), which are expected to reduce soil erosion and sedimentation, reduce GHG, and contribute positively to the quality of water in the basin. An improvement on water quality implies improved hydropower generation efficiency and reduced water treatment cost for urban water supply systems that are located on the same river system. Improved vegetable, crops, and agricultural products trade across the border is also one of the anticipated benefits for regional cooperation because of the project. Proposed irrigation infrastructure will be informed by climate-resilient design standard considerations.

Table A3.1. Priority Irrigation Development Projects Identified by the IMPIF

	Name	District	Source of Water	Command Area (ha)	Estimated Cost (US$, millions)	Estimated Number of Beneficiaries
1	Bwanje Valley	Dedza	Weir	1,400	30.0	3,655
2	Lembani	Neno	Weir	1,224	15.4	3,110
3	Mwenilondo	Karonga	Weir	575	21.9	634
4	Dwambazi	Nkhotakota	Weir	645	6.6	3,100
5	Mpamba	Nkhatabay	Weir	798	16.8	1,232
6	Lupenga	Mzimba	Weir	284	11.5	785
Total				**4,926**	**102.2**	**12,516**

[77] Criteria used in selecting them include their size and anticipated production levels (to align with the commercialization agenda), unit cost of development, vulnerability to climate change, geographical/regional spread/significance, and potential to enhance agri-food system climate resilience.

Subcomponent 2.2: Institutional Capacity Building for Irrigation Schemes (US$6 million of which IDA: US$4 million equivalent, GAFSP: US$2 million)

11. This subcomponent will develop and strengthen irrigation institutions including WUAs to help ensure the sustainability of project-rehabilitated infrastructure and promote water-use efficiency. It will strengthen the capacity of irrigation service providers responsible for the management and maintenance of irrigation infrastructure and water delivery to end users by funding TA, goods, works, and training in water conservation in the context of droughts. It will also coordinate efforts to strengthen institutions, build their capacity, review and update relevant policies and strategies, consolidate various working manuals and guidelines, and offer WUAs refresher trainings and needed TA, including training on climate risk, impacts, and adaptation measures on water and irrigation resources. Malawi is signatory to the Zambezi Watercourse Commission (ZAMCOM) protocols that call for enhanced cooperation on the shared water resources. By notifying ZAMCOM on project activities, the project will contribute to enhanced trust building between the countries and networking. Irrigation practitioners and WUAs can share experiences under the ZAMCOM protocol, further cementing the spirit of regionalism and working together.

Component 3: Getting to Market (US$128 million of which IDA: US$119 million equivalent, GAFSP: US$9 million)

12. This component aims to improve physical and economic access to sufficient, safe, and nutritious food by improving agri-food producers' access to domestic and international markets and enhancing marketing infrastructure. It will do this by supporting POs, PAs,[78] and 'last-mile' infrastructure.

Subcomponent 3.1: Farmer Organizations (US$25 million of which IDA: US$23 million equivalent, GAFSP: US$2 million)

13. This subcomponent will scale up AGCOM (1.0) efforts to support the capacity of POs to join and gainfully participate in project-supported PAs. It will do this by providing POs matching grants, training, advisory, market links, and other services and other learning opportunities, with a focus on developing their knowledge and competencies to engage in value addition, marketing, and business management activities. These knowledge and competencies development activities will include capacity building in climate risks, impacts, and adaptation measures to be undertaken by POs. It will also help POs to form or join secondary or union cooperatives[79] and organize national and international study tours. A national or regional business development organization will be contracted to work with farmers and agro-enterprises to build capacity at all points along the value chain, as well as foster and strengthen links between value chain actors and broker contracts. More grant funding and special incentives will be available to POs with

[78] To enhance the commercialization aspect, POs are linked to off-takers (buyers) through a concept known as a Productive Alliance (PA). Through the PA arrangement, a PO can access project resources such as matching grants to help invest in capital items (for example, construction of warehouses, procurement of modern processing equipment, dairy cows, or transportation trucks) to enhance production and productivity.

[79] The experience of AGCOM (1.0) reveals that certain value chains such as soya need larger scales for the organizations to endure cycles of low commodity prices. AGCOM (1.0)-supported cooperatives, with an average of 300 members and a maximum aggregated volume of 400 tons per year, are still too small. The same logic is valid for organizations with the potential of exporting their products. To attract the interest of purchasers abroad, organizations need to increase their volumes.

larger shares of women and youth. Some of these investments have already been screened/selected under AGCOM 1.0 and will be ready for rapid disbursement under the proposed Malawi FSRP.

Subcomponent 3.2: Productive Alliances (PA) (US$73 million of which IDA US$68 million equivalent, GAFSP: US$5 million)

14. This subcomponent will support PAs already developed and supported by AGCOM (1.0)[80] and support the development of new PAs,[81] with the target of a total of 560 PAs.[82] PAs enhance the commercialization of agricultural products by linking POs to off-takers (buyers). Under AGCOM (1.0), participating POs were eligible for matching grants for productive capital investments (for example, for the construction of warehouses or the procurement of modern processing equipment, dairy cows, or trucks). While supporting PA, this component will enhance farmers' climate resilience,[83] through access to climate-adapted farming inputs, technologies, and knowledge and to diversified and more lucrative output markets, giving them better tools to manage farm-level climate risks and resources to face climate shocks while reducing food loss and GHG emissions from waste by promoting commercialization of the total production. Therefore, eligibility selection criteria for proposals to receive matching grants will have the inclusion of climate-smart investments and adoption of climate-smart agricultural technologies and practices in their proposed plan as one of the main concepts, with specific quotas to incentivize women's participation. Proposals including use of renewable energy sources will receive bonus points at evaluation for selection. The Malawi FSRP will continue to apply the rules effectively put into practice under AGCOM (1.0), including those relating to beneficiary matching contributions and grant ceilings. In addition to the ongoing window of matching grants under AGCOM 1.0, the Malawi FSRP will pilot a new window of matching grants for off-takers. These successful lessons by AGCOM 1.0 will be shared regionally. As Malawi advances in setting up a system that is fair, transparent, and efficient in building PAs, this approach can be adopted by other countries in the region. To this end, the Malawi FSRP will offer opportunities for sharing the relevant knowledge and experiences (supporting exchange visits, sharing business plans, conducting market analyses for the selected value chains, and so on) with countries that will be implementing similar activities, such as Somalia.

Subcomponent 3.3: Last-Mile Infrastructure (US$21 million of which IDA US$19 million equivalent, GAFSP: US$2 million)

15. POs already awarded matching grants under AGCOM (1.0) or the Malawi FSRP will continue to be eligible to access additional project resources for last-mile infrastructure investments. Investments to be supported through this subcomponent include: (a) the development and rehabilitation of SSI infrastructure benefiting POs in PAs by accelerating the diversification, intensification, and commercialization of agricultural products; (b) the construction and rehabilitation of feeder roads and

[80] AGCOM (1.0) has contributed to diversifying the agricultural sector by promoting sales in 27 value chains, including dairy, soya, rice, tea, and honey.
[81] PAs enable the provision of grants to POs for investments in energy-efficient and climate-resilient infrastructure, thereby reducing the susceptibility of commodities to extreme weather conditions, building capacity on climate-smart value chain development, and reducing food loss and waste and GHG emissions.
[82] They include 200 subprojects for the second round of business plans that have been approved under AGCOM (1.0), 300 new subprojects for regular PAs, and 60 subprojects for the new MG window for SMEs/anchor farm/cooperatives.
[83] PAs enable the provision of grants to POs for investments in energy-efficient and climate-resilient infrastructure thereby reducing susceptibility of commodities to extreme weather conditions, building capacity on climate-smart value chain development, and reducing food loss and waste and GHG emissions.

bridges[84] that connect agricultural areas to markets, as the country's feeder roads and bridges are vulnerable to damage from extreme weather events such as floods and cyclones—the activity will prioritize climate-resilient infrastructure that is designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions; (c) infrastructure for generation of electricity, informed by climate design standards—considering wind, rain, and energy availability—and energy efficiency; and (d) water infrastructure that enables access to clean water and value addition activities. A pipeline of subprojects has already been identified and approved for implementation under AGCOM (1.0). All the preparatory activities, including detailed engineering designs, specifications, bills of quantities, and documents, have been prepared and are ready for tendering. Proposed infrastructure will be informed by climate-resilient design standard considerations.

Subcomponent 3.4: Strategic Public Facilities (IDA: US$9 million equivalent)

16. This subcomponent will construct, rehabilitate, and upgrade strategic public facilities informed by climate design and energy-efficient standards. A preliminary set of investments include, among others, a national agricultural exhibition center, agricultural residential training centers, a central veterinary laboratory and regional laboratories, central and regional laboratories of the Malawi Bureau of Standards (MBS), facilities needed for decentralized land registration in selected districts, trade facilitation infrastructure, and stud-breeding infrastructure. The technical design and social/environmental impact assessment of these infrastructure investments will incorporate climate adaptation/mitigation considerations (for example, integrating water recycling infrastructure to building designs, thermal protection through green roofs and shading, use of energy-efficient mechanical and electrical equipment, and installation of renewable energy sources).

Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (US$10 million of which IDA US$8 million equivalent, GAFSP US$2 million)

17. This component will promote policy reforms relating to agricultural commercialization and climate resilience by building the Government's institutional and technical capacity to develop, update, and implement relevant policies and legal texts. Some of the regulatory documents to be prepared or updated include the agricultural research policy, the horticulture strategy, the contract farming policy, the livestock breeding strategy, the apiculture strategy, and the e-commerce strategy.

18. The project will also assist the MoA in revising Malawi's NAIP 2018–2023 to better align it with Malawi Vision 2063 and Malawi's NDC.[85] The work on revising the NAIP will be coordinated with other FSRP countries and may benefit from studies, climate-informed policy framework, and technical support from the AU in the context of the regional coordination platform the FSRP provides. Other examples of regional policy and legal frameworks that could be supported under the project include: (a) harmonization of the seed act/regulations to SADC and COMESA (expanding the work initiated under the World Bank-funded APPSA), (b) harmonization of fertilizer policy and regulations in the region (COMESA) to facilitate

[84] Malawian feeder roads and bridges are vulnerable to damage from extreme weather events such as floods and cyclones. The activity will prioritize climate-resilient infrastructure that is designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions.

[85] The Project activities are in line with key NDC commitments for climate change adaptation and mitigation. Thus, the Project implementation will also provide inputs and evidence for the integration of strategic climate change adaptation and mitigation measures into the NAIP and related policy / regulatory instruments developed or enhanced with Project support.

efficient fertilizer trade across the region, as well as improving fertilizer use efficiency; (c) domestication of AfCFTA agreements—could include review of existing policies/legal frameworks to promote regional trade; and (d) support to phytosanitary (for example, develop and implement e-phytosanitary system, key to facilitate agricultural exports, imports, and reduction in food loss and waste). The project will also help the Government explore possible pathways for agricultural investment plan reform, a topic of ongoing policy dialogue under both the Malawi FSRP and the ongoing Malawi Growth and Resilience Development Policy Financing (P175072). Capacity building will also focus on the areas of agricultural production, agricultural trade and marketing, standards, and interagency coordination. Enhanced coordination will notably be sought between the MoA, the Ministry of Trade and Industry, and the Malawi Investment and Trade Center. These activities will be subject to considerable cross-learning with FSRP participating countries, CCARDESA, and/or the AU.

Component 5: Contingent Emergency Response Component (US$0)

19. This component will finance eligible expenditures in the event of an emergency precipitated by a disaster. The activation of CERC, by request of the Government, will allow funds to be disbursed rapidly to reduce damage to productive infrastructure, ensure business continuity, and speed up recovery. An IRM-OM will be developed by the Government stipulating the fiduciary, ESF, monitoring, and reporting requirements relating to CERC as well as other coordination and implementation arrangements. In the event of CERC activation, funds from other project components may be reallocated to finance immediate response activities as needed.

Component 6: Project Management (IDA: US$18 million equivalent)

20. **This component will support project management, coordination, and M&E of project activities.** The existing PIU within the MoA will be responsible for project implementation including fiduciary aspects; knowledge management/communication; GRM; CE; and monitoring the implementation of ESF-related measures. It will finance PIU staff-related costs (training and so on), goods, equipment and vehicles, and other eligible expenses associated with overall project implementation. Support will also be provided for social/results/impact surveys at project midterm as well as project completion. The capacity of the PIU will be enhanced by hiring additional technical and administrative staff as needed, including, among others, irrigation engineer and agri-business/MSME value chain expert, technical specialists as needed (who will work with service providers hired for PAs, WUAs, and so on), two additional support persons to administrate the matching grants program, and an additional project accountant and procurement assistant to enhance fiduciary management.

D. Beneficiaries and Areas of Intervention of the Project

21. **The Malawi FSRP will be implemented across the country.** The six irrigation schemes it will develop are located in the center and north of the country, complementing the geographic focus of other ongoing projects. The Malawi FSRP's 560 new PA subprojects are expected to reach 112,000 farming households and bring the overall number of direct beneficiaries to 134,400, of whom at least 50 percent women. Direct beneficiaries will include various value chain actors including producers (farmers and FPOs), buyers (processors, retailers, exporters, and aggregators), POs, financial institutions lending to the agribusiness sector, and targeted government agencies. The project will support the integration of small-scale and emerging farmers (defined as farmers cultivating no more than 8 ha) into value chains by improving their

capacity to finance and execute productivity-enhancing investments and respond to the requirements of end markets and buyers (off-takers). The PA approach used by the project is a demand-driven approach that is meant to enable self-targeting by producers. However, the land registration subcomponent will help officially validate and record the size of participating farmers' land holdings to prevent elite capture. POs will play a pivotal role in helping farmers access markets and diversify what they produce and, at the sector level, enhancing the inclusion of women and youth. The project will take multiple measures to ensure that youth and women benefit fully from its interventions, as in the allocation of matching grants to POs.

E. Project Costs

22. **The project will cost US$265 million over a period of six years.** Sources of financing include IDA grants from Performance-Based Allocations (PBA) and Regional allocations (RI), as well as a grant from GAFSP. The costs shown in table A3.2 include all investment and operational costs, and provisions for physical contingencies and price increases.

Table A3.2. Costs and Financing for the Malawi FSRP (US$, millions)

Components and Subcomponents	Sources of Financing (US$, millions)			
	National PBA	Regional (RI)	GAFSP	Total
Component 1: (Re-)Building Resilient Agricultural Production Capacity	**9**	**17**	**2**	**28**
Subcomponent 1.1: Agricultural Research, Development, and Innovation Systems	4	8	1	13
Subcomponent 1.2: Digital Agriculture	3	6	1	10
Subcomponent 1.3: Land Demarcation and Property Registration	2	3	0	5
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes	**24**	**55**	**2**	**81**
Subcomponent 2.1: Large-to-Medium Scale Irrigation Schemes and Catchment Management	22	53	0	75
Subcomponent 2.2: Institutional Capacity Building for Irrigation Schemes	2	2	2	6
Component 3: Getting to Market	**43**	**76**	**9**	**128**
Subcomponent 3.1: Farmer Organizations	8	15	2	25
Subcomponent 3.2: Productive Alliances	25	43	5	73
Subcomponent 3.3: Last-Mile Infrastructure	7	12	2	21
Subcomponent 3.4: Strategic Public Facilities	3	6	0	9
Component 4: Promoting a Greater Focus on Food Security Resilience in National and Regional Policymaking	**3**	**5**	**2**	**10**
Component 5: Contingent Emergency Response Component		**0**	**0**	**0**
Component 6: Project Management	**6**	**12**	**0**	**18**
Total	**85**	**165**	**15**	**265**

II. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

23. **The lead implementation agency is the Ministry of Agriculture (MoA) which will centralize the fiduciary responsibility.** Malawi FSRP will be led by a Project Steering Committee (PSC) to be established not later than three months after project effectiveness, which will include all the ministries involved. Based on the experience of AGCOM (1.0), a dedicated PIU anchored in the MoA will coordinate overall implementation of the project. The PIU will include competent consultants, covering all critical areas of the project. Compared to AGCOM (1.0), the Malawi FSRP PIU will need enhanced capacity corresponding to the size of the new operation. The PIU will coordinate the project interventions with the MoA; the Ministry of Trade and Industry (MoTI); the Ministry of Lands through the Land Reform Implementation Unit; and the Malawi Bureau of Standards and Malawi Investment and Trade Centre (MITC). The PIU will also coordinate with the districts and, when needed, provide funds to cover their incremental operational costs according to their contribution to the project. **The PIU will coordinate the implementation of the matching grants and the infrastructure investments with the relevant Ministries, Departments and agencies.** Following the success of AGCOM (1.0), the PIU will organize the calls for proposals, coordinate the evaluations, disburse the matching funds to the grantees, support the implementation of the subprojects, and monitor the results. The MoT will participate in this process, particularly with respect to the large cooperatives and MSMEs. It will also lead the dialogue with private sector representatives and off-takers. The PIU will coordinate and lead the last-mile infrastructure investments. The Department of Irrigation (DOI) will lead the design, implementation, and supervision of the medium to large irrigation schemes, outsourcing complex technical designs and supervision as needed. The PIM will be adopted prior to project effectiveness.

B. Monitoring and Evaluation

24. **The project will support the PIU to develop and implement a strong M&E system and framework to monitor progress toward the PDO and intermediate indicators.** A full-time M&E specialist will lead the results measurement exercises, with guidance from the World Bank team. The PDO indicators are designed to capture the incremental changes related to the project among its direct beneficiaries. Intermediate indicators will track periodic progress toward the PDO. The M&E system will focus explicitly on disaggregating results by gender and age (youth) for key performance indicators wherever possible. The impact assessment of the ongoing AGCOM 1.0, currently underway, will collect data to serve as baseline for the indicators in the Results Framework as applicable.

25. **The M&E system will feature an MIS, spot checks, evaluations, and beneficiary assessments to gather accurate data on the indicators.** The MIS will record all information related to project activities, including: (a) basic information on POs, (b) details on business plans and PAs, (c) subproject information (such as physical and financial progress), (d) the FM data from which SoEs will be provided to the World Bank, and (e) project management information for the semiannual progress reports. A midterm evaluation will be conducted halfway into the project implementation period, and a final impact assessment will be conducted two months before the project closing date.

III. APPRAISAL SUMMARY

26. **The MoA has a solid track record leading and implementing complex investment projects.** It has successfully led projects financed by the World Bank, IFAD, the AfDB and other relevant agencies. With IDA financing, the MoA has effectively implemented the AGCOM (P158434), which included a CERC; the Shire Valley Transformation Project (SVTP) Phase I (P158805), with Phase 2 being prepared (P176575); and the Agricultural Productivity Program for Southern Africa (P094183). In addition, the MoA has implemented the Second ASWAp SP I and II (P105256 and P164445), which received financing through a multi-donor trust fund. Lastly, the MoA has contributed to the Malawi Watershed Services Improvement Project (P167860) and the Resilience and Disaster Risk Management Project (P161392).

A. Fiduciary

27. **Financial Management.** Malawi FSRP will leverage the FM capacity developed during AGCOM (1.0). AGCOM (1.0) has complied with all procedures stipulated in the PIM, including reporting financial covenants for both IFRs and audited financial statements. The IFRs have consistently been submitted on time with accurate content. All audited financial statements have been in compliance with policies and procedures as detailed in the Implementation Manual. The FM arrangements established under AGCOM (1.0), including the accounting software for transaction processing and reporting, are to be continued during the implementation of the project. The personnel, including those assigned from the Government, have been qualified, experienced, and capable. With regard to Malawi FSRP, all manuals and FM provisions will be upgraded, including the IFR templates.

Procurement

28. **Procurement procedures.** Procurement activities under the project will be carried out in accordance with the Procurement Regulations; the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006, revised in January 2011 and as of July 1, 2016; and the provisions stipulated in the FA.

29. **Procurement implementation arrangements.** Procurement planning, procurement processing, contract management, and the related decision-making authority under the project will be carried out by MoA through a dedicated PIU. MoA was assessed, risks were identified, and an action plan was prepared. Based on the findings of the assessment and corresponding mitigating measures laid out in the action plan, MoA is in an acceptable condition to implement the project.

30. **Procurement capacity.** The capacity of MoA was assessed during project preparation and found to be acceptable for managing the procurement activities for the project. MoA's Procurement and Disposal Unit is headed by a chief procurement officer and includes senior procurement officer, procurement officer, and assistant procurement officer. MoA is implementing projects financed by the World Bank, such as AGCOM, SVTP-I, SVTP-II, and ASWAP-SP II, and is familiar with the World Bank procurement procedures in general. However, MoA's procurement staff have limited experience in the World Bank's Procurement Regulations as the projects are implemented using market-recruited procurement consultants. The scale of the project has increased compared to AGCOM, with a higher number of contracts, and therefore, as a mitigation measure, MoA will hire two qualified and experienced procurement specialists and two assistant procurement specialists acceptable to the World Bank to

support the implementation of the project. The World Bank will also carefully monitor the procurement processing and provide support and guidance as required. Action plans to improve the capacity of the PIU were put in place and will be continuously monitored to ensure that the units are performing at an acceptable level.

31. **Overall procurement risk.** The assessment above rated the procurement risk as Substantial, given that MoA's procurement staff have limited experience in implementing World Bank's Procurement Regulations, procurement scope, and market-associated risks identified. The assessment identified several risks that could adversely affect project implementation if not mitigated. The mitigation measures are outlined in Table A3.3.

Table A3.3. Procurement Risk Assessment and Mitigation Action Plan

No.	Risk	Risk Type	Mitigation Measure	Time Frame	Responsible Agency
1.	Delays in procurement processing due to limited capacity and workload and many approval stages by different government agencies	Substantial	MoA will hire dedicated procurement specialists with qualifications and experience satisfactory to the World Bank. MoA will put in place mechanisms for regular follow-up and monitoring of procurement processes.	Within three months of project effectiveness During project implementation	MoA
2	Lack of adherence to procedures due to inadequate understanding of the World Bank Procurement Regulations	Substantial	MoA staff involved in project implementation will receive training on the World Bank Procurement Regulations.	During project implementation	World Bank, MoA
3	Limited capacity of the market and supply chain to execute contracts due to continued increases in local inflation and price fluctuations, scarcity of forex, and Russia's invasion of Ukraine.	Substantial	MoA will include (on a need basis) supplier preferencing measures such as price adjustment provisions and direct payment in foreign currencies.	Throughout project implementation	MoA
4	Delays and/or unsuccessful completion of contracts due to inadequate contract management capacity	Substantial	Staff involved in project implementation will undergo contract management training. Contracts identified in PPSD as complex will have Contract Management Plans.	Within six months of project effectiveness	MoA

No.	Risk	Risk Type	Mitigation Measure	Time Frame	Responsible Agency
5	Loss of and/or unauthorized access to procurement records due to poor record management	Moderate	MoA will put in place an effective and secure record management system in addition to strict use of STEP.	During project implementation	MoA

32. **Filing and record keeping.** The Procurement Manual (part of the PIM) will set out the detailed processes for maintaining and providing readily available access to project procurement records in compliance with the FA. The recipients will assign one person responsible for maintaining the records. The logbook of the contracts with a unique numbering system will be maintained.

33. **Commitment control system.** The signed contracts will be reflected in the commitment control system of the recipient's accounting system or books of accounts as commitments whose payments need to be updated with reference made to the payment voucher. This approach will ensure a complete record system whereby the contracts and related payments can be corroborated.

34. **PPSD.** As required by the Procurement Regulations, the MoA has prepared a PPSD. The PPSD sets out market approaches and selection methods to be followed during project implementation. The PPSD identifies optimum procurement strategies on how fit-for-purpose procurement of activities will support project operations for the achievement of PDOs and deliver VfM. Based on the PPSD findings, the PP for the first 18 months was prepared, setting the selection methods to be used by the recipient in the procurement of goods, works, non-consulting services, and consulting services under the project. The PP will be updated at least every 12 months, or as required, to reflect the actual project implementation needs. Each update will require World Bank approval and will be publicly disclosed in accordance with the World Bank disclosure policy. The PPSD is a living document that will be regularly updated during project implementation to provide necessary justifications for procurement arrangements, PPs, and their updates.

35. **Contract strategy.** Goods, services, and civil works are packaged in economical packages to attract local and foreign bidders who are qualified and can offer good prices and complete contracts within the stipulated time frame, resulting in value for money. Packaging for procurement is decided in such a way that encourages adequate participation and is based on two principal forms of procurement packaging: the grouping (or bulking) of procurement activity within a procurement category for acquiring them under a single contract and the division of one activity into multiple lots, where bidders can submit bids for one, several, or all lots (as would be stipulated in the procurement documents) and where a contract could be awarded for each lot or various lots when the awardee meets the qualifications requirements.

36. The following have been considered for procurement packaging:

(a) The likelihood of local suppliers being able to fulfill the requirements and if the packaging would limit their participation
(b) If the requirements are needed (or can be received) simultaneously or there are different delivery dates between requirements. Unless the selected supplier can deliver at different intervals, receiving all the goods at one time could result in a potential logistical problem;

therefore, under these circumstances, it may be preferable not to package the various requirements.

(c) The availability of several suppliers that can provide a combination of procurement categories as may be required in the case of supply, installation, commissioning, and training

(d) The implementing agency's capacity to coordinate several suppliers. If the implementing agency's capacity is limited, this may create a preference for packaging to reduce the number of suppliers that the PIU would have to coordinate with.

37. **Procedures for procurement of works, goods, consulting, and non-consulting services.** Based on the project requirements, technical solutions, and supply base, goods, works, and services have been packaged in economical packages to attract local and foreign bidders who are qualified and can offer good prices and complete contracts within the stipulated time frame resulting in value for money, and the procurement strategy for the project is as follows:

(a) **Works.** Open international market approach using request for bids (RFB) without prequalification will be used for the procurement of the major construction works packages (ranging from US$15,000,000 to US$30,000,000) for (i) construction of Lembani gravity-fed irrigation schemes in Neno District, (ii) construction of Mwenilondo gravity-fed irrigation schemes, and (iii) construction of Bwanje valley extension gravity-fed irrigation scheme in Dedza District. Given the perceived SEA/SH-GBV risks, these packages will use the bidding documents where the World Bank's disqualification mechanism for noncompliance with SEA/SH-GBV obligations apply. Small works for the construction of last mile such as roads, bridges, small irrigation schemes, and water and electricity connections will be procured through a national market approach as there is adequate capacity locally for such works.

(b) **Goods.** Procurement of goods for high-value equipment for Land Information Management System (LIMS) and National Agricultural Management Information System (NAMIS) will be through RFB, and open international approach while motor vehicles, ICT/office equipment, and furniture will be procured through RFB and open international approach.

(c) **Consulting services.** The major consultancy services for: (i) design review and construction supervision of irrigation schemes; (ii) consultancy services for training, formation of irrigation organization/WUAs, and cooperatives and operationalization of irrigation institutions in irrigation schemes; (iii) consultancy for design and construction supervision of MBS laboratory; and (iv) design review and supervision for construction/rehabilitation of district land registries will be procured through Quality- and Cost-Based Selection method following open international market approach. Open national market will be used for procurement of consultancy services for baseline, midline, and endline studies.

38. **Procurement documents templates.** The World Bank's SPDs will be used for the procurement of goods, works, and non-consulting services under international competitive procurement approaches. National bidding documents may be used under National Procurement Procedures subject to the exceptions stipulated in the textual part of the PP except for works which will use the World Bank's Model Standard Procurement Document for Small Works as it includes sufficient provisions to adequately mitigate against environmental and social (including SEA/SH) risks and impacts. Similarly, the selection of consultant firms will use the World Bank's SPDs, in line with procedures described in the Procurement Regulations.

39. **National procurement procedures.** National open competitive procurement procedures may be used while approaching the national market, observing the requirements stipulated in the Procurement Regulations on National Procurement Procedures.

40. **Approach to market.** Based on the size of the contracts under this project, open international bidding will be followed; however, generally, the thresholds shown in Table A3.4 will be used for open national/international and request for quotation bidding under this project.

Table A3.4. Thresholds for Procurement Approaches and Methods (US$, millions)

Category	Works			Goods, Information Technology, and Non-Consulting Services			Short List of National Consultants	
Market Approach and Methods	Open International ≥	Open National <	Request for Quotation ≤	Open International ≥	Open National <	Request for Quotation ≤	Consulting Services ≤	Engineering and Construction Supervision ≤
Malawi	7	7	0.2	1	1	0.1	0.2	0.3

41. **Procurement Plan.** MoA prepared a PP for the first 18 months based on the findings and recommendations of the PPSD. The PP is subject to public disclosure and will be updated on an annual basis or as needed. The updates or modifications of the PP will be subject to the World Bank's prior review and 'no-objection'. The World Bank will arrange for the publication of the PP and any updates on the World Bank's external website directly from STEP.

42. **Review by the World Bank of procurement decisions.** Table A3.5 indicates the contract thresholds that require prior review by the World Bank. All activities estimated to cost below these amounts will be treated as post review and will be reviewed by the World Bank during the Implementation Support Missions under a Post Procurement Review exercise. Direct selection will be subject to prior review only above the amounts given in Table A3.5. The World Bank may, from time to time, review the amounts based on the performance of the implementing entity.

Table A3.5. Thresholds for Procurement Prior Review

Procurement Type	Prior Review (US$)
Works	10,000,000
Goods and non-consulting services	2,000,000
Consultants (firms)	1,000,000
Individual consultants	300,000

43. **Monitoring by STEP.** STEP will be used to prepare, clear, and update PPs and conduct all procurement transactions, including contract management for the project. Through the mandatory use of STEP by the PIU, the World Bank will be able to consolidate procurement/contract management data for monitoring and tracking all procurement transactions and contract implementation.

44. **Publication of procurement information.** The project will follow the World Bank's policies on the publication of procurement information that are outlined in the World Bank's Procurement Regulations.

45. **Fiduciary oversight by the World Bank.** The World Bank will prior review contracts as provided for in the PP. Contracts below the prior review thresholds will be subject to post review according to procedures outlined in World Bank Procurement Regulations on an annual basis by the World Bank team or by consultants hired by the World Bank. The rate of post review is initially set at 20 percent. This rate may be adjusted periodically based on the performance of the procuring entity. In addition, the World Bank procurement team will regularly participate in implementation support missions to assist in monitoring procurement procedures and plans.

46. **Operational costs.** Operational costs financed by the Project would be incremental expenses, including office supplies, O&M of vehicles, maintenance of equipment, communication, rental expenses, utilities, consumables, transport and accommodation, per diem, supervision, and salaries of locally contracted support staff. Such services' needs will be procured using the procurement procedures specified in the PIM accepted and approved by the World Bank.

47. **Procurement Manual.** MoA will prepare a Procurement Manual, which may be part of the PIM, to elaborate procurement arrangements, roles and responsibilities, methods, and requirements for carrying out procurement under the project.

B. Environmental and Social

48. **The project environmental and social risks are rated Substantial.** The project will build on the AGCOM (1.0) project and will be implemented across the country. The nature of the project is that beneficiary POs will be identified through approval of business plans during implementation. Hence, specific project activities and actual sites will be known during implementation, which requires adoption of a framework approach. The risk rating is based on the nature and scope of the works and the preliminary screening of associated environmental and social risks and the capacity of the implementing entities to manage risks and apply the World Bank's new ESF and relevant standards. The identified risks will be managed through the ESCP, which includes capacity building for the PIU, implementing entities, and service providers. The ESCP and SEP have been developed by the client, consulted upon and adopted. These tools were disclosed to the public on April 3, 2023, on the Government's websites (https://www.agcom.gov.mw/downloads/policies-and-guidelines;and *http://www.agriculture.gov.mw/*), as well as in the World Bank's website on the same date. The recipient will adopt the Environmental and Social Management Framework, Labor Management Procedures, and Resettlement Policy Framework, and update the Stakeholder Engagement Plan and the Gender Based Violence Prevention and Response Plan prior to project effectiveness.

49. **Project activities' screening for potential environmental and social risks indicates that the project will have positive environmental and social outcomes for the citizens and economy of Malawi.** The main benefits arise from food and income security, improved livelihoods, improved soil health, sustainable agricultural practices, and sustainably managed catchments. However, the project presents significant environmental risks, including construction related, OHS, dam safety, community and health safety, natural habitats and biodiversity, cultural heritage, waste management associated with agricultural production and processing, e-waste from digital activities, pests and diseases, and water and soil pollution. During project implementation, environmental risks will include soil erosion, siltation, flooding emanating from irrigation designs, water and soil salinity, water-related vector-borne diseases if irrigation systems are not properly maintained, hydrological flow impacts of irrigation schemes operation, and

possible impacts on physical and cultural heritage. It is important to note that most of the districts in Malawi are vulnerable to climate change. This may affect the project and require management and mitigation to safeguard investments. The following ESS therefore apply: ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10.

50. **OP 7.50 - Projects on International Waterways is triggered as the Project intends to construct four irrigation schemes in the four tributaries of Lake Malawi and Shire River basins, which are considered an international waterway.** This activity could potentially increase water abstraction from the tributary of Lake Malawi and could result in increased risk of pollutants entering these international waterways and/or reduced waterflow. According to the World Bank's preliminary assessment, this activity will not affect the water quality or flow in the upstream riparian countries and will not be adversely affected by the possible water use by the other riparian countries. In accordance with the stipulations of OP 7.50, the World Bank has notified all concerned riparian countries on March 22, 2023. No responses were received at the end of the established period (April 19, 2023). All the requirements of the policy are now completed.

51. **Social risks and impacts that have been identified include loss of land and other assets resulting from the development of new irrigation schemes.** There is potential loss of livelihood due to the loss of land, restriction of land use, and involuntary resettlement and the possibility of enterprises developed under Component 1 not becoming viable. Rising incomes at the household level may increase the number of cases of GBV. An expansion of the land to be cultivated under Components 1 and 2 may lead to the use of child labor and exploitation of women. An increase in mechanization under Component 1 may lead to the loss of job opportunities and affect the livelihoods of some community members negatively. There is also potential risk of exclusion, especially for vulnerable groups such as youth, women, and people with disabilities, during the formation of farmer organizations, as well as risks to workers and community safety inherent in construction; risks associated with labor management; labor influx-related risks, including the spread of infectious and sexually transmitted diseases, such as HIV and other communicable diseases; and risks of GBV/SEA/SH. Activities undertaken by the farmer organizations as part of the proposed irrigation schemes may give rise to disputes about land boundaries and land rights.

52. **GBV.** The GBV risk rating for the project is rated as Moderate. The project will develop GBV referral pathways to enhance response to GBV/SEA/SH and a comprehensive GRM with clear strategies to respond to GBV/SEA/SH incidents. In general, these social risks are usually site specific. Therefore, a site-specific GBV risk assessment will be conducted, and mitigation measures will be put in place to manage those risks. Further, all ESF' documents will integrate GBV/SEA/SH issues.

53. **Consultation and disclosure.** The PIU will be responsible for communications, CE, and stakeholder coordination activities during the implementation of the project. Stakeholder consultations and engagement were undertaken as a core element of project preparation, and stakeholder views and feedback have been incorporated into project design and the ESF documents. Continuous consultations and engagement with stakeholders, including government agencies, beneficiaries, civil society, the private sector, and POs, will be undertaken throughout project implementation and operation. A budgeted SEP has been prepared, and resources have been allocated to its activities within Components 1 and 2 of the project. The ESCP and SEP were disclosed on the Government's website on April 3, 2023 (https://www.agcom.gov.mw/downloads/policies-and-guidelines;*and http://www.agriculture.gov.mw/*).

The ESMF, RPF, and LMP have been drafted and will be disclosed by project effectiveness as outlined in the ESCP.

54. **Institutions' ESF capacity.** MoA established a PIU that has the environmental and social capacity to implement AGCOM (1.0) project activities. The project environmental and social risk was categorized as B for AGCOM (1.0), and performance has been satisfactory; however, Malawi FSRP will carry out a wide range of activities that will expose the team to various environmental and social risks, and the risk rating, therefore, has been increased to High. Though the PIU has environmental and social capacity, it is not adequate to manage all environmental and social requirements for farmer organizations. Additionally, the existing PIU has experience with the World Bank's former safeguards policy but will need to learn how to apply ESF requirements through this project. The PIU will enhance its environmental capacity to two specialists and social capacity to two specialists, who will undertake ESF trainings to increase their capacity. The recipient will recruit the following staff to the PIU: environmental specialist, social and gender specialist, environmental health and safety officer, and social development and gender officer with terms of reference satisfactory to IDA.

55. **The preparation and design of the project have involved broad CE, including a number of POs, the National Smallholder Farmers' Association of Malawi, and the Farmers' Union of Malawi.** To ensure continued CE in the project, a full-time communications specialist will join the PIU, and a comprehensive communications strategy will be applied and implemented throughout the project to ensure proper coordination, dissemination, and stakeholder feedback.

56. **Further, during project implementation, Component 4 will upgrade the CE and social accountability mechanism established under AGCOM (1.0).** This will include setting up and upgrading grievance redress schemes, measuring and publicizing project impacts, and generating feedback from beneficiaries. No later than thirty days after project effectiveness, the recipient will establish a project grievance redress mechanism, and maintain and operate it throughout the implementation of the project. Malawi FSRP will continue to use the dedicated website developed under AGCOM (1.0). All communication and visibility efforts will be part of a communication strategy that will be continuously revised and improved. Citizens will provide feedback on the services delivered through multiple mechanisms, including an annual survey commissioned by the PIU. Citizen engagement indicators will form part of the Results Framework.

C. Key Risks

57. **The overall risk for the Malawi Phase 3 project is Substantial.** The main areas of risk above Moderate are presented in the following paragraphs.

58. **Institutional capacity for implementation and sustainability risk is Substantial.** The risk results from unpredictable policy changes that may negatively affect the project: for example, the policy shift that affected the working conditions of the PIU consultants during the life of AGCOM (1.0), creating an exodus of critical staff and the loss of institutional memory. In addition, underperforming contractors can seriously undermine project results and cause negative collateral damage, such as GBV cases. Mitigation measures include the following: continuous dialogue with the Ministry of Finance to encourage sound and predictable policies for consultant fees; close supervision of contractors, including training at the industry level; compiling of positive lists of reliable professional contractors; having dedicated GBV/SEA training

and control mechanisms in place; leveraging the network of district offices for project supervision and hiring external consultants; and introducing GEMS to better monitor all infrastructure investments.

59. **Fiduciary risk is Substantial.** The risk results from procurement capacity and delays. This risk is linked to possible staff turnover[86] and limited contract management capability, including the management of environmental and social risks in works contracts. In addition, limited capacity and multiple approval stages required by government departments can slow procurement processing and slow implementation of the project. Based on experience from AGCOM (1.0) and procurement assessment conducted, mitigation measures include the training and supervision of MoA by the World Bank team; ensuring adequate technical and procurement staff, including hiring and retaining a qualified, experienced procurement specialist and assistant procurement specialist to support PIU operations; increasing procurement lead times; and revising the procurement content of the PIM (for example, ensuring that the PIM clarifies the rules and regulations, clearly defines the step-by-step procedures, contains a matrix of responsibilities for each of the actors, and sets clear timelines).

60. **Environment and social risk is Substantial.** The key risks and mitigation measures are discussed above in section III.B, paragraphs 48-56.

[86] During the implementation of AGCOM (1.0), the procurement specialist and assistant, who substantially had implemented the first phase of the project, left the PIU due to unexpected changes in contracting conditions. This also refers to the risk included under 'Institutional capacity'.

ANNEX 4: Somalia Food Systems Resilience Project

I. PROJECT DESCRIPTION

A. Project Development Objective

1. **The PDO of the Somalia FSRP is to increase the resilience of food systems and the country's preparedness for food insecurity in project areas and, in case of an eligible crisis or emergency, to respond promptly and effectively to it.**

Sector Climate Vulnerability

2. **Somalia is the second most vulnerable country to climate change globally, and recurring and intensifying climate shocks are fueling a growing food security and humanitarian crisis.** Somalia was ranked 181st out of 182 countries in terms of vulnerability to climate change on the ND-GAIN country index[87] and has experienced more than 30 major climate-related shocks since 1990, including 12 droughts and 19 floods. Flooding, which is anticipated to increase in intensity and frequency, is a particularly significant threat in the heavily farmed southwest of the country. Southwest, central, and northwest Somalia are the most drought-prone parts of the country. Worsening drought conditions have contributed to massive internal displacement. In 2022, nearly 65 percent of 1.8 million internally displaced people left their homes on account of drought.[88] This mass displacement of rural dwellers seeking food and basic services in urban areas is likely to further contribute to poverty and vulnerability, increasing remittance inflows and grants, which jointly account for as much as 60 percent of GDP.

3. **The country is currently facing a record-breaking, multi-season drought, the food security impacts of which are being compounded by the global food crisis and the erosion of households' coping capacity.** In October–December 2022, Somalia experienced its fifth consecutive failed rainy season and harvest, driving down national food supply. Household coping capacity has further been undermined by conflict and displacement as well as the loss of livestock. Since mid-2021, over 3 million heads of ruminant livestock are estimated to have died from the drought. According to the latest IPC analysis, approximately 8.3 million people across Somalia are expected to face 'crisis-levels' of food insecurity (IPC Phase 3), or worse, between April and June 2023.[89] This unprecedented level of need within Somalia is in large part owed to the five consecutive seasons of poor rainfall it has faced, with a sixth season of below-average rainfall expected in March–June 2023. Furthermore, approximately 1.8 million or nearly 55 percent of children are expected to be acutely malnourished in the August 2022–July 2023 time frame. Somalia's food systems are increasingly challenged by the uncertainty and variability of weather caused by climate change, including an increased intensity of pests and diseases. In 2020, the hotter weather conditions gave rise to the worst outbreak of desert locust swarms in over 25 years, destroying tens of thousands of hectares of cropland and livestock grazing pastures, and threatening food security and livelihoods. The associated increases in rainfall variability, the frequency and intensity of droughts, and the pest and

[87] ND-GAIN, 2020. A country's ND-GAIN index score is composed of a vulnerability score and a readiness score. Vulnerability measures a country's exposure, sensitivity, and ability to adapt to the negative impacts of climate change.
[88] UNHCR (United Nations High Commissioner for Refugees). 2022. "Somalia Population Dashboard – 31 December 2022."
[89] https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/Multi-Partner-Technical-Release-on-Updated-IPC-Analysis-for-Somalia-fo-October-2022-to-June-2023-Final-(English)-13-Dec-2022.pdf.

disease pressures are already depressing crop yields and food production. The rising intensity and frequency of erratic rainfalls and severe droughts exacerbate the country's water scarcity, adversely affecting food security. Similarly, the main climatic hazards (for example, extreme temperatures and variable precipitation) are already having significant impacts on the livestock sector, resulting in disease outbreaks, increased mortality, and reduced productivity. Somalia's traditional livestock sector is based on nomadic agropastoral systems that make up about a third of the population. In turn, the loss of land productivity is driving land clearing, which in turn is fueling a vicious cycle of land degradation and climate vulnerability while contributing to global GHG emissions. Adding to the challenging context are the weakened conditions of productive infrastructure and public services. These factors limit risk management and climate change adaptation capacities of the population, particularly smallholder farmers, agro-pastoralists, and nomadic pastoralists.

4. Climate change further exacerbates Somalia's structural drivers of food insecurity, including the country's existing deficits in agricultural research, inputs and infrastructure critical to building food system resilience. Low access to infrastructure and related services, particularly in rural areas, together with high cost and lack of crop and livestock extension (such as post-harvest storage, food processing facilities) and veterinary services, hinder agriculture production and productivity amplifying the impacts of climate-induced food insecurity. Somalia's herders continuously face inadequate supplies of fodder, while farmers lack sufficient improved seed varieties adapted to changing climatic conditions. Limited rural connectivity curtails not only access to markets, but also access to agricultural inputs and weather information. Climate change compounds Somalia's dilapidated infrastructure (water, road, market, etc.) and limited institutional and human capacity in agricultural innovation holds back the sector. Increasing the resilience of food systems and the country's preparedness for food insecurity begins with climate-resilient infrastructure. Digital agriculture infrastructure and solution is critical to give Somalia's pastoralists and farmers access to early warning systems and mobile banking as well as platforms to purchase fertilizers, seeds, or sell produce, helping them connect to markets. Therefore, building resilience to climate change and geophysical hazards is a vital step in Somalia's fight against poverty and for sustainable development.

B. Project Results Indicators.

5. Project results indicators are harmonized for all Phase 3 participants and are presented in the consolidated Results Framework for the entire MPA Phase 3 (section VII of this PAD).

C. Project Components

6. With its clear focus on building food systems resilience and the Government's institutional capacity at the federal and state levels, the project is regarded as flagship World Bank-financed agricultural investment project in Somalia. The Somalia FSRP design is based on intensive consultations with the Federal Member States (FMSs) and Federal Government of Somalia (FGS) and has followed a highly inclusive and participatory approach to select the main features and to reflect states' unique context, as well as to complement other active projects.

7. The Somalia FSRP will focus on a few value chains that are particularly pivotal to national and regional food security and economic growth. The criteria used to select them include: (a) potential to contribute to national food security and resilience; (b) relevance to diversification into higher-value production, building on opportunities created by investments in food production; (c) potential for inclusion of women

and youth; (d) climate resilience and potential to mitigate GHG emissions; (e) potential to support diet diversification and better nutritional outcomes; and (f) potential to generate jobs.[90]

Component 1: (Re-)Building Resilient Agricultural Production Capacity (IDA US$40 million equivalent)

8. This component is focused on strengthening the foundations of resilient agricultural production by building the capacity of Somalia's crop and livestock research institutions, its seed and breeding systems, and its extension and advisory services to better cater to small farmers on a large scale.

Subcomponent 1.1: Crop and Livestock Research, Extension, and Seed Systems (IDA US$18 million equivalent)

9. This subcomponent will build the capacity of Somalia's research, extension, and seed systems by (a) helping leading crop and livestock research institutions upgrade their research infrastructure (informed by climate design standards, considering flood and renewable energy use) for testing, providing certification services and technical training capacity on research related to climate-resilient practices/development (addressing climate vulnerabilities such as recurrent droughts, flooding, and land degradation)[91] while reducing GHG emissions of the agriculture and livestock sectors; (b) upgrading crop extension infrastructure including soil testing, early warning, and weather and market information systems; (c) expanding the network of epidemiology and data management units at the federal and state levels and strengthening the National Referral Veterinary Lab; (d) strengthening public veterinary services including and supporting mass vaccination campaigns to address transboundary animal diseases—as climate change has a significant impact on animal health and diseases in Somalia's livestock sector, including diseases outbreaks due to extreme temperatures and vector-borne diseases, this activity will address these challenges by preventing and promptly responding to livestock diseases outbreaks while providing access to improved animal housing, disease surveillance and control, and enhanced veterinary services; (e) strengthening seed systems through large-scale field trials of drought-tolerant and high-yielding varieties; (f) developing new and existing climate-adapted seed certification capacity including support to the Somali Agriculture Regulatory and Inspection Services; (g) building the capacity of climate-adapted seed grower groups and strengthening their links to agro-dealers; (h) developing and validating climate-smart and gender-sensitive TIMPs; and (i) integrating climate-smart TIMPs into extension content delivered through the public and community-based extension systems.

10. In relation to crop farming, the project will support investments in two national-level research institutions focusing on rain-fed and irrigated areas and at least one satellite center in each participating FMS. For livestock, the project will help establish a National Livestock Research Institution and National Genetic and Artificial Insemination Center, which will anchor research and extension in the areas of breed improvement, good animal husbandry practices, animal health and disease surveillance, and herd management and handle the accreditation and supervision of educational institutions for veterinary science and animal husbandry. Scholarships for technical education will be awarded each year to strengthen human resources. The prioritization of investments in research institutions will be guided by comprehensive technical assessments, while investments in public veterinary services will be identified by the World Organisation for Animal Health assessment planned under the Somalia Crisis Recovery

[90] Based on these criteria and stakeholder consultations, the value chains being considered are maize, sorghum, sesame, dairy, poultry, red meat, honey, frankincense, potato, and fish.
[91] FAO. 2022. "Somalia Country Profile." https://www.fao.org/3/cc0074en/cc0074en.pdf.

Project (SCRP). The Somalia FSRP will consider the work being done by other regional and national research institutions such as the International Livestock Research Institution, KALRO, and the Ethiopian Agriculture Transformation Institute (ATI).

11. The subcomponent will invest in research on areas such as low-carbon technologies, which are instrumental to achieving full decarbonization, as well as climate-smart technologies and extension services that will build climate resilience and reduce emissions (for example, seeds with enhanced yields will lead to more efficient use of land, reducing the need for land clearing and subsequent emissions from deforestation. Moreover, improved seeds, drought-tolerant or with other climate-resilient traits, will also reduce emissions by reducing the need for inputs such as irrigation, fertilizer, and pesticides). This subcomponent will provide training on best management practices, such as improved feed and animal health, that can lead to increased animal productivity and reduced emissions per unit produced in the country.

Subcomponent 1.2: Community Engagement and Technology Transfer (IDA US$12 million equivalent)

12. This subcomponent will support (a) rural producers' capacity for collective action, (b) build their capacity to adopt CSA technologies and management practices, and (c) recover from climate shock-related asset losses and establish a strong community-based extension system. The project will build producers' capacity for collective action by supporting the mobilization of farmers, agro-pastoralists, and pastoralists into CIGs, placing a strong emphasis on the inclusion of women and young smallholder farmers. Each CIG will comprise 15–25 producers from a given value chain and will be intensively trained and supported to identify key challenges within their value chain and undertake micro-projects involving the adoption of climate-smart TIMPs. The latter could, for example, involve the demonstration and adoption of conservation agriculture, drip irrigation, and other water conservation techniques or the timely planting and use of early maturing and drought-tolerant varieties. CIGs will be supported to double up as local nodes linking producers to emerging POs involved in marketing crop and livestock products.

13. The project will enhance farmer knowledge and capacity to adopt climate-smart TIMPs by supporting the large-scale deployment of FFSs and agro-pastoralist field schools (APFSs), demonstration plots, and community-based extension services. The project will support a hybrid extension approach wherein lead farmers or community-based facilitators will be identified within farmer groups and further trained to facilitate FFSs or APFSs locally. These community-based extensionists will be backstopped by public extension officers through phone and (bi)monthly visits. Every FFS will be supported to develop demonstration plots and become the epicenter of extension service delivery, training farmers on climate-smart TIMPs and supporting adaptive research and field trial activities. The community-based facilitators will be supported to evolve into digitally enabled local agro-entrepreneurs offering producers a range of support services. Additionally, the project will support asset restoration for farmers and pastoralists affected by climate-related shocks, including small-scale animal restocking, the purchase of seasonal inputs, and community-based assets. The establishment and strengthening of community-based collective actions for climate change adaptation, while providing them with relevant technical expertise on CSA technologies and practices, as well community-based response mechanisms to shocks, will contribute to climate adaptation and mitigation outcomes.

Subcomponent 1.3: Digital Agriculture Solutions and Data Systems (IDA US$10 million equivalent)

14. This subcomponent will support (a) the development of a national database of farmers and pastoralists that will enable more data-driven policy making; (b) the expansion of the livestock identification and traceability system initiated under the DRIVE project; (c) the development of a national DCAS serving registered farmers, with a special focus on women; (d) the development, or incubation, of disruptive agriculture technology (DAT) platform, including hydromet data to increase producers' resilience to extreme weather events and other climate vulnerabilities such as climate variability and unpredictability of rain that drives production losses in crops and livestock; and (e) the mapping of emerging digital solutions in Somalia's agricultural sector, and the selective scaling up of promising climate-smart ones, leveraging the national farmer registry and DCAS to inform farmers of available digital technologies and services, which increase climate resilience. Supported DAT solutions will include ones that offer farmers customized, demand-driven, and climate-informed advisory services (for example, related to climate-adapted seeds and livestock production systems) and support access to financial services including climate risk management. Investments in DAT and emerging digital solutions will contribute to deliver reliable and timely climate information towards supporting improved decision making for improved agriculture production, early warning systems and improved long-term response and preparedness to climate and disaster risk.

Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (IDA US$50 million equivalent)

15. This component aims to enhance water availability for crop and livestock value chains and support rangeland rejuvenation and management. It will be implemented in coordination with ongoing World Bank-financed projects that share these objectives. For example, the Somalia FSRP will complement investments made by the SCRP in the rehabilitation of irrigation and flood control infrastructure already identified and designed[92] and a number already completed. The project will also complement activities carried out under other projects in water infrastructure development,[93] mainly through its investments in energy-efficient water pumping outside the riverine areas touching on international waterways and water-efficient on-farm irrigation systems and promotion of climate-smart crop and livestock farming practices around farmer fields near already established water points.[94]

Subcomponent 2.1: Water Availability for Crops and Livestock (IDA US$38 million equivalent)

16. This subcomponent will enhance water availability for crop and livestock production by building and rehabilitating water collection and management infrastructure and helping improve its management by users and communities.

17. The project will enhance small water works in both rain-fed and irrigated areas, working with CIGs and community groups to identify and prioritize needed hardware investments and supporting participatory planning processes at the state and community levels to prioritize infrastructure

[92] In collaboration with the FAO, SCRP (under MoAI implementation) has identified and designed a total of 58 irrigation and water development investments but will only be able to finance 20 of these. This presents a good starting point for Somalia FSRP.
[93] Mainly Biyoole, Barwaaqo, and Horn of Africa groundwater projects.
[94] Any activities that involve the use or potential pollution of international waterways, that is, Juba-Shebelle system and connected aquifers, will not be eligible for project financing. The POM will reflect this as part of the eligibility criteria.

investments. In riverine areas vulnerable to flooding, the subcomponent will scale up the provision of agriculture and livestock services complementary to support investments made by ongoing initiatives funded by the World Bank and other development partners in the rehabilitation of flood control infrastructure including barrages, water gates, and canals, most of which have already been identified by the SCRP. In rain-fed areas, the project will invest in complementing efforts of other ongoing as well as in developing multipurpose water harvesting and water catchment structures. These may include solar pumping solutions, irrigation networks extending from rainwater harvesting reservoirs to farmers' fields, and conservation agriculture technologies such as drip irrigation. In improved irrigation zones and especially those in riverine areas, the project will fund farmer-led fodder production efforts as well as the introduction of energy-saving and water use-efficient technologies and devices and equipment used in spate irrigation and contour bunding and terracing. Finally, to improve water management by communities, the project will build the capacity of WUAs and other community organizations and facilitate the development of detailed plans to govern the O&M of community-based water works and multiuse water points. It will also identify and disseminate climate-smart practices already used locally to mitigate the evaporation of water and siltation. Proposed infrastructure will be informed by climate-resilient standard considerations for design and construction.

Subcomponent 2.2: Rangeland Management (IDA US$12 million equivalent)

18. This subcomponent will contribute to restoring degraded rangelands by supporting (a) large-scale reforestation efforts around pastoral and agropastoral settlements; (b) community-based rangeland management; (c) sustainable rangeland-based livelihoods, including key activities to mitigate climate change (for example, rotational grazing, soil conservation, and agroforestry increasing soil carbon sequestration) and enhancing climate resilience (for example, improving water infiltration, diversifying crops, and livestock production systems) helping farmers overcome climate vulnerabilities derived from climate-related shocks, such as droughts or floods; and (d) fodder production and storage which will address climate vulnerabilities related to uneven rain seasons and extreme temperatures. To support large-scale reforestation, afforestation, and pasture re-seeding efforts, the project will make use of drought-resistant, fast-growing, and nitrogen-fixing grasses and forage varieties identified and validated by crop research institutions.

19. To help communities sustainably manage their natural resources, the project will provide TA to CIGs and other community institutions to address several climate vulnerabilities, such as flooding and soil erosion, developing and effectively managing micro-catchments, which can help improve water filtration and flood control, enhancing soil moisture retention, and reducing soil erosion. The project will also support applied research on approaches to rangeland rehabilitation, including opportunities for resting pastureland and deferring (delaying) grazing and configurations and uses of water points that help prevent overgrazing. To support rangeland-based livelihoods, the project will incubate enterprises and technically assist private sector players making sustainable and productive uses of local resources to develop viable business models. To support rangeland-compatible water management and fodder production, the project will support community-driven enforcement of rotational grazing; the distribution of seeds to fodder production groups and enterprises; improvements in fodder and feed productivity; and aggregation, processing, and storage capacity. Through the rangeland-based livelihood intervention, the project will support communities rehabilitating their livelihood assets while actively taking part in the process of restoring their rangeland and contributing towards their income, contributing to climate adaptation and mitigation outcomes.

20. The subcomponent includes agricultural activities that contribute to increasing the carbon stock in the soil. Agroforestry, reforestation, and restoration of degraded lands can provide GHG emission reduction and improved carbon sequestration[95]. Mitigation opportunities lie in improving or restoring watershed functions through activities such as afforestation and protected area management that also restore soil carbon pools; developing guidelines on watershed management and erosion control; and developing a long-term watershed conservation and restoration plan that aims to achieve sustainable soil aggregation, land restoration, and reforestation in target areas. Additionally, this subcomponent includes activities that improve carbon sequestration through rangeland management.

Component 3: Getting to Market (IDA US$20 million equivalent)

21. This component will strengthen the agricultural and livestock sectors' market orientation, helping it cater to both domestic and regional markets. It will do this by supporting existing and new FPOs and agri-food enterprises, the development and upgrading of market infrastructure and export-oriented testing and certification capacity, and rural producers' access to savings and credit services.

Subcomponent 3.1: Farmer Producer Organizations (FPO) and Agrifood Enterprises (IDA US$5 million equivalent)

22. This subcomponent will work with private, market-facing organizations, helping establish and strengthen existing FPOs[96] and develop small and medium agri-food enterprises. FPOs will be selected to receive project support based on their business performance, inclusiveness, technical and managerial capacity, and, as a priority criterion, the adoption of CSA technologies and practices in their plans. FPOs will receive 'inclusion grants' to expand their membership, digitize their operations, strengthen their governance and management systems, and prepare bankable EDPs. FPOs with strong EDPs may receive a matching grant to expand their processing, value addition, and marketing activities, as well as strengthening their ability to include the adoption of CSA technologies. The subcomponent will build the capacity of small and medium agri-food enterprises for value addition, marketing, and branding by providing them with matching grants and TA, linking them to CIGs and FPOs, and helping them develop climate-informed business plans to access commercial lines of credit and other financial services. FPOs can provide farmers with access to up-to-date information and knowledge about best practices for adapting to changing climatic conditions, such as drought-resistant crops, irrigation technologies, and soil conservation methods. Additionally, they provide peer-to-peer learning experiences and improved access to diversified markets. Enterprises selected for support will have to demonstrate potential for the adoption of climate-smart practices, job creation, and co-financing. Value chain assessments will be carried out in every region to identify and target value chains based on where the greatest market opportunities lie, including opportunities for value addition, productivity enhancement, and the inclusion of women and youth.

[95] For example, the project will support the expanded use of the invasive *Prosopis juliflora* tree (also known as mesquite or, in Somali, *garaanwa*) for the production of charcoal and commercial livestock feed. To protect the health, productivity, and sustainability of frankincense, myrrh, and gum Arabic production in Puntland and Somaliland, the project will support the promotion and enforcement of sustainable tapping methods, new private investments in processing (for value addition), and the adoption of export market quality standards.

[96] FPOs refer to both farmer and livestock producer organizations.

Subcomponent 3.2: Market Infrastructure and Enterprise Development (IDA US$10 million equivalent)

23. Using a cluster-inspired approach, this subcomponent will support the safety and marketability of crop and livestock products, including for export, by developing and upgrading physical infrastructure and quality assurance services and training value chain actors on food safety. Under this subcomponent, the project will generally adhere to the One Health approach, investing in improved market climate-resilient facilities ensuring enhanced productivity, reduced postharvest losses, the use of renewable energy, and increased value of the products while addressing climate vulnerabilities such as exposure and susceptibility to extreme weather conditions or energy disruption for producers, improving the handling of crop and livestock products, mitigating postharvest losses and food contamination, and facilitating adherence to SPS standards. The project will support value chain actors' adherence to SPS and other food safety standards by working with CIGs, agro-processors, and exporters and training them on safe food handling best practices and standards. This subcomponent will invest in avoiding food losses along the value chain (using the IFC's Food Loss GHG accounting tool). To address this issue, improving market access and product transportation is key to reducing postharvest losses. By doing so, GHG emissions along the food supply chain can be reduced.

24. Infrastructure and service upgrades will be supported through direct investments and the development of PPPs and target climate-resilient infrastructure and services used in postharvest handling;[97] storage, transportation, and testing and certification of agricultural products. The latter may include rural trunk and feeder roads;[98] cold storage; facilities and associated services used to trade live animals (such as holding grounds and veterinary health certification services) and animal products (slaughterhouses and meat processing facilities); and grading, sorting, processing, and storage facilities. The project will specifically support the development of a reliable public animal health certification system, which will be needed to grow exports of live animals. Proposed infrastructure will be informed by climate-resilient and energy-efficient design standard considerations.

Subcomponent 3.3: Access to Finance (IDA US$5 million equivalent)

25. This subcomponent is focused on enhancing access to finance at various levels to catalyze adoption of climate-smart TIMPs by smallholder farmers and pastoralists with special incentives that target female farmers. At the CIG level, the project will support intensive financial literacy and capacity building to promote member savings which will be matched by the project. The combined funds (farmer savings plus matching grants) will be used to establish a revolving fund that extends small loans to group members for the adoption of climate-smart TIMPs developed under the project. At the FPO level, the project will provide capital support to enable advance collective purchase of key inputs and services and provision of the same to CIG members. To the extent possible, financial transactions at CIGs and the FPO level will be digitized to develop credible performance metrics for small farmers, pastoralists, and FPOs. The

[97] With current trends and future projections of extreme precipitation, postharvest handling infrastructure is vulnerable to damage which could lead to entire harvest losses and increased GHG emissions. Therefore, investments in climate-resilient and energy-efficient postharvest infrastructure will enable the infrastructure to withstand weather extremes, thereby reducing food loss and waste and GHG emissions.

[98] Rural roads are vulnerable to damage from extreme weather events such as floods, landslides, storms, and cyclones. This activity will prioritize climate-resilient infrastructure and planning (for example, improving drainage systems, reinforcing roads with appropriated materials, and protecting coastal roads from erosion) that is designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions while improving the resilience of rural communities that depends on these roads for access to critical services and economic opportunities.

performance data will be shared with formal financial institutions and other service providers to build sustainable access to credit and other financial services.

Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (IDA US$25 million equivalent)

26. This component will build food systems resilience at the national and regional levels by focusing on building the capacity of public institutions and identifying relevant policy reform opportunities, taking into account implementation support for Somalia's NDC.[99] In both the crops and livestock sectors, it will build the capacity of government institutions at the federal and state levels and carry out comprehensive assessments of agri-food policies. Strengthening institutional capacity at all levels, both for crop and livestock sectors, including increasing the capacity of public institutions for climate mainstreaming in the design and implementation of crop and livestock sector policies, is critical to building Somalia's food system resilience.

Subcomponent 4.1: Institutional Infrastructure and Capacity Development for the Crop Subsector (IDA US$12.5 million equivalent)

27. First, the subcomponent will build the capacity of the Ministry of Agriculture and Irrigation (MoAI) and its state-level line ministries to provide high-quality public services to the agri-food sector. It will do this by building human resources and constructing or rehabilitating physical government facilities (such as offices); prioritizing climate-resilient infrastructure and planning designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions (rising temperatures, change in precipitations and extreme weather events[100]) through improving drainage systems, reinforced with appropriated materials; and including the use of renewable energy and thermal insulation. To guide its investments and those of subsequent efforts, it will carry out a comprehensive needs assessment, building on the work of the SCRP. The subcomponent will build human resources by sponsoring higher and continued education for ministerial staff; recruiting technical specialists; training new and existing staff; and establishing knowledge partnerships with CGIAR institutions, KALRO, Ethiopia's Agriculture Transformation Agency, and other organizations in the region. Second, the subcomponent will carry out an assessment of 'gaps' and opportunities to mainstream climate resilience in national agri-food policy and identify where TA is immediately needed to formulate or update policies and action plans relating, among other topics, to seed systems, land tenure, food safety management, biosecurity, and other One Health arrangements. This subcomponent will invest on national and territorial cross-sectoral policies that aim to lead to climate change mitigation actions or technical support for such actions. Proposed infrastructure will be informed by climate-resilient and energy-efficient design standard considerations.

Subcomponent 4.2: Institutional Infrastructure and Capacity Development for the Livestock Subsector (IDA US$12.5 million equivalent)

28. Following a similar approach to that used in the crops sector, this subcomponent will focus on the Ministry of Livestock, Forest and Range (MoLFR) and its line ministries at the state level, building its human

[99] The Project activities are in line with key NDC commitments for climate change adaptation and mitigation. Thus, the Project implementation will also provide inputs and evidence for the integration of strategic climate change adaptation and mitigation measures into policy, regulation and institutional capacities developed/enhanced with Project support.
[100] https://climateknowledgeportal.worldbank.org/country/somalia/trends-variability-historical.

and organizational capacity; rehabilitating its physical facilities; and prioritizing climate-resilient infrastructure and planning (for example, improving drainage systems, reinforced with appropriated materials, and including the use of renewable energy and thermal insulation) designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions, such as rising temperatures, change in precipitations, and extreme weather events.[101] The latter may include new legislation governing rangeland use and tenure, climate-smart animal health and welfare, meat inspection, and pesticides and the regulatory framework for the animal health certification system to be developed under Component 3 to facilitate livestock exports.

Component 5: Contingent Emergency Response Component (US$0)

29. This component will finance eligible expenditures in the event of an emergency precipitated by a disaster. The activation of CERC, by request of the Government, will allow funds to be disbursed rapidly to reduce damage to productive infrastructure, ensure business continuity, and speed up recovery. An IRM-OM will be developed by the Government stipulating the fiduciary, ESF, monitoring, and reporting requirements relating to CERC as well as other coordination and implementation arrangements. In the event of CERC activation, funds from other project components may be reallocated to finance immediate response activities as needed.

Component 6: Project Management (IDA US$15 million equivalent)

Subcomponent 6.1: Project Coordination and Management (IDA US$13.5 million equivalent)

30. This subcomponent will help establish and strengthen project coordination and management structures within the FGS and FMSs in line with the agreed-upon project implementation arrangements. At the federal level, the subcomponent will fund all full-time staff, office infrastructure, transportation, and operating costs of the NPCU, which will be established to oversee the Somalia FSRP's implementation. The subcomponent will also support FMS-level PCUs including dedicated staff and consultants involved in project implementation. Additionally, the subcomponent may support the onboarding of TPIAs.

Subcomponent 6.2: Monitoring and Evaluation (IDA US$1.5 million equivalent)

31. This subcomponent will fund the establishment of a full-fledged MIS with requisite data collection and analysis systems and digital dashboards for decision support at all levels of implementation. It will also support the onboarding of competent technical agencies to carry out impact evaluations and training on data-driven decision-making and performance management.

D. Beneficiaries and Areas of Intervention of the Project

32. **The Somalia FSRP will directly benefit an estimated 350,000 small farmers, agro-pastoralists, and nomadic pastoralists, at least 30 percent of whom will be women.** In addition, the project will support value chain stakeholders including women-owned agribusiness enterprises, financial services providers, DAT start-ups, and agricultural research and extension institutions. Within the public sector, the project will also build the capacity of MoAI, MoALF, and other relevant ministries and institutions at the federal

[101] https://climateknowledgeportal.worldbank.org/country/somalia/trends-variability-historical.

and state levels to implement resilience-focused policies. The latter is expected to indirectly benefit all agricultural stakeholders who have access to public services.

33. **In terms of geography, the project will be implemented in the following six states of Somalia: Jubbaland, South-West, Galmudug, Hirshabelle, Puntland, and Somaliland.** Each participating FMS is expected to sign a subsidiary agreement. Within each state, the project will be implemented in 8 selected districts, to be identified on the basis of several 'exclusion' and 'inclusion' criteria. Excluded from consideration will be districts that (a) are inaccessible due to high levels of insecurity, (b) have large areas of contested lands leading to significant challenges in complying with environmental and social framework, and (c) have large investment projects similar to the Somalia FSRP. Districts to be targeted by the Somalia FSRP will be selected on the basis of the following 'inclusion' criteria: (a) the potential for impact within priority value chains in terms of farmer coverage, potential productivity gap to be bridged, and maturity of specific value chain within the district; (b) implementation readiness in terms of systems, existing institutions, and infrastructure;[102] (c) level of community vulnerability and marginalization (including high share of rural population under IFC3+); (d) the existence of ongoing, complementary investments; (e) potential for investments to have national and regional spillover effects, notably in the control of transboundary animal disease and population displacement, and (f) the development and resilience of regionally significant value chains.

E. Project Costs

Table A4.1. Costs and Financing for the Somalia FSRP (US$, millions)

Component/Subcomponent	PBA	RI	TOTAL
Component 1: (Re-)Building Resilient Agricultural Production Capacity	**10.0**	**30.0**	**40.0**
Subcomponent 1.1 Crop and Livestock Research, Extension, and Seed Systems	3.0	15.0	18.0
Subcomponent 1.2: Community Engagement and Technology Transfer	5.0	7.0	12.0
Subcomponent 1.3: Digital Agriculture Solutions and Data Systems	2.0	8.0	10.0
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes	**16.0**	**34.0**	**50.0**
Subcomponent 2.1: Water Availability for Crops and Livestock	12.0	26.0	38.0
Subcomponent 2.2: Rangeland Management	4.0	8.0	12.0
Component 3: Getting to Market	**5.0**	**15.0**	**20.0**
Subcomponent 3.1: Farmer Producer Organizations and Agrifood Enterprises	1.5	3.5	5.0
Subcomponent 3.2: Market Infrastructure and Enterprise Development	2.0	8.0	10.0
Subcomponent 3.3: Access to Finance	1.5	3.5	5.0
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking	**9.0**	**16.0**	**25.0**
Subcomponent 4.1: Institutional Infrastructure and Capacity Development for the Crop sector	4.5	8.0	12.5
Subcomponent 4.2: Institutional Infrastructure and Capacity Development for the Livestock sector	4.5	8.0	12.5
Component 5: Contingent Emergency Response Component	0.0	0.0	0.0

[102] The project may choose to adopt a phased implementation approach wherein districts with low implementation readiness will be entered into after initial systemic capacity building.

Component/Subcomponent	PBA	RI	TOTAL
Component 6: Project Management	**10.0**	**5.0**	**15.0**
Subcomponent 6.1: Project Coordination and Management	9.0	4.5	13.5
Subcomponent 6.2: Monitoring and Evaluation	1.0	0.5	1.5
TOTAL	**50.0**	**100.0**	**150.0**

II. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

34. **The Somalia FSRP will be implemented at the federal level by the Federal Ministry of Agriculture and Irrigation (MoAI), in coordination with the Ministry of Livestock, Forestry and Range (MoLFR) and the relevant line ministries of participating Federal Member States.** There will be a comprehensive assessment of implementation readiness for the ministries at the federal and state levels. The recipient will establish a national project steering committee no later than three months after project effectiveness, co-chaired by the Minister for Agriculture and Irrigation and the Minister for Livestock, Forestry and Range, and comprised of representatives from other relevant stakeholder institutions. A national project coordination unit (NPCU) housed in the MoAI will be established not later than three months after project effectiveness. The NPCU will have strong representation from the Ministry of Livestock, Forestry, and Range (MoLFR and will be strengthened through the recruitment of additional staff and consultants who will be made responsible for project management tasks including administration, M&E, communication, procurement, FM, and ESF, as well as GBV and SEA/SH. Additionally, the project will contract dedicated subject matter specialists deployed at the federal and state levels. It will significantly benefit from implementation capacity developed under the Biyoole Project that has performed moderately satisfactorily during the last couple of years.

35. **Project implementation and coordination at the national level will be anchored by the NPCU.** The NPCU will be a high-capacity multi-thematic unit comprising representatives from MoAI and MoLFR. The NPCU will also have thematic specialists to support various project components including but not limited to crop production specialists, animal health specialists, financial inclusion specialist, a digital agriculture specialist, a private sector specialist, and a gender specialist. Additionally, the NPCU will have dedicated personnel for environmental and social aspects, finance, security, gender, procurement, and M&E. Detailed ToR will be developed for each of these positions. The NPCU positions will be filled primarily through secondment from stakeholder ministries and departments. In case suitable staff are unavailable, the project will recruit staff. Wherever needed, the project will engage leading technical agencies and research institutions to backstop implementation capacity and technical training. The focus of these partnerships will be to build long-term institutional capacity within MoAI and MoLFR at the FGS and FMS levels through co-implementation, training, and capacity building. At the community level, the project will engage existing as well as newly mobilized community institutions including CIGs, representative village-level organizations, and FPOs as key implementation stakeholders.

36. **As part of the implementation arrangements, the recipient will put in place technical advisory committees at the national and state levels.** The latter would include representatives from producer cooperatives and organizations, the chamber of commerce, banking associations, livestock associations, and other private sector associations. A national technical advisory committee to be established not later

than three months after grant effectiveness will be co-chaired by Directors General of the MoAI and the MoLFR and comprised of representatives from relevant ministries and other relevant stakeholder institutions. The purpose of these technical advisory committees will be to bring in sectoral insights, coordinate investments, and build stakeholder feedback into project design and implementation. For investments at the local level, the project will engage in intensive community consultations in the design, validation, and implementation of activities. The project will leverage the network of institutions mobilized under the project as well as pre-existing community forums to identify and prioritize investments. To the extent possible, the NPCU will engage in multi-ministerial visits to assess the multi-sectoral needs of communities and develop local investment plans.

B. Results Monitoring and Evaluation Arrangements

37. **The project will develop and implement a robust monitoring, evaluation, and learning system to track and assess the project's progress toward the PDO and utilize digital technology solutions for proactive learning and needful course correction.** The M&E system will disaggregate all relevant project data by gender, further distinguishing female participants by age (women and girls) and household type (female-headed and male-headed), and it will analyze how gender gaps evolve over time. A project-specific MIS will be established and will leverage capacity building and information technology (IT) infrastructure investments supported at MoAI level to deliver high-quality information dashboards for project stakeholders at various levels. The system will be aligned to the National M&E Policy and the National Monitoring Framework once developed.

38. **Project M&E efforts would be supplemented by World Bank-procured TPM arrangements in areas being implemented through TPIAs.** The recipient will select and engage, by no later than six months after project effectiveness, the services of a duly qualified and experienced monitoring consultant(s) to monitor the achievement of the project's objectives. TPM frequency will be quarterly in the early project phase and, based on contextual improvements, semiannual at most after the 18th month of implementation. TPM arrangements may cover the following aspects (among others): implementation progress or completion status, physical verification of infrastructure, compliance with the ESF, the effectiveness of the project's GRM responding to complaints, and fiduciary compliance. The contracted agency will be a private or public firm, a civil society organization, an international NGO, or a UN organization, required to have strong knowledge of the country's context, a country footprint, experience, ability to establish and enforce effective security systems, ability to develop effective working relationships with government and other implementing entities, relevant technical and sectoral knowledge, ability to integrate technology into monitoring procedures (where relevant), and ability to mobilize rapidly. Contracts will include provisions that require the contracted TPM entity to strengthen the Government's capacity to conduct such tasks at a later stage.

III. APPRAISAL SUMMARY

A. Fiduciary

39. **Financial Management.** Given the consideration for use of country systems, the project will adopt the use of country systems in various aspects of the project FM including planning and budgeting, accounting, enhanced internal control framework reporting, funds flow and banking, oversight arrangements with the Office of the Auditor General, and staffing. The External Assistance Fiduciary

Section (EAFS) already established under the respective Offices of the Accountant General[103] and staffed with mainstream civil servants in consultation with the Directorates of Finance in MoAI will oversee and manage the project FM. The EAFS units have been fully operational at the FGS, Puntland, Somaliland and respective FMSs for the last six years. The need for a dedicated project accountant based at the PIU will be determined to which the Accountant Generals will second appropriate qualified EAFS staff to the NPCU in line with ToR as will be agreed with the World Bank.

40. The EAFS Unit at FGS, Somaliland and the respective FMSs working closely with the respective implementation management units will prepare and submit to the World Bank the project's annual work plan, budget and cash flow forecast and related procurement plans for the project for the necessary approvals by the Bank before being included in the Government Appropriations and the relevant sector within FGS budgets. Monitoring of budget execution will be done through regular submission of quarterly interim unaudited financial reports to Government and the Bank. The project accounting capacity will comprise a dedicated accountant at the NPCU supported by the EAFS staff in the Office of the Accountant General. The team will be responsible for ensuring efficient payment processing, accurate recording and timely financial reporting. The project will ensure submission of quarterly interim unaudited financial reports to the Bank within 45 days after the end of the quarter. The project will also prepare annual financial statements which will be submitted for external audit within three months after the financial year end. External audit of project financial statements will be conducted by the Office of the Auditor General FGS in collaboration with the respective Auditors General in the Federal Member States. Project financial statements for Somaliland will be audited by the Office of the Auditor General for Somaliland.

41. The project internal control framework including control procedures over fixed assets, imprests and staff advances, cash and bank balances and contract management will be detailed in the Project Implementation Manual (PIM) which will be aligned with the government's Comprehensive Operations and Accounting Procedures Manuals (COAPM). The PIM will be prepared and adopted prior to project effectiveness. The key fiduciary risks under the project relate to activities under component 3 which are planned to be executed at the community level. This includes provision of small-scale seed capital and matching grants to Producer Organizations (POs), as well as capital investment support to build their capacity for value addition, marketing, and branding (subcomponent 3.1). It also includes investments into feeder road construction and rehabilitation, common testing facilities, warehousing facilities, and cold chain storage under subcomponent 3.2. In addition, the project will support deployment of community level revolving funds at CIG level that can support collateral free access to small credit for small farmers (including women farmers) and pastoralists (subcomponent 3.3). All these activities could portend high fiduciary risks because they involve disbursement of funds to multiple groups at community level with limited capacity, accountability, and infrastructure. To address these risks, the project will develop a small grants manual which will detail the procedures for access to the financial support, eligibility criteria and the accountability mechanisms to ensure funds reach the intended beneficiaries. The Monitoring Agent will also conduct regular review of the project activities and submit a report to the Bank. The Bank FM team will also conduct biannual FM supervision review of project activities to assess the continued adequacy of the FM arrangements, identify emerging fiduciary risks and recommend mitigation measures.

42. The project will follow the transaction-based Statement of Expenditure method of disbursement. Based on the project's cash forecasts, funds for the project will be disbursed directly from the World Bank

[103] FGS, Puntland, Somaliland, and all FMSs.

to the project designated bank accounts (DA-A) for FGS, DA-B for the Federal Member States (FMS) and DA-C for Somaliland. Both DA-A and DA-B will be opened in the Central Bank of Somalia while DA-C for Somaliland will be opened in the East African Bank, Djibouti or other commercial bank acceptable to IDA. The request for funds withdrawal will be made by Government through the World Bank Client Connection (CC) in line with the World Bank disbursement procedures. The initial withdrawal request will be accompanied by a six-month cash forecast. Thereafter, withdrawal of funds will be based on submission of withdrawal applications to the Bank accompanied by evidence of accountability for previous disbursements as reflected in the Statements of Expenditure (SOE). Retroactive financing up to an aggregate amount not to exceed SDR 1,200,000 may be made for payments for eligible expenditures made prior to the signing date of the Financing Agreement but on or after March 1, 2023.

43. **Procurement.** The project will be carried out in accordance with World Bank procedures: (a) the World Bank Procurement Regulations for IPF Borrowers, dated November 2020; (b) Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006 (revised January 2011 and as of July 1, 2016); and (c) other provisions stipulated in the FA. The implementing agency prepared a PPSD and a PP, reviewed and approved by the World Bank. In addition, the World Bank procurement team will carry out procurement capacity assessment to ensure that the implementing agencies have adequate capacity to implement the procurement activities of the project. The procurement capacity assessment will cover issues related to procurement regulatory framework and management capability, integrity and oversight, procurement process and market readiness, and procurement complexity. Based on the capacity assessment, the procurement risk and mitigation measures is considered High, which will be monitored and updated as needed. Also, the World Bank's STEP approach will be used to prepare, clear, and update PPs and conduct all procurement transactions for all implementing agencies of the project. Procurement staff of the implementing agencies not familiar with STEP will be trained on using STEP.

B. Environmental and Social

44. **Overall, the project will bring about positive benefits such as increasing rural employment opportunities and improving rural livelihoods through improved agricultural productivity and food and income security.** Its positive environmental outcomes include resilient and productive food systems and water and soil moisture conservation investments, including improving soil health and quality, as a result of adoption of sustainable agricultural practices and sustainably managed catchments. The project recognizes that building resilience is a long-term process, and the TA activities include strengthening the national and regional public policies and systems' response capacity to various shocks and stressors, thus enabling them to contribute to greater food systems resilience.

45. **The project involves community-based finance and digital financial services and strategic infrastructure investments to upgrade value chains and reduce losses for farmers and value chain stakeholders and investments into cold chain infrastructure for livestock produce; grading, sorting, and processing facilities for crop produce; and improved storage infrastructure to reduce postharvest losses and aflatoxin contamination.** Under the World Bank's ESF, the environmental and social risk of the project is High.

46. **The project activities in Somalia will also generate a variety of environmental health and safety risks and impacts.** These include health and safety risks and impacts during construction and rehabilitation of SSI schemes, storage, cold chain, processing, and marketing facilities; operational phase including risks that may result from inappropriate use, handling, and disposal of agrochemicals including

pesticides as well as agricultural research centers; overuse of water and water contamination by agrochemicals; degradation of soils; direct and indirect impacts on biodiversity and ecosystems; and local environmental pollution, for example, air, waste, noise. Project activities may also cause social risks related to the construction of infrastructure, including land acquisition and resettlement impacts. To identify and manage potential environmental and social risks, the Government of Somalia will adopt and publicly disclose the Environmental and Social Management Framework (ESMF), the Resettlement Policy Framework (RPF), the Vulnerable and Marginalized Group Framework, Livelihood Restoration Plans, the Sexual Exploitation, Abuse and Harassment Prevention and Response Plan, Integrated Pest Management Plans (including emergency response measures), the Waste Management Plan, and an Integrated Pest Management Plan (IPMP), prior to project effectiveness. The ESMF will include, among others, screening, risk assessment (including cumulative and downstream impacts), general mitigation measures, guidance for site-specific instrument preparation, exclusion/eligibility criteria, and a checklist to monitor implementation of mitigation measures. It will also include security risks assessment and mitigation measures.

47. **The recipient has prepared the ESCP, SEP, and ESMF which includes an SEA/SH prevention and response action plan, RPF, and LMP.** During preparation of these instruments' meaningful consultation, participation was conducted in accordance with ESS10 requirements. Final instruments will be disclosed on the Government's ministry project website. A site-specific comprehensive ESMP (including social assessments, inclusivity plans, LMP, SEA/SH, and Resettlement Action Plans/livelihood restoration plans), and Security Management Plan will be prepared and approved before contracting and in place before implementation. A project-wide security risk assessment and management plan will be created within six months of the grant effectiveness.

C. Key Risks

48. **The overall risk of the project is High.** Somalia represents a complex operational environment with substantial risks that have the potential to derail project activities and impede achievement of the project's objectives. Many risk categories are rated High or Substantial, with the exception of three: Sector Strategies and Policies; Technical Design; and Institutional Capacity for Implementation and Sustainability; which are rated Moderate.

49. **Political and governance (High).** Relations among the FGS and FMSs could affect project implementation. Further, the current new administration could heighten existing tensions in Somalia and shift development priorities. The project design is community development-based and, as such, is protected from the higher-level political issues. However, political instability can quickly result in insecurity. Fighting in Somalia tends to be isolated and, in the event of the security situation suddenly deteriorating, project activities and funds can be reallocated to more secure states and districts. Strong intergovernmental relations built up under ongoing projects will help mitigate political and governance risk.

50. **Macroeconomic (High).** Somalia's economy is subject to low and volatile levels of growth. Upon reaching the Heavily Indebted Poor Countries Initiative Decision Point milestone in 2020, growth was projected at 3.2 percent. However, numerous shocks such as COVID-19, floods, and desert locust infestation caused an economic contraction of 0.3 percent in 2020. While there was a modest economic recovery in 2021, with growth estimated at 2.9 percent, severe drought and famine conditions are emerging, which are contributing to high levels of food insecurity (affecting 7.1 million people) and internal displacement. Growth in 2022 was estimated at 2.2 percent, below the population growth rate

of 2.9 percent. Furthermore, inflation was estimated at 8.5 percent in 2022 as global commodity prices increase and domestic agricultural production falls. The production and supply chain impact of Russia's invasion of Ukraine is expected to put further upward pressure on food prices. The Somali authorities have limited policy options to address shocks, as the country has negligible fiscal space and no monetary policy instruments. These risks are being partly mitigated through ongoing support from the World Bank, the International Monetary Fund, and other international partners to improve revenue generation and the management of public resources.

51. **Fiduciary (High).** The FM and procurement environment in Somalia remains challenging, with some potential levels of mismanagement, fraud, lack of transparency, and corruption. Although anticorruption and public sector regulations are in place, problems persist, contributing to low levels of trust in government institutions. Appropriate risk mitigation measures, including periodic extended implementation support activities complemented by close monitoring, will be undertaken in addition to providing on-the-ground fiduciary capacity support to the project. Some mitigation measures for fiduciary issues have been built into the project design in the form of strict fiduciary control mechanisms and application of World Bank fiduciary rules as well as a focus on social accountability. The project will ensure that the NPCU always have in place dedicated procurement and FM specialists who are adequately trained jointly with the EAFS Unit and other relevant staff within the Office of the Accountant General. A series of on-the-job fiduciary training and the World Bank's periodic review and implementation support will help in mitigating these risks.

Environmental and Social Risks (High)

52. **Environmental risk is Substantial.** As presented in section VIII.B, even though the project is expected to have positive environmental outcomes, it is also likely to result in significant environmental risks and impacts occurring during implementation. Component 1 could lead to increased demand for agrochemicals and will require management of wastes generated from animal health care services and food safety and reduced food loss and waste can result in environmental health and safety impacts including: (a) inappropriate use and disposal of agrochemicals; (b) environmental health and safety risks during construction and agricultural research lab activities; (c) overuse of water and agrochemical contamination affecting quantity and quality; (d) physical and chemical degradation of soils from unsuitable land management techniques; (e) agricultural activities adversely affecting biodiversity and ecosystems; (f) cumulative impacts due to SSI activities; and (g) construction of infrastructure facilities and SSI schemes causing community health and safety risks. In addition, agricultural activities produce GHG emissions, for example, methane, nitrous oxide, and carbon dioxide, in addition to localized pollution, agricultural and solid waste generation, and risks associated with the use of pesticide and fertilizers, including downstream risks in water bodies. However, the activities are community-driven so no significant emissions are expected. Activities involving TA capacity building, and institutional strengthening will enhance the ability of selected entities and communities to develop food systems climate resilience in compliance with the World Bank guidance and the environmental and social issues consistent with the ESF.

53. **Social risk is rated High.** The social risk is rated High due to the scope of the project activities, including the TA activities and proposed civil works which may include resettlement, land take, or restrictions of access to land use, as well as contextual country risks (conflict, social tensions, and client capacity to manage environmental and social risks). Social risks related to land acquisition include loss of land or other assets, loss of livelihoods, social and gender exclusion, inadequate consultations and

engagement, lack of compensation at replacement cost, and lack of access to grievance mechanisms. Labor influx and associated risks including risks on community health and safety, SEA and SH, and other forms of GBV. There are also risks associated with the use of child labor as child work is present in the agricultural sector. Other risks and impacts include the potential for elite capture and/or the exclusion of vulnerable groups and individuals from project benefits due to poorly designed and/or disseminated or nontransparent beneficiary selection process or eligibility as well as failure to comply with labor standards, in particular in relation to forced and child labor. Risk mitigation measures include following a standardized technical design with quality assurance elements to help country team in project implementation; use emergency procedures, such as direct contracting, expedited contract approvals, and use of specialized UN agencies for strengthening the fiduciary functions, when needed; and provision of specialized technical assistance and a knowledge management a learning agenda to raise the quality of implementation of the project.

54. **Stakeholders' risks (Substantial).** There is a risk that state agencies will overestimate their capacity to deliver activities, resulting in slow implementation. Resulting disruptions could fuel tensions and jeopardize nascent state-citizen relations and the well-being of rural communities who rely on services provided by nonstate actors. To mitigate these risks, the project will support the Government to better understand how to leverage nonstate actors and bring them under Government direction and oversight. At the federal and the FMS levels, the use of the national project steering committee composed of key ministries, strong involvement of federal and state authorities, working with the various development pillar working groups, and the robust capacity building embedded in the project will help further mitigate these risks.

55. **Other: Security situation risk (High).** Parts of Somalia remain in conflict, which affects access to the project sites and insecurity for staff of both government agencies and contractors. There will be flexibility with regard to the selection of the project sites subject to the security situation, and the project implementation will consider contingency plans and require the contractors to put in place standard operating procedures to undertake project activities in case of restricted sites' access. Specifically, the project component design offers flexibility to undertake the activities in areas that are of low security risk and, when required, to select new sites. Security Risk Assessments and Security Risk Management Plans will be developed for each site or in batches where a collection of sites is geographically close. Lessons learned from ongoing projects and early moving districts will help this process, and an additional layer of mitigation exists where clearance will be provided by the project only if the site Security Risk Management Plan is in place.

ANNEX 5: African Union Food Systems Resilience Project

I PROJECT DESCRIPTION

A. Project Development Objective

1. The PDO of the AU project under FSRP Phase 3 is to increase the resilience of food systems and preparedness for food insecurity in project-targeted parts of Eastern and Southern Africa.

2. In line with the overall MPA, the AU FSRP aims to accelerate the response to the ongoing food security crisis while making longer-term investments that will build food systems resilience and help break the emergency response cycle. The AU FSRP will focus on the regional coordination, facilitation, and monitoring of interventions under Components 1, 3, and 4 of Phase 3. It also includes a project management component.

B. Project Results Indicators.

3. Project results indicators are harmonized for all Phase 3 participants and are presented in the consolidated Results Framework for the entire MPA Phase 3 (see section VII of this PAD).

C. Project Components.

Component 1: (Re-)Building Resilient Agricultural Production Capacity (IDA: US$4 million equivalent)

4. Under this component, aligned with Pillar 2 of the MPA, AU-DARBE will contribute to building the resilience of the regional food supply to shocks and stressors through multiple activities relating to agricultural production systems. It will focus specifically on CSA, the mitigation of postharvest food loss, and agricultural R&D and extension systems.

Subcomponent 1.1: Climate-Smart Technologies, Production Practices, and Policy Options

5. This subcomponent will build on evidence from MPA-financed investments to inform: (a) a comprehensive review of factors restricting agricultural producers' access to climate-smart technologies, access to high-value crops by women, and their transition to more sustainable and resilient production systems, including challenges relating to seed, fertilizer, and equipment supply, optimal soil and water management, and land tenure, with emphasis on the driving factors for the gender gap in agricultural productivity; (b) the continent-wide promotion of CSA in national and regional investment plans, (c) the development of continental framework papers focused on key themes (such as soil fertility, closing the agricultural productivity gender gap, and CSA) that inform policy makers and technical agencies drafting NAIPs, regional agricultural investment plans (RAIPs), and other key policy documents; (d) the establishment of platforms that support debate and knowledge sharing about common regional challenges and solutions; (e) provision of guidance on TA required for governments to develop bankable investment plans; and (f) the monitoring of progress toward reform in selected countries, including the documentation and sharing of lessons learned.

6. The subcomponent will aim to accelerate investment in research on low-carbon technologies or other technologies instrumental to achieving full decarbonization, through supporting research and innovation processes that focus on climate-smart technologies and extension services that will build climate resilience and reduce emissions (for example, seeds with enhanced yields will lead to more efficient use of land, reducing the need for land clearing and subsequent emissions from deforestation. Additionally, improved seeds with drought-resistant or other climate-resilient traits will also reduce emissions by reducing the need for inputs such as irrigation, fertilizer, and pesticides).

Subcomponent 1.2: Post-Harvest Food Loss Mitigation Technologies (including Storage and Cold Storage)

7. This subcomponent aims to accelerate the diffusion of technologies and business practices (including those being financed by the MPA) with the potential to significantly and sustainably reduce postharvest losses, addressing several challenges related to climate mitigation (reduction of emissions from food loss and waste, energy savings by adopting energy-efficient storage and cooling) and adaptation (increasing food security and enhancing resilience to climate change by improving production efficiency per unit). It will fund (a) carrying out analysis of existing knowledge to explore and promote postharvest technologies, climate-informed business models, policies, and enabling regulations; (b) the development of national and regional action plans on energy-efficient cold storage and other approaches to postharvest loss mitigation; and (c) communications and knowledge exchange on climate-resilient postharvest technologies including bankable postharvest technology development projects or programs. This subcomponent includes activities that increase energy efficiency of equipment for agricultural processing and storage. Additionally, the subcomponent will improve postharvest handling which is key to reduce postharvest losses. The activity will also propose climate-resilient design standards to be considered in infrastructure (considering wind, rain, and energy availability, efficiency, and renewable energy use).

Subcomponent 1.3: Agricultural R&D and Extension and Advisory Services (Coordination and Strengthening)

8. This subcomponent will help coordinate research efforts around CSA and minimizing the impact of shock-related pest and disease outbreaks. It will involve FARA, subregional organizations (SROs), the African Forum for Agricultural Advisory Services (AFAAS), and agricultural universities under the leadership of RUFORUM. Activities funded by the subcomponent will include development of knowledge-sharing platforms; regional conferences; identification and promotion of digital agriculture solutions, including digital advisory service solutions (public and private); ensuring the of integration of gender-specific needs in terms of time and labor; and upskilling of staff responsible for making research accessible to a broad audience.

Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (US$0)

9. The AU will not carry out activities under this component of Phase 3.

Component 3: Getting to Market (IDA: US$3 million equivalent)

10. Under this component, aligned with Pillar 4 of the MPA, AUC-DARBE will facilitate the harmonization of trade policies and strengthen national trade negotiation capabilities.

Subcomponent 3.1: Trade Policy and Rule Harmonization (including Food and Trade Standards, Food Safety Management, and Compliance)

11. This subcomponent will support the delivery of national commitments made under the Framework for Boosting Intra-African Trade in Agricultural Commodities and Services, facilitating, among other things, the harmonization of food and food safety standards, trade rules and policy, and compliance procedures. Under this subcomponent, AUC-DARBE will work in partnership with the AfCFTA Secretariat specifically to fund an analysis of the effects of increased regional trade in key agricultural commodities on food security and climate resilience; the creation of virtual and physical platforms where producers, processors, and traders can develop a common understanding of trade and food standards; and partnerships and action plans aimed at facilitating trade. Harmonized trade policies and agreements could help countries meet climate goals by removing tariffs, harmonizing standards on environmental goods, and eliminating barriers.

Subcomponent 3.2: Trade Negotiation Capacity of Member States

12. This subcomponent will, in collaboration with the AfCFTA Secretariat, fund a training needs assessment for relevant national and regional institutions, the development and delivery of appropriate training programs (in-person and virtual), and an annual performance review of the training's design and impacts.

Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (IDA: US$4 million equivalent)

13. Under this component, aligned with Pillar 5 of the MPA, AUC-DARBE will support the following activities.

Subcomponent 4.1: Evidence-Based Planning

14. This subcomponent will fund AUC-DARBE's technical support to countries undertaking reviews of existing NAIPs or developing new NAIPs. It will also help integrate critical new themes relating to CSA and resilience into the biannual CAADP reviews, supporting the dissemination and streamlining of successful examples and experience on both adaptation and mitigation to climate change, supporting countries on tracking, measuring, and reporting their progress during the review/update of NAIPs. This subcomponent will invest in regional cross-sectoral climate-informed policies that aim to lead to regional climate change mitigation and adaptation actions or technical support for such actions. Additionally, it will provide opportunities to build capacities for farmer organizations, public officers, and institutions on climate-smart value chain development.

Subcomponent 4.2: Strategy Development

15. Considering that the CAADP Malabo Declaration extends only to 2025, this subcomponent will enable AUC-DARBE to coordinate the development of its successor agreement. For this, it will fund efforts to (a) generate supporting evidence to inform the new continental agreement (including by synthesizing framework papers generated under other components), (b) build consensus among AU member states and stakeholders on new targets, (c) update the monitoring framework, and (d) convene meetings and

events needed to launch the new programs. In parallel, the subcomponent will finance updating the AU's business plan by 2024, ensuring that the thematic areas of climate resilience and CSA are prioritized.

Subcomponent 4.3: Strengthening Foresight Systems

16. AUC-DARBE will work with regional and international organizations to identify and promote systems that will provide improved forecasting of shocks and policy reforms on food systems. In addition, AUC-DARBE will work with governments and relevant international agencies to explore options for decreasing the time between the identification of a shock and the implementation of the appropriate response. This analysis will be integrated into action plans in the future.

17. The subcomponent will support: (a) institutional arrangements for increasing the effectiveness of early warning systems at the national and regional levels and (b) working with agricultural research partnerships, promoting research on low-carbon technologies—instrumental to achieving full decarbonization—while addressing climate vulnerabilities through promoting knowledge and experience sharing on climate adaptation techniques, identifying common frameworks for research and innovation on CSA, including the ones involving One CGIAR and African research institutions to increase alignment on emergency pest and disease response measures.

Component 5: Contingent Emergency Response Component (US$0)

18. This component of Phase 3 is not relevant to the AU FSRP.

Component 6: Project Management (IDA: US$2 million equivalent)

19. This component will handle all aspects of project management, including project coordination, knowledge management, communications, staff costs, and compliance with fiduciary responsibilities. AUC-DARBE will hire new long-term staff to lead the department's work in the three component areas and build its capacity in the long run. In addition, short-term TA will be recruited as required.

D. Beneficiaries and Areas of Intervention of the Project

20. The project will work directly with the Ministries of Agriculture, Finance, and Trade (senior civil servants, technical staff, and leading researchers); the private sector; and civil society. Project outputs, including revised policies, adjustments to NAIPs, improved investment in technologies, increased levels of trade, and strengthened early warning systems, are expected to benefit farmers, processors, and traders across the region.

E. AU Project Costs

Table A5.1. Costs and Financing for the AU FSRP

	Components	US$, millions
1	(Re-)Building Resilient Agricultural Production Capacity	4
3	Getting to Market	3
4	Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking	4
6	Project Management	2
	TOTAL	**13**

II. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

21. **AUC-DARBE will coordinate work at the national and regional levels in direct partnership with AUDA-NEPAD.** AUDA-NEPAD will receive a grant of US$3 million that will be transferred to it through the AU's system. The day-to-day implementation of the overall project will be the responsibility of a PIU to be established by AUC-DARBE prior to project effectiveness.

22. **A detailed PIM will be developed no later than three months after the effectiveness of the project.** The PIM will detail: (a) partnership arrangements between the AU and AUDA-NEPAD, including activities and deliverables and (b) guiding principles for gender inclusion in all AUC-DARBE and AUDA-NEPAD events and processes.

23. The AU, in partnership with IGAD and CCARDESA, will set up working groups made up of the FSRP participating countries to share knowledge and information on strategically relevant themes.

B. M&E.

24. The project will use existing systems for M&E.

I APPRAISAL SUMMARY

A. Financial Management

25. The FM assessment was carried out in line with the World Bank Guidance: Financial Management Manual for World Bank Investment Project Financing Operations Effective on March 1, 2010, and issued on September 7, 2021. The assessment is conducted at the AU and its Directorate of Finance and AUDA-NEPAD.

- **Organization context.** Over the past years, the AU has been working toward strengthening its FM activities through the Directorate of Programming, Budget, Finance and Accounting which is now renamed as the Directorate of Finance. This directorate includes Budget Division, the External Resource Management Division, Accounting Division, FM Division, and the Peace Support Finance Unit. NEPAD is an arm of the AU with an integrated structure and processes into the AU and works in close collaboration with the AU. AUDA-NEPAD has funds flow arrangement through the AU and submits its quarterly budget execution report and yearly audited financial reports to the AU. The organization uses the AU rules and regulations to guide activities and ensure accountability.
- To ensure structured FM arrangements, the AU has developed a 'Financial Rules and Regulations (FRR)', approved by the Head of States. The FRR codifies key procedures and regulations in budgeting, payment, accounting, reporting, auditing, and so on. It was revised, reviewed, and approved by policy organs in January 2014. The AU adopted International Public Sector Accounting Standards (IPSAS) effective from January 2014 and finalized valuation of property, plant, and equipment and became fully compliant with IPSAS by December 31, 2018. In 2018, training on IPSAS was provided to the AU HQ, regional, liaison, specialized offices, and organs at

the HQ with a certificate of completion by ICAEW IPSAS. With regard to the effort in strengthening the internal and external audit functions to audit IPSAS-compliant financial statements, training has been provided to audit staff of the Office of Internal Oversight (OIO) including certification. The Board of External Auditors has also taken the training. The AU uses SAP, a computerized accounting system to process and record financial transactions, included in projects such as the one with World Bank financing. The AU has rolled out SAP to existing organs, regional, representational, and liaison offices.

- Despite noted improvements and developments, observed gaps include absence of tools for planning and consolidating AU budgets and tools to support results monitoring; inefficiencies in the centralized nature of budget management, unsystematic annual planning, and midyear budget review processes; funding shortfalls, complex communication systems, and refunds; human resource capacity constraints that limit quality and efficient delivery of services; grants management-specific challenges linked to reporting, banking arrangements, leading to comingling of funds; and gaps in internal audit reviews due to staffing and capacity issues**.**
- To further strengthen its FM system, the Directorate of Finance has developed a strategic plan which is to be implemented from 2022 to 2024. This strategic plan aims to operationalize core development goals outlined in the AU Medium-Term Plan 2018–2023 which is from the first 10-year period toward the implementation of the agenda 2063. The strategy is aligned to this AU overall strategic direction and appreciates high performance standards required of the AU as a whole to capably deliver on its strategic priorities while contributing to achievement of the Seven Aspirations as outlined in the agenda 2063. The strategy anticipates ensuring that the Directorate of Finance is a trusted strategic directorate in delivering high-quality professional services and solid financial infrastructures throughout the organization. Hence, delivery of quality and timely financial information for decision-making is its main objective. The World Bank, through the project, will finance activities that emanate from this strategic plan to ensure that the envisaged improvements are realized.
- **FM implementation arrangement.** The AU's Directorate of Finance, through its ERM Division, is responsible for overall FM of the project. AUC-DARBE will be involved in the project implementation, and it will be responsible for resources to be provided to it. AUDA-NEPAD will receive funds from the AU to implement project activities and will be an accounting center. It will account for the funds it receives and submit quarterly financial reports to the AU within 30 days from the end of the quarter so that it is included in the quarterly IFR of the project to be submitted to the World Bank. Under Subcomponent 1.3, FARA, the SROs, AFAAS, and agricultural universities (under the leadership of RUFORUM) are the institutions to be involved in the project implementation not as implementing entities but as service providers to be recruited under the project's procurement arrangement agreed with the World Bank.
- **Lessons learned.** The number of World Bank-financed projects being implemented by the AU has grown in recent years. Currently, there are six active projects and three pipeline projects including this project. This has shown the AU's capacity to manage multiple projects with the necessary support and capacity development including staffing requirements. The projects have benefited from the well-established FM system of the AU. A Project-specific FM Manual has also helped in accommodating financier-specific requirements. The AU's Directorate of Finance management and finance officers have become aware of World Bank FM procedures, which has enabled smooth communication and remedial actions when necessary. This will continue to benefit existing and upcoming projects.

- The AU has been submitting IFRs and audited financial statements on time over the past years. However, due to the recent increase in the number of World Bank-financed operations, it is observed that the Directorate of Finance is overstretched. This has led to recent delays in submission of IFRs and external audit reports. Hence, using this lesson learned, the necessary staffing and capacity building will be put in place for the project as well as other pipeline projects.
- The FM-related challenges noted over the past years are documented in the strategic plan of the Directorate of Finance, which enables to properly follow up and address these in a systematic manner. These are more or less similar to the challenges that also appear in the World Bank-financed projects. These challenges, as described above under the 'Organization Context' section and detailed under the various sections of the FM arrangement elements, have been noticed over the years and the existing know-how and experience will help in addressing the issues through the interventions to be made under the project as well as the other ongoing World Bank-financed operations.
- **Budget preparation.** The AU will prepare its annual budget following its budget calendar. Delays have been noted in finalizing budget preparation, approval, and notification process in the other World Bank-financed AU projects. The Internal Program and Budget Committee coordinates the planning and budgeting processes within the AU. The financial resources from development partners are declared and included as part of the AU's budget. The AU's regular budgets are formulated at the Finance Division while program/project budgets, including donor-financed programs, are organized at the various divisions that are responsible for the execution of the programs. The internal Program and Budget Committee scrutinizes, consolidates, and compiles the budget estimates and submits to the AU chairperson for presentation to the Permanent Representative Committee (PRC). The annual consolidated budgets are approved by the Assembly after consideration by the Executive Council upon the recommendation of the PRC. Once the budget is approved, the details will be logged in the SAP system. Any project whose budget is not approved by the PRC will not be accommodated by the Finance Directorate. In addition, the approved budget logged in SAP would be released in the system for the project to disburse. The AU procedures allow the project to disburse up to the released budget amount in the system. The initial budget approval happens around June of each year for the subsequent fiscal year and supplementary budget is usually incorporated around October–November of each year for the subsequent fiscal year. The project budget preparation follows the AU's budgeting procedures. AUC-DARBE, in coordination with the AU's Directorate of Finance, will prepare a consolidated AWPB (which includes activities to be implemented by AUDA-NEPAD) and submits them to the World Bank by August 31 of each year to obtain a 'no-objection' from the World Bank before the start of the fiscal year to which the budget relates. In addition, the PIM and FM Manual will document budgeting procedures for the project including the timeline for the budgeting process and review and provision of 'no-objection' by the World Bank.
- **Budget utilization.** Recently, low budget utilization was noted across all World Bank-financed projects at the AU. Hence, close follow-up of project implementation and budget utilization is required for this project, which would include pragmatic/realistic budget preparation.

26. **Budget control.** Budget control will be made starting from the initiation of a transaction up to its approval. Budget variance analysis and explanation of bottlenecks with the relevant resolutions will be provided in IFRs. Both the AU and AUDA-NEPAD use SAP for budget monitoring system. Budget monitoring appears to be quite strong at the AU and at AUDA-NEPAD. The monitoring starts at the initiation of the

transaction where for each transaction to be processed, requests are checked by the Finance Division (external resource management division) for availability of budget, relevance, and compliance to rules and regulations and agreements. Then, when the transaction is entered into the system, the system ensures that budget overruns are rejected (it will not allow transactions to be processed above the set budget for that component/activity). Finally, the system allows for 'a real-time' follow-up on the project funds and activity transactions that can be easily generated from the system. Furthermore, budget variance analysis is made on IFRs of the World Bank-financed project. These budget control mechanisms will be applicable to the project and will be documented in the PIM or FM Manual as noted earlier.

Accounting and Staffing

27. **Basis of accounting.** The AU has adopted IPSAS effective from January 2014. Detailed procedure manuals were revised, and relevant staff were trained. AUDA-NEPAD also applies IPSAS.

28. **Accounting system.** Both the AU and AUDA-NEPAD use SAP (computerized accounting system to process and record financial transactions). Both have adequate internal IT support system and use the organization's FRR, approved by the Head of State. They maintain accounts on a double-entry accrual basis of accounting. The FRR codifies key procedures and regulations in budgeting, payment, accounting, reporting, auditing, and so on. It was revised, reviewed, and approved by policy organs in January 2014. There is a plan to revise the FRR further as this is somehow outdated. In addition, the project will have an FM Manual which will describe project-specific FM arrangements including accounting arrangements. The chart of accounts allows reporting of World Bank-financed transactions (especially income and expenditures by activities/components). However, the current system does not provide a separate trial balance for a specific project. To address this issue and as a desire to effectively manage its partners funds, the AU had started the process to implement business planning and consolidation and Grant Management Modules of SAP. SAP business planning and consolidation was at the testing phase and expected to go live by the end of FY2018. However, this was delayed due to misunderstandings between the system developer and AU. The Grant Management Module was also delayed because of procurement/contract-related challenges. This project intends to finance these activities. Until then, project financial reports, including this project's, will continue to be prepared by extracting data from SAP in a spreadsheet.

29. **Staffing and capacity building.** The ERM Division of the AU provides overall guidance on FM issues. There are qualified staff in this unit at the HQ and in AUDA-NEPAD. However, staff are already handling multiple assignments in the unit and delays in submitting financial reports are noted in the other World Bank-financed projects. Hence, the finance officer dedicated to this project will be assigned/recruited or the entity will ensure sufficient FM staff are deployed to World Bank-financed operations, and thereby the project accounting and reporting arrangement is effective. AUDA-NEPAD will assign/recruit a designated FM expert who will handle the overall project FM at AUDA-NEPAD and liaise with the AU's ERM and Directorate of Finance.

30. **Accounting centers.** Accounting centers for project funds are the AU HQ and AUDA-NEPAD. Both entities will be responsible in managing the project resources.

31. **Internal control.** The FRR includes internal control procedures that will be followed for projects. In addition, the project will have an FM Manual which will describe project-specific FM arrangements including internal control arrangements. SAP is used for processing payments and provides adequate

security to various users in terms of data entry, verification, and approvals. Duties are adequately segregated. The authorized signatories approve payments and related documents before payments are processed. Transactions to be processed are checked by the Finance Division for availability of budget, relevance, fund availability, and compliance to rules, regulations, and agreements at both the AU and AUDA- NEPAD. Once procurement processes or payment requests reach the Finance Division, transactions pass through the finance officers, certifying officer, authorizing officer, releasing officer, and treasury (where cheques are prepared) and are paid through the bank. The drawback of this process is that it involves several individuals, and unless the respective officers and officials sign off on time, payments can be delayed pending response from individuals who need to sign off. In addition, if requests are rejected at any stage, reworking the process on the system may take time-. This might adversely affect budget utilization and thereby project implementation. Monthly bank reconciliations are prepared and counter checked. However, errors and discrepancies were noted in other World Bank-financed project accounts in recent periods. Hence, the project team will provide due attention to avoid such errors and irregularities in this project's accounts. Fixed assets register is maintained in SAP and can easily be identified. It incorporates various attributes about the asset including asset code, source of fund, and user.

32. **Internal audit.** The AU has an Office of Internal Oversight (OIO) reporting directly to the AU chairperson. It has an Internal Audit Charter which was approved/adopted in July 2012. The PRC Sub-Committee on Audit Matters (which follows up on all internal and external audit matters including investigations) and the Internal Audit Progress Committee (an internal committee set up by the management, the AU chairperson, to follow up on implementation of audit recommendations) are established. Despite its constraint in staffing, the directorate performs internal audit on project funds in the commission on a risk-based approach, but significant delays are noted. AUDA-NEPAD has an internal audit department staffed with certified accountants and reports to the CEO of AUDA-NEPAD. For the Support for Capacity Development of the AU and other African Union Organs Project (CBP - P126848), the internal audit review for FY2019 and 2020 has been delayed and the audit report is not yet issued. The OIO will provide the internal audit/ oversight review support to this project on time. An internal auditor is to be recruited under the Eastern Africa Regional Statistics Program-for-Results (P176371) which has just become effective and is also expected to support this and all other World Bank-financed projects.

33. **Financial reporting requirements.** The AU will prepare a quarterly unaudited IFRs. The AU, after collecting the project's financial reports of AUDA-NEPAD, will prepare a consolidated quarterly unaudited IFRs and submits them to the World Bank within 45 days of the end of the quarter. It will ensure that advances received as well as documentation of expenditure are properly accounted for. The finance officer at the ERM Division is responsible for preparing the IFRs. AUDA-NEPAD will be responsible for preparing its IFR and submitting it to the AU within 30 days of the end of the quarter for consolidation and submission to the World Bank.

34. **Reporting timeline and content.** Project IFRs will be submitted within 45 days of the end of the reporting quarter. The IFR format and content was agreed with the AU. At a minimum, the report will include a statement of sources and uses of funds and opening and closing balances for the quarter and cumulative, a statement of uses of fund that shows actual expenditures, appropriately classified by main project activities (categories, components, and subcomponents), actual versus budget comparisons for the quarter and cumulative balances will also be included, a statement on movements (inflows and outflows) of the project DA, including opening and closing balances, notes and explanations, and other supporting schedules/documents. AUDA-NEPAD will submit financial report to AU Directorate of Finance

within 30 days of the end of the quarter in a form acceptable to the directorate to enable the AU's ERM of Finance Directorate consolidate with its own reports and submit a consolidated IFR to the World Bank.

35. The AU has current experience of preparing and submitting IFRs to the World Bank in relation to the ongoing projects. IFRs are submitted with good quality. However, delays in submitting IFRs are recently being observed due to the workload on the assigned finance officer who is working on all World Bank-financed projects. The entity will ensure sufficient FM staff deployed to World Bank-financed operations and improve timeliness of IFR reporting. Project transactions are processed and recorded as part of the other AU financial activities. To prepare IFRs, financial information relating to the project are exported to Excel spreadsheet from SAP.

36. **Annual financial audit.** The AU will submit annual audited financial statements and audit reports (including the Management Letter) to the World Bank within six months of the end of the reporting year. The annual financial statements will be prepared in accordance with the standards to be indicated in the audit ToR. The audit will be conducted by an auditor acceptable to the World Bank. The AU will then submit project audited financial statements in a form and content satisfactory to the World Bank.

37. Recently, delays are noted in submitting external audit reports for the World Bank-financed projects. The AU's capacity-building project audit report for FY2021 has been submitted with a couple of months delay whereas the audit reports for the HISWA project and Africa CDC Investment Financing Project for FY2021 are not yet submitted and have been overdue for six months. Recent external audit reports of the AU CBP project are clean reports. The Management Letter revealed a few internal control weaknesses relating to low budget utilization and long outstanding advances and payables. The AU has submitted Action Plans and subsequent status report for actions taken on audit findings on time.

38. For this project, the audit will also cover the project transactions or financial activities managed by AUC-NEPAD. The AU will facilitate a visit to AUDA-NEPAD as needed. In accordance with its policies, the World Bank requires that the recipient disclose the audited financial statements in a manner acceptable to the World Bank; following formal receipt of these statements from the recipient, the World Bank makes them available to the public in accordance with the World Bank Policy on Access to Information. It is noted that the AU has not disclosed audit reports for FY2018, FY2019, FY2020, and FY2021. The project will ensure public disclosure of the audited financial statements on time.

39. **FM-related costs.** The project's AWPB will include the cost of: (a) finance staff recruited for the project, (b) audit, (c) project-related logistics and supervision costs (for example, transportation, per diem and accommodation while travelling), (d) FM-related trainings, and (e) other charges including bank charges and so on.

40. **FM covenants.** FM-related covenants will include the following:

a) Maintaining satisfactory FM system for the project
b) Submitting IFRs for the project for each fiscal quarter within 45 days of the end of the quarter
c) Submitting annual audited financial statements and audit report within six months of the end of each fiscal year.

Fund Flow and Disbursement Arrangements

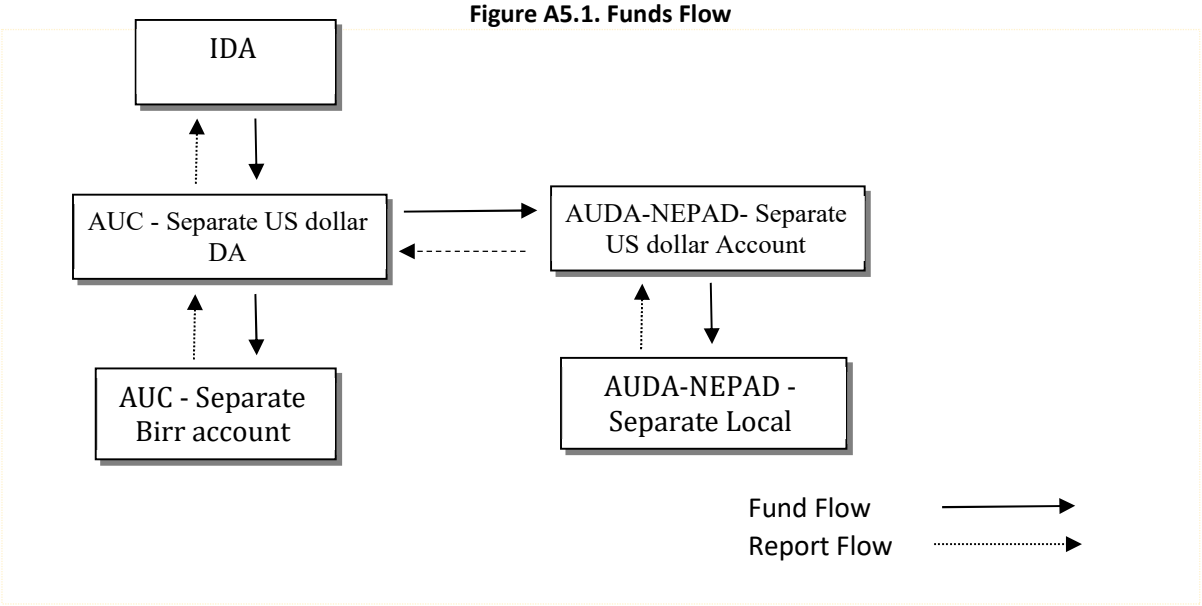
41. **DA and disbursement methods.** The AU at the HQ (Addis Ababa) will open a segregated designated US dollar bank account into which project funds will be disbursed by the World Bank. A separate local currency (Ethiopian birr) account will also be opened by the AU at the Commercial Bank of Ethiopia to manage funds received. Such arrangement is currently in place by the AU for other World Bank-financed projects. AUDA-NEPAD will open a project-specific US dollar bank account to receive funds from the AU. It will also open a local currency bank account as applicable. It will account for the funds it receives and submit quarterly financial reports to the AU within 30 days of the end of each reporting quarter and settle advances accounted at the AU.

42. The project will prepare a six months' expenditure forecast based on the AWPB and the cash requirement will be submitted along with the IFRs of the project. This will be the basis to request funds from the World Bank for disbursements into the project DA. In addition, direct payment, reimbursement, and special commitment methods can be used. Additional information with regard to disbursement such as minimum value of application for direct payments, reimbursement, and special commitments will be indicated in the project DFIL. It is noted that usually one account is being used (Special Fund account of the AU for donor financings) to make aggregate payments to some services obtained for various projects (for example, airlines and credit union related bills). The balances are later cleared by refunding the involved balance to the Special Fund. Such practices have interfund borrowing implications. It should be noted that interfund borrowing is not allowed under World Bank-financed projects and hence the AU will take steps to avoid interfund borrowings.

43. **Eligible expenditures.** Project eligible expenditures are for activities the World Bank approved under the AWPB prepared under the umbrella of the activities/components indicated in the PAD. The expenditure categories include costs for goods, works, consultant costs or consulting services, non-consulting services, training costs, travel and workshops, and operating costs.

44. **Fund flow and reporting diagram.** The fund flow arrangement for the project is summarized in figure A5.1.

Figure A5.1. Funds Flow



Risk Assessment, Mitigating Measures, and Action Plans

45. **Risks.** Over the years, the AU's FM arrangement has provided reasonable assurance to the use of funds for the intended purposes. Recently, because of the increase in the World Bank- financed operations, the Directorate of Finance (ERM Division) has been overstretched. This has resulted in delays in submitting IFRs and audited financial statements. Hence, the risk in this regard should be mitigated by ensuring adequate staffing in the project. AUDA-NEPAD appears to have sufficient capacity and will deploy a dedicated accountant to handle this project. The use of one pool account by the AU (Special Fund account) to pay for common costs of various projects leads to interfund borrowings. The AU will take necessary steps to ensure that project expenditures are paid out of the segregated project account and interfund borrowings are avoided. Delays are noted in the preparation and approval of project AWPB. Timeline for preparation, review, and approval of AWPB will be proposed and documented in the PIM and FM Manual. Low budget utilization has been prevalent in recent years in all the World Bank-financed projects at both the AU and AUDA-NEPAD. The project will closely monitor implementation and analyze bottlenecks on time to ensure resource utilization is at the required level each year at both implementing entities. The long payment processing bureaucracy might result in delay in project implementation and hence an FM focal person will be assigned for the project to follow up and facilitate transaction processing and payment. The internal audit function has gaps as the OIO does not have adequate staff and capacity, leading to delays in conducting internal audit reviews on World Bank-financed projects at the AU while the AUDA-NEPAD was assessed to have sufficient qualified internal audit staff capable of supporting projects. The OIO will include review of the project accounts in its plan and conduct internal audit reviews of the project account during implementation. The AUDA-NEPAD internal audit department will also have review of the project accounts in its plan and conduct internal audit reviews of the project account during implementation. The project will also use additional internal auditor to be recruited using the World Bank-financed Eastern Africa Regional Statistics Program resource. A detailed Action Plan is developed to address the risks identified and will be followed up during implementation. In addition, the project has a component that finances activities that will be able to address the risks and gaps identified.

46. **Strength and weaknesses.** The internal control system over payments is strong in that there is adequate segregation of duties in approving payment requests and authorizing payments both at the AU and AUDA-NEPAD. Once procurement processes or payment requests reach the Finance Division, transactions pass through the finance officers, certifying officer, authorizing officer, releasing officer, and treasury (where cheques are prepared) and are paid through the bank. The drawback of this process is that it involves several individuals, and unless the respective officers and officials sign off on time, payments can be delayed pending response from individuals who need to sign off. In addition, if requests are rejected at any stage, reworking the process on the system may take time. This might adversely affect budget utilization and project implementation.

Table A5.2. AU Financial Management Action Plan

Action	Timeline	Responsible
Budget		
Outline key project FM procedures in the PIM of the project including setting up of budget preparation, approval, and submission calendar and reporting timelines	Within two month of project effectiveness	AU
Close follow-up on budget communication and release on system by a focal finance officer assigned/recruited	During implementation	AU
Accounting/staffing		
(a) Deploy sufficient FM staffing capacity at AUC-Finance/ERM directorate (b) AUDA-NEPAD deploys FMS to support the project	Within one month of effectiveness	a. AU b. AUDA - NEPAD
Funds flow		
Provide training on filling withdrawal applications for the finance staff to be recruited	Within one month of recruitment	AU
Open segregated US dollar and local currency separate bank accounts for the project at AU and AUDA-NEPAD	Within one month of effectiveness	AU/AUDA-NEPAD
Internal control and Internal audit		
Conduct internal audit review of the project accounts at both AUC and AUDA-NEPAD using regular internal audit function of the entities. The AU will involve the internal auditor to be hired from the other World Bank-financed project (Eastern Africa Regional Statistics Program).	During implementation	AU – OIO and AUD-NEPAD internal audit department
Financial reporting		
Submit IFRs using agreed forms on time	Within 45 days of the end of each quarter	AU
External audit		
External auditors to be recruited on time	Within one month of the end of the reporting fiscal year	AU
Prepare annual financial statements on time to allow adequate time for audit	Within three months of the end of the fiscal year	AU
Submit audited financial statements on time	Within six months of the end of the fiscal year, annually	AU
Disclose audit reports on the AU's website	Annually	AU

47. **Supervision plan.** The FM risk for the project is rated Substantial. The project will be supervised twice per year. After each supervision, risk will be measured and recalibrated accordingly. Supervision will include field visits, review of IFRs, audit reports, and follow-up agreed actions. The arrangements are summarized in table A5.3.

Table A5.3. Implementation Support Plan

FM Activity	Frequency
Desk reviews	
IFR review	Quarterly
Audit report review of the project	Annually
Review of other relevant information such as interim internal control systems reports	Continuous as they become available
On-site visits	
Review of overall operation of the FM system	Semiannually (implementation support mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors' Management Letters, internal audit, and other reports	As needed, but at least during each implementation support mission
Transaction reviews	As needed
Capacity-building support	
FM training sessions by the World Bank FM team	Following the project effectiveness and thereafter as needed

48. **FM conclusion.** Subject to the successful completion of the actions recommended in the Action Plan to address the risks identified, the project's FM arrangements are considered acceptable to the World Bank and the related risks are Moderate.

B. Procurement

49. **Applicable procurement rules and procedures.** Procurement under the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers, dated November 2020; Procurement in Investment Project Financing for Goods, Works, Non-Consulting, and Consulting Services, dated July 1, 2016, and updated November 2020 (as amended from time to time) and the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006, revised in January 2011 and as of July 1, 2016, as well as the provisions stipulated in the Financing Agreement.

50. **PPSD, PP, and STEP.** The recipient has prepared a draft PPSD and PP for the first 18 months of project implementation. The PPSD identifies the fit-for-purpose procurement approach through an analysis of the market, procurement risks, and capacity and recommends suitable procurement arrangements. The PPSD will be updated regularly as required. The recipient will use the World Bank's online tool (STEP) for procurement planning, processing, monitoring, contract management, reporting, and record keeping. The PP will be updated by the recipient (subject to World Bank 'no-objection') as required.

51. **Procurement implementation arrangement.** The AU through its Supply Chain Management Division (SCMD) is responsible for the implementation of the procurement activities of the project following the procedures in the procurement regulation. The AU corporate procurement function is placed at its newly

formed SCMD replacing the former PTSD as a result of the recent internal restructuring of the AU. Thus, procurement risk assessment was carried out at the SCMD of the AU. Some of the findings include the following:

a) The SCMD is well staffed with the necessary procurement support personnel and handles a portfolio of more than US$100 million. There is one qualified procurement staff and two recently recruited senior procurement consultants employed under the World Bank-financed project in the SCMD. The staff have adequate qualification and experience in handling the procurement activities of the project. The major challenge regarding organization and staffing is that the procurement staff and other teams in the division are overwhelmed with procurement activities of the AU in addition to the procurement in World Bank-financed projects. Besides, there is no qualified staff to handle contract administration at the SCMD. As a result, the procurement staff and consultants are also engaged in contract administration activities without the required qualification and training. Now, the new structure allocated three contract management officers' positions under the SCMD. There is a need to quickly fill these positions with qualified and experienced contract management officers to support the day-to-day contract administrations of the signed contracts. In addition, the procurement staff and consultants and endorsing committee members need to be trained on the Procurement Regulations of the World Bank and contract management.

b) The envisaged procurement activities in the AU part of the project are simple procurements that will be carried out using standard approaches through open competition. Business opportunities are openly advertised on the AU's website and UNDB Online. The AU has its own standard bidding documents which are now being updated to meet latest requirements and market realities. However, experience shows that procurement activities are not carried out in accordance with the timeline specified in the PP particularly in the World Bank-financed project. Mostly, the cost estimates and contract implementation durations of the planned activities are not determined based on the prevailing market assessment and scope of the assignment. So, there is a weak practice in preparing reasonable cost estimate comparable to the scope of assignment based on recent market assessment. This is one of the areas which needs improvement. The assessment has also found delays in releasing budget for the approved PP.

c) The AU has issued revised Procurement Manual, which is applicable to the wider AU organs. Procurement decision-making and delegation of authority for contract signature is clearly stipulated in the AU Procurement Manual. Depending on thresholds, decisions are made by the AU Tender Board, internal procurement committee, Director of OSSD, and the Head of the SCMD. The draft bidding document, evaluation reports, and draft contracts are reviewed at different stages in the AU. Specifically, all draft contracts regardless of value and category will be submitted to the legal unit for review and approval before signing of the contract. The additional hierarchy in approving contract document creates delays in timely signing of contracts particularly in small-value low-risk activities.

d) The AU procurement manual provides for lodging complaints during any stage of the bidding process. The complaints handling office is required to report on its findings to the controller's office. Procurement process of the AU is subject to annual audits by internal and independent external auditors.

52. Based on the findings of the risk assessment and considering the small procurement activities of the projects envisaged in AU, the overall procurement risk rating for AU is **Moderate.** Some of the identified risks and risk mitigation measures are provided in table A5.4.

Table A5.5. Procurement Risks and Mitigation

S. No.	Identified Risk	Risk Mitigation Measures	Responsible Body	Timeline
1	Staff overloaded with procurement and contract administration activities of all AU procurement operations beyond the procurement under World Bank-financed projects	• Redistribution of assignments of the procurement activities for the World Bank-financed projects among the existing and new procurement staff and consultants in the AU	AU	Before effectiveness
2	Inability to carry out procurement activities within the agreed time frame undermines procurement performance and achievement of the project objective	• Assigned procurement expert will ensure that procurement activities are initiated and processed within the agreed time frame. • Beneficiary unit will provide necessary input, including ToR, specifications, and so on, timely.	AU	Ongoing
3	Failure to update procurement information in STEP leads to noncompliance	• Provide training on the proper use of STEP to the procurement staff and ensure the AU uses STEP as a tool for monitoring procurement and contract performance. • Timely upload all documentation and record related to procurement and contract management in STEP for all signed and completed contracts to facilitate the Procurement Post-Review (PPR) by the World Bank.	AU/World Bank AU	Annually Ongoing

B. Environmental and Social

53. **The AU FSRP will carry out TA activities that are associated with environmental and social risks.** Their aim is to build resilience through TA, capacity building, and institutional strengthening activities that will help enhance the ability of selected entities and communities to prepare for and respond to food systems shocks and develop food systems climate resilience. Direct environmental and social risks in a defined physical footprint are not expected.

54. **Induced impacts may occur, but they are not expected to be significant given the nature of the activities (technical assistance).** The project will ensure that consultancies, studies, capacity building, training, and other TA activities are carried out in accordance with the relevant requirements of the World Bank's ESF. Any outputs from TA activities will also be consistent with the ESF.

D. Lessons Learned

55. **Key role of regional organizations in supporting collaboration and learning.** Collaboration and cross-learning must be dynamic and adaptable, based on the priorities of the participating countries. Some of these priorities may evolve as more countries join the MPA. Experience of Phase 1 of the MPA has shown that this collaboration needs the logistical and technical support from regional organizations. The AU, therefore, in partnership with IGAD and CCARDESA, will help set up working groups representing participating countries, to share knowledge and information on strategically relevant themes. Such technical/thematic groups can range from aligning definitions and methodologies for M&E so that project indicators can be aggregated to sharing experience on PA support or disseminating knowledge on CSA.

E. Key Risks

56. **The overall risk rating for the AU Phase 3 project is Moderate.** Environment and social, procurement, and financial management risks are also moderate, generally associated with the implementation of TA by regional entities. They relate to inclusion, ensuring the requirements of the ESF are fully reflected in TA activities, access to information, the consideration of vulnerable groups, contextual issues (for example, drought, climate change, and the overexploitation of natural resources), and cumulative impacts. To address these risks, SEP and ESCP have been prepared and disclosed by the recipient on April 6, 2023 on its website (*https://au.int/en/documents/20230406/environmental-and-social-commitment-plan-escp*) and on the World Bank's website. In addition, an Action Plan has been agreed to reduce further risk related to Financial Management.

ANNEX 6: Climate Adaptation and Mitigation Activities under Phase 3

1. Like Phase 1 (P172769) and Phase 2 (P172769) of the Food Systems Resilience Program (the MPA), Phase 3 (P177816) is strongly committed to scaling up climate adaptation and mitigation practices. Table A6.1 provides illustrations of climate adaptation and mitigation activities planned under Phase 3, by project and component.

Table A6.1. Examples of Climate Adaptation and Mitigation Activities Planned under the MPA Phase 3, by Country and Component

Comoros

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Component 1: (Re-)Building Resilient Agricultural Production Capacity (US$15.7 million)		
Subcomponent 1.1: Quality Seed Systems and Climate-Smart Technologies for Food Crops (IDA US$5.2 million)	Through the strengthening of entities involved in delivering and developing improved seeds used to grow crops, support for local seed production, and R&D on improved varieties, this subcomponent will build climate resilience and support agricultural producers through enhanced access to climate-smart TIMPs and agricultural research and innovation systems for the provision and financing of high-quality and climate-resilient inputs (for example, drought-resistant seeds). Additionally, this subcomponent will specifically focus on supporting the multiplication and diffusion of higher-yielding, climate-adapted crop varieties and help scale up CSA technologies, referred to here as climate-smart TIMPs. It will also support soil conservation practices on farms, a key to enhancing farms' ability to cope with changing climate conditions.	This subcomponent will support technologies and practices with the potential to reduce GHG emissions through enhanced management of fertilizer. Additionally, higher-yielding crop varieties could lead to more efficient land use, reducing agricultural expansion into forested and other carbon-rich landscapes. Improved crop varieties may also reduce emissions by requiring less pumped water and fertilizer. Additionally, the subcomponent will invest in research on low-carbon technologies or other technologies instrumental to achieving full decarbonization. According to the GHG accounting, this sub-component would generate a net GHG emission reduction of 354,539 tCO_2e in 20 years of assessment
Subcomponent 1.2: Livestock Sector Productivity and Safety (IDA US$4 million)	This subcomponent aims to increase the livestock sector's productivity and safety by supporting its professionalization, biosecurity surveillance systems, preventive health and immunization campaigns for livestock, and management of antimicrobials and will deliver adaptation benefits through promoting the training of enhanced animal health services to increase climate resilience to climate change risks and invest in	This subcomponent may reduce the carbon intensity of livestock by increasing its productivity and the adoption of feeding, waste management, and health management practices that reduce emissions per unit of livestock. Reductions or increases in livestock sector emissions will depend in part on whether these practices lead to an increase or decrease in herd size.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	food safety measures for livestock threatened by climate change, while aiming to increase production.	The EFA, and thus the GHG accounting, project an increase in herd size (sheep and chicken layers). Thus, there is an increase of GHG emissions by 1,156 tCO_2e in 20 years. The GHG accounting does not include assumptions on potential emissions reduction from improved breeding, enhanced feeding, waste management and health management that could lead to a net reduction of GHG emissions over time, despite the increase in herd size.
Subcomponent 1.3: Resilient Fisheries (IDA US$4 million)	Through the investment in production, postharvest practices, and the value and health of catches, enablers for private sector participation and governance at a regional and national levels, this subcomponent will facilitate adaptation of communities by supporting the sustainability of fishery-related livelihoods. It will also support adaptation in the wider population by helping diversify food supply.	
Subcomponent 1.4: Digital Agriculture and Information Systems (IDA US$2.5 million)	This subcomponent will finance the strengthening and scale up the existing pilot systems used to manage agricultural production, price, and weather data at the national and regional levels while also supporting farmers' and other value chain actors' ability to access and use these data. The subcomponent will build climate resilience through improved access to data and data-backed decision support tools, including agrometeorological data linked to advisory services, and market information services will help farmers and other agri-food actors adapt to climate change by enhancing their capacity to manage weather and price risk. Improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, the Project would support informed decisions on various topics with adaptation contribution, such real-time weather or forecasted	Improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, the Project would support informed decisions on various topics with mitigation contribution, such real-time data on forest cover, land degradation, and soil health; and fish stocks and sea conditions, as well as other relevant information that would facilitate better climate risk management. The activity will support energy-efficient infrastructure considerations for ICT/equipment procurement.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	weather; crop production and food supply; animal and plant health (such as pest or animal disease outbreaks); the prices and availability of seeds, fertilizers, and food stocks and other market information as well as other relevant information that would facilitate better climate risk management and adaptation planning.	
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (US$8.5 million)		
Subcomponent 2.1: Resilient Landscape and Watershed Management (IDA US$3 million)	By developing SSI water management, this subcomponent will contribute to farm and rural community adaptation by improving ecosystem operational efficiency, which will contribute to mitigating the effects of climate shocks on farming and other human systems. Watershed restoration activities provide multiple benefits, such as reduced soil erosion, increased water availability, and quality and ecosystem services which will reduce the vulnerability of the country's food systems to climate change.	The subcomponent includes agricultural activities that contribute to increasing the carbon stock in the soil, through supporting agroforestry and reforestation efforts and the restoration of degraded lands and watersheds. According to the GHG accounting, this sub-component would generate a net GHG emission reduction of 334,674 tCO_2e in 20 years of assessment
Subcomponent 2.2: Resilient Water Management (IDA US$4.5 million)	By developing SSI and investing in on-farm water harvesting and storage infrastructure, this subcomponent will contribute to farm and rural community adaptation by restoring ecosystem functions that play a protective role, at times mitigating the effects of climate shocks on farming and other human systems. By investing in irrigation and other rural water infrastructure and its management, this subcomponent will increase farmers' resilience to climate change-induced weather variability including reducing water-deficit risks in production systems.	
Subcomponent 2.3: Resilient Coastal and Marine Resources Management (IDA US$1 million)	By establishing and managing a network of marine protected areas, this subcomponent will contribute to adaptation by helping the Government establish and manage a network of marine protected areas and coastal communities manage their resources more sustainably even as the changing climate puts them under pressure. Community-based coastal and marine resources	Protecting coastal and marine ecosystems to support the resilient fisheries sector—as an adaptation approach—also enhances the natural carbon sinks and reservoirs.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	management will promote the inclusion of community voices and jointly plan and implement management plans by integrating climate risk considerations to mitigate the negative impacts of climate-induced hazards such as storms and coastal flooding.	
Component 3: Getting to Market (US$11.3 million)		
Subcomponent 3.1: Post-Harvest Handling and National and Regional Market Linkages (IDA US$1 million)	Through allocating finance into developing, adapting, and delivering post-harvesting and agro-processing technologies, this subcomponent will enhance the availability and quality of healthy food products and related income opportunities. Additionally, this subcomponent will support adaptation by developing agri-food commercialization, incomes, and employment opportunities. Proposed postharvest facilities and infrastructure will be informed by climate-resilient design standard considerations.	This subcomponent may reduce GHG emissions associated with postharvest losses of agri-food products by improving supply efficiency and postharvest handling practices. Energy efficiency considerations will be incorporated within the proposed postharvest facilities and infrastructure.
Subcomponent 3.2: Rehabilitation of Rural Feeder Roads for Improved Market Access (IDA US$10.3 million)	This subcomponent will finance the rehabilitation of feeder roads to facilitate the transportation of agricultural products to markets, thus supporting adaptation to climate change by financing the development of physical infrastructure linking rural producers to markets, enhancing suppliers' access to productive technologies, lucrative markets, market information better prices, and better economic opportunities and choices. Good roads also facilitate access to inputs, technical advice, and other incentives that facilitate the adoption of climate-smart technologies and practices among farmers and value chain stakeholders. The activity will prioritize climate-resilient infrastructure that is designed and built in a way that anticipates, prepares for, and adapts to changing climate conditions. Upgrading road networks and infrastructure that connect people to markets are relevant as they facilitate the access to inputs, technical advice and other incentives that facilitate the adoption of climate-smart technologies and practices among farmers and	This subcomponent could potentially reduce GHG emissions associated with postharvest losses, due to lack of transportation for agri-food products to markets. Investments in rural market infrastructure would not generate considerable GHG emissions from construction works. These investments are more likely neutral or contributing with climate change mitigation due to the potential for food losses reduction

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	value chain stakeholders. The EFA indirectly integrates the benefits of this sub-component.	
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (US$1 million)		
Subcomponent 4.1: Strategies, Standards, Regulations, and Institutional Frameworks (IDA US$0.2 million)	The subcomponent will support the development of appropriate policies and the coordinating mechanisms required for enhancing climate resilience by mainstreaming climate risk, impact, and adaptation options in the national seed strategy. The subcomponent will support activities that are essential to provide the basic pillars supporting the development of technologies and practices that would contribute to improving resilience to climate change. Key ones are (a) the elaboration of a national seed strategy giving emphasis to varieties better adapted to improve resiliency to climate change and weather shocks; (b) finalization of the animal health strategy, the legislation on veterinary services, and the new 'livestock code', considering reduction in GHG emissions; and (c) the validation of the national strategy for combating invasive plants and strengthened legislation on the introduction of exotic species.	
Subcomponent 4.2: Agrifood System Stakeholder Capacity Building (IDA US$0.5 million)	This subcomponent will equip public institutions to support climate adaptation by enabling its staff to be trained on topics such as climate-adapted crops and livestock, CSA practices and technologies, climate change risk modeling, agrometeorological forecasting, and big data analytics (for example, methodologies for estimating changes in agricultural productivity, net carbon sequestration, net GHG emissions, soil erosion, vegetation cover, meteorological and hydrological modeling, area-based weather forecasting, and cloud-based data management).	The subcomponent includes activities that aim to contribute to increasing the carbon stock in the soil. Capacity of public institutions will be reinforced to measure agricultural and land-based GHG emissions and assess and pursue mitigation opportunities.
Subcomponent 4.3. Regional Integration Efforts (IDA US$0.3 million)	This subcomponent will support direct collaboration with regional neighbors and organizations around food systems resilience research and policy, focusing on (a) supporting regional collaboration with other members of the IOC to strengthen early warning systems, climate risk management, and intra-regional trade; (b) facilitating partnerships to strengthen research and	Research on low-carbon technologies or other technologies instrumental to achieving full decarbonization

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	innovation systems for improved productivity and resilience with regional and global agricultural research organizations such as CCARDESA and One CGIAR; (c) scaling up ongoing EU-supported efforts to build digital information systems for the Indian Ocean under the SANOI project; and (d) supporting collaborative fisheries governance, supporting both regional climate preparedness and risk management.	

Kenya

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Component 1: (Re-)Building Resilient Agricultural Production Capacity (US$50 million)		
Subcomponent 1.1: Data and Digital Agriculture Systems at the National and County Levels (IDA US$15 million)	The subcomponent aims to develop and strengthen data and digital systems that, among other things, support agricultural climate resilience and climate adaptation planning. By strengthening digital agriculture systems and data, this subcomponent will enable adaptive agriculture and enhance agricultural innovation capacity, both of which can help agriculture stay one step ahead of evolving climate risk. Support to digital solutions under this subcomponent will improve smallholders' access to extension services, climate-resilient input and market information, research products, farming knowledge, planting material, inputs, land, water, digital tools, and finance as well as climate services which will enable farmers to make climate- and weather-informed decisions, all of which will contribute toward climate adaptation.	Improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, in addition to climate adaptation outcomes, the Project would support informed decisions on various topics with mitigation contribution, such real-time data on forest cover, land degradation, and soil health and other relevant information that would facilitate better climate risk management. The activity will support energy-efficient infrastructure considerations for ICT/equipment procurement. Better-informed farmers are better positioned to reduce their carbon footprint by making more efficient use of their land and using inputs more strategically.
Subcomponent 1.2: Climate-Smart Agriculture Technologies and Services (IDA US$10 million)	This subcomponent aims to increase farms' productivity and climate resilience by developing and delivering CSA technologies and services to farmers, including climate-smart seed systems. This subcomponent will build resilience through developing climate-smart TIMPs that are climate-	The subcomponent includes agricultural activities that contribute to increasing the carbon stock in the soil. Additionally, many climate-smart TIMPs (for example, the balanced use of fertilizers, reduced tillage on cropland and grassland, the use of cover crops, crop rotation, and

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	resilient and farming practices and services that support soil health and water conservation, carbon sequestration, and GHG mitigation.	agroforestry) can increase land-based carbon sequestration and reduce agricultural and land-based GHG emissions. Following the GHG accounting, this sub-component would generate a net GHG emission reduction of 1.2 million tCO2e in 20 years of assessment.
Subcomponent 1.3: Community Engagement and Technology Transfer Including through Digitization (IDA US$25 million)	This subcomponent aims to strengthen community engagement and enhance the uptake of digital solutions at the farm level, with the objective of enhancing climate resilience and productivity. Additionally, this subcomponent will support the adoption of climate-smart TIMPs and inputs and access to information and resources that farmers need to adapt to climate change.	Improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, in addition to climate adaptation outcomes, the Project would support informed decisions on various topics with mitigation contribution, such real-time data on forest cover, land degradation, and soil health and other relevant information that would facilitate better climate risk management. Energy efficiency considerations will be incorporated to procurement and mobilization of digital equipment and infrastructure that would enable farmers access real-time climate information.
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (US$30 million)		
Subcomponent 2.1: Water Availability for Crops and Livestock (IDA US$15 million)	This subcomponent will improve farmers' access to water for crops and livestock, leveraging the FLID. By expanding and increasing the efficiency of irrigation services, this subcomponent will increase farmers' resilience to climate change-induced weather variability and the risk of water deficit in production systems.	
Subcomponent 2.2: Rangeland Management for Crops and Livestock (IDA US$15 million)	This subcomponent will support (a) sustainable soil and land management including participatory grazing management schemes and participatory rangeland resource management; (b) the demarcation and restoration of livestock migration routes and common grazing lands; (c) the development of feed and fodder storage infrastructure and strategic feed	According to the GHG accounting, this sub-component would generate a net GHG emission reduction of 13.36 tCO2e in 20 years of assessment. A significant proportion of GHG emissions reduction is due to the restoration and improved management of grazing areas (50,000 hectares restored with high carbon inputs and 50,000 hectares restored with

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	reserves; (d) animal health infrastructure and services including disease surveillance and vaccination, holding grounds, and quarantine compartments; (e) livestock restocking programs; and (f) crop-livestock integration including seed multiplication and bulking (crops and pasture) and breed multiplication. The investments under this subcomponent aim to enhance the sustainable and resilient use of natural resources of food systems and livelihoods within priority areas while improving animal health and food security.	medium carbon inputs). Increased productivity, due to improvement in feeding and health management also accounts for a reduction in the camel herd size, while keeping the same level of milk production. The subcomponent includes agricultural activities that contribute to increasing the carbon stock in the soil. Additionally, this subcomponent includes activities that improves carbon sequestration through rangeland management.
Component 3: Getting to Market (US$45 million)		
Subcomponent 3.1: Strengthening of Farmer Producer Organizations (IDA US$15 million)	This subcomponent will help crop and livestock farmers connect better to markets by establishing or strengthening FPOs and the constellation of agro-enterprises that serve them. FPOs are expected to act as anchor institutions that facilitate aggregation, quality control, and the marketing of agricultural products. FPOs can provide farmers with access to up-to-date information and knowledge about best practices for adapting to changing climatic conditions, such as drought-resistant crops, irrigation technologies, and soil conservation methods. Additionally, they provide peer-to-peer learning experiences and improved access to diversified markets.	In line with the EFA, the GHG analysis considers climate mitigation at the level of communities and Farmer organizations. According to the project's EFA, the project will support 300,000 crops and livestock farmers to improve their productivity and incomes through inclusive value chains and supporting the introduction and adoption of climate-smart agriculture (CSA) and sustainable land management (SLM) practices under component 1 and 2, respectively, all of which have mitigation outcomes
Subcomponent 3.2: Market Infrastructure and Enterprise Development (IDA US$5 million)	This subcomponent will invest in market infrastructure to improve the postharvest handling of crop and livestock products and facilitate value chain actors' adherence to sanitary and phytosanitary (SPS) standards. Investments under this subcomponent will privilege enhancing food systems resilience and climate change adaptation.	This subcomponent includes activities that increase energy efficiency of crop production and increasing use of energy-efficient equipment for agricultural processing and storage, also avoiding emissions from food lost and waste. Investments under this component will privilege renewable energy and energy-efficient technologies.
Subcomponent 3.3: Creditworthiness of Crop and Livestock Farmers (IDA US$25 million)	The subcomponent will facilitate crop and livestock farmers' access to financial services including savings, credit, and insurance by addressing both demand- and supply-side constraints, enhancing farmers' capacity to invest in adaptive	This subcomponent promotes climate-smart finance and investment which indirectly facilitate opportunities, for SACCOs CSA technologies and practices which has mitigation outcomes.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	technologies, improving their access to finance, and reducing their vulnerability to climate-induced risk. Raising awareness and financial literacy among SACCOs of the effects of financial decisions can help to better deal with climate change and, more generally, uncertain events contributing climate resilience.	
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (US$10 million)		
Subcomponent 4.1: Prioritization of Food Systems Resilience in Public Policy and Spending (IDA US$5 million)	This subcomponent will support and finance policy and regulatory changes to enhance food security and food systems resilience. The subcomponent will support mainstreaming of food resilience into Kenya's strategic vision, development of national plans, and efforts to align price and policy incentives in agriculture and natural resources management (NRM), with the aim of achieving a climate-informed policy environment.	
Subcomponent 4.2: Institutional Capacity for the Implementation of Resilience-Enhancing Policies (IDA US$5 million)	This subcomponent will build the capacity of the MoALD to develop, review, and implement resilience-focused policies by developing relevant human as well as material resources. Given the multisectoral nature of resilience-related policies, this subcomponent will leverage platforms that enable more effective cross-sectoral and interagency collaboration. At a national level, it will support the prevention and management of food systems crises with national and regional consequences and strengthen contributions to regional efforts.	

Malawi

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Component 1: (Re-)Building Resilient Agricultural Production Capacity (Total US$28 million; IDA Grant: US$26 million, GAFSP Grant: US$2 million)		
Subcomponent 1.1: Agricultural Research, Development, and	This subcomponent will support research activities that fill knowledge gaps relating to the productivity and climate resilience of high-value commercial crops and livestock,	Research on low-carbon technologies or other technologies instrumental to achieving full decarbonization. Investments under this subcomponent will support the identification and

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Innovation Systems (Total US$ 13 million; IDA Grant: US$12 million, GAFSP Grant: US$1 million)	including the development of new varieties and animal breeds better adapted to climate change and weather shocks (flood/drought, increase temperature, and so on), and enabling adaptation by supporting research on agri-food systems, emerging market niches, value chain demand, diagnostic studies, and strategic planning.	application of CSA technologies and practices, combining adaptation and mitigation co-benefits, through the PA approach.
Subcomponent 1.2: Digital Agriculture (Total US$10 million; IDA Grant: US$9 million, GAFSP Grant: US$1 million)	Improved information systems, such as the meteorological information system, NAMIS, LMIS and sanitary& food safety system, and the application of digital agriculture (virtual one-stop service center) would contribute to up to date knowledge about climate risks (particularly droughts, floods pests and diseases) and other risks (market risks) that may affect the performance and climate resilience capacities of the Project beneficiaries. Besides supporting the implementation of risk reduction measures, it would inform decisions on longer term climate change adaptation for Productive Alliances (as part of Business Plan development and implementation), Water Users Associations (and other stakeholders linked to water catchment / irrigation system management) and national institutions (informing policies and programs).	Improved information systems and the application of digital agriculture would contribute to up to date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, the Project would support informed decisions at three levels: (i) within Productive Alliances to develop investment subprojects that implement production systems with technologies and practices aiming at restoring degraded lands and contributing with sustainable land management; (ii) within Water Users Associations and other local stakeholders of priority watersheds, linked to irrigation systems that will be developed by the Project, to plan afforestation/reforestation and conservation activities in highly-degrated areas and important water catchment area; and (iii) at national level to support the definition / improvement of policies and regulations. In line with the EFA, the GHG considers CCM at the level of Productive Alliances and Water Catchments. However due to scarce information at the time of ex-ante assessment, the GHG accounting does not include additional CCM co-benefits from improved policies and regulation, aiming at the fulfillment of NDCs in AFOLU with Project support
Subcomponent 1.3: Land Demarcation and Property	This subcomponent will scale up and sustain the adjudication, demarcation, and registration of 168,000 land parcels, thus supporting climate resilience through enhancing farmers'	

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Registration (IDA US$5 million)	land security and driving investment incentives toward a resilient and sustainable farm and landscape management.	
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (Total US$81 million; IDA grant: US$79 million, GAFSP grant: US$2 million)		
Subcomponent 2.1: Large-to-Medium Scale Irrigation Schemes and Catchment Management (IDA grant: US$75 million)	This subcomponent will develop catalytic irrigation infrastructure selected for its potential to enhance climate resilience, private investment flows, access to markets, and value addition. By investing in irrigation and water catchment management, this subcomponent will increase farmers' resilience to climate change-induced weather variability and the risk of facing water deficits in their production systems. Proposed irrigation infrastructure will be informed by climate-resilient design standard considerations and improved water catchment management.	Mitigation opportunities lie in developing guidelines on watershed management and erosion control; developing and contributing to the implementation of a long-term watershed conservation and restoration plan that aims to achieve in sustainable soil aggregation, land restoration, and reforestation in target areas. According to the GHG assessment, activities under Component 2 would generate a net reduction of GHG emissions of about 0.26 million tCO_2e in 20 years.
Subcomponent 2.2: Institutional Capacity Building for Irrigation Schemes (Total US$6 million; IDA grant: US$4 million, GAFSP grant: US$2 million)	This subcomponent will invest in strengthening irrigation institutions including WUAs to help ensure the sustainability of project-rehabilitated infrastructure and promote water use efficiency. Through the mentioned investments, this subcomponent will enable adaptation by supporting knowledge and training on the management and maintenance of irrigation infrastructure and water delivery to final users, including training on climate risk, impacts, and adaptation measures on water and irrigation resources.	As above
Component 3: Getting to Market (Total US$128 million; IDA grant: US$119 million, GAFSP grant: US$9 million)		
Subcomponent 3.1: Farmer Organizations (Total US$ 25 million; IDA grant: US$23 million, GAFSP grant: US$2 million)	Investment in supporting the capacity of POs to join and gainfully participate in project-supported PAs through providing matching grants, training, advisory, market links, and other services and learning opportunities. This subcomponent will support adaptation by promoting access and adoption of CSA technologies and practices as well as enhancing farmers' capacity to act collectively to aggregate and add value to their products and sell into markets.	According to the GHG assessment, the development and implementation of PAs (more directly linked to Subcomponents 3.1, 3.2, and 3.3) will generate a net reduction of GHG emissions of about 2.49 million $ttCO_2e$ in 20 years.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Subcomponent 3.2: Productive Alliances (Total US$73 million; IDA grant: US$68 million, GAFSP grant: US$5 million)	This subcomponent will support PAs already developed and supported by AGCOM and the development of new PAs. The PA development and selection include criteria to ensure the application of climate-smart investments. This subcomponent will also facilitate farmers' access to climate-smart input and output markets.	As above
Subcomponent 3.3: Last-Mile Infrastructure (Total US$21 million; IDA grant: US$19 million, GAFSP grant US$2 million)	This subcomponent will finance the building or rehabilitation of infrastructure—notably, feeder roads and a bridge—that facilitates the transportation of agricultural products and the linking of rural producers to market opportunities, improving farmer's access to markets. Proposed infrastructure will be informed by climate-resilient design standard considerations.	This subcomponent may help mitigate GHG emissions associated with postharvest losses of agri-food products. A proportion of this benefit is already included in the GHG accounting, indicated above.
Subcomponent 3.4: Strategic Public Facilities (IDA grant: US$9 million)	This component will finance the construction, rehabilitation, and upgrade of strategic public facilities, including a national agricultural exhibition center and agricultural training center, and regional and central laboratories of the MBS.	Construction, rehabilitation, and upgrade of strategic public facilities are also expected to contribute to reduced food losses and waste. Due to limited information, an estimate is not included beyond the specific contributions of PAs (factoring in LMI).
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (Total US$10 million; IDA grant: US$8 million, GAFSP grant US$2 million)		
Subcomponent 4.1: Preparation and Implementation of Strategic Policy Reforms (Total US$10 million; IDA grant: US$8 million, GAFSP grant US$2 million)	This component will promote policy reforms relating to agricultural commercialization and climate resilience by building the Government's institutional and technical capacity to develop, update, and implement relevant policies and legal texts. This subcomponent will invest in climate resilience through the inclusion of climate-informed inputs on the national crop production and development policy, the agricultural research policy, the horticulture strategy, the contract farming policy, the livestock breeding strategy, the apiculture strategy, and the e-commerce strategy. The Project would also support the updating of the NAIP and would ensure the integration of NDC commitments on climate resilience, in line with the updating of key policy and regulations mentioned above.	Following Malawi's updated NDC, a significant proportion of climate-resilient investments that will be promoted by the improved agri-food sector policy have a positive impact in climate change mitigation. The CSA technologies and practices promoted by improved policies and regulations will follow those indicated by the country's NDC. As part of the Project support to update the NAIP and key policy/regulations, it will seek to mainstream climate change mitigation commitments of the country's NDC (AFOLU sector) along investment priorities. As indicated above, the potential climate change mitigation co-benefits of this subcomponent are not included in the ex-ante GHG accounting but this could represent a relevant

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
		contribution in the long term (to be included in ex-post assessment and impact evaluation).

Somalia

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Component 1: (Re-)Building Resilient Agricultural Production Capacity (IDA grant US$40 million)		
Subcomponent 1.1: Crop and Livestock Research, Extension, and Seed Systems (IDA US$18 million)	This subcomponent will build the capacity of Somalia's research, extension, and seed systems while contributing to build climate resilience and support agricultural producers through enhanced access to quality inputs, technology, and know-how as well as a suite of upstream and downstream agricultural services aimed to build climate resilience. It will also support climate-smart agricultural research and innovation systems, extension and advisory services, agricultural information systems, and the development of high-quality and climate-resilient inputs. This subcomponent will promote the training of enhanced animal health services to increase resilience to climate change risks and support investments on food safety measures for livestock threatened by climate change while aiming to increase production.	The subcomponent will invest in research on low-carbon technologies, or other technologies instrumental to achieving full decarbonization, such as innovations focusing on climate-smart technologies and extension services that build climate resilience and reduce emissions (for example, seeds with enhanced yields will lead to more efficient use of land, reducing the need for land clearing and subsequent emissions from deforestation). Moreover, improved seeds with drought-resistant and/or other climate-resilient traits will also reduce emissions by decreasing the need for inputs such as irrigation, fertilizer, and pesticides). This subcomponent will provide training on best management practices, such as improved feed and animal health, that can lead to increased animal productivity and reduced emissions per unit produced in the country.
Subcomponent 1.2: Community Engagement and Technology Transfer (IDA US$12 million)	This subcomponent will support (a) developing rural producers' capacity for collective action, (b) building their capacity to adopt CSA technologies and management practices, and (c) recovering from climate shock-related asset losses and establishing a strong community-based extension system. Thus, this subcomponent will build climate resilience and support agricultural producers through community engagement and technology transfer through partnerships with farmers, agro-pastoralists, and pastoralists into CIGs. It will include mobilization, TA, training, and capacity building,	According to the GHG assessment, the adoption of CSA technologies and practices by CIGs of smallholder farmers, agro-pastoralist or nomadic pastoralists—linked to activities under Components 1 and 2—will lead to a net reduction of 3.88 million tCO_2e in 20 years.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	enabling farmers' access to quality inputs, technology, and know-how and a suite of upstream and downstream agricultural services aimed to build resilience. It will also support agricultural research and innovation systems, extension and advisory services, agricultural information systems, the provision and financing of high-quality and climate-resilient inputs (for example, drought-resistant seeds).	
Subcomponent 1.3: Digital Agriculture Solutions and Data Systems (IDA US$10 million)	As data is a key enabler of CSA and innovation, this subcomponent will invest in the development of effective data services and digital climate advisory systems that will be important means of boosting climate resilience. Examples of data streams that this subcomponent will support include the collection and dissemination of data on climate and weather variability, farms (including their location, soils, and demographics), the timing and choice of crop plantings, crop health, the price of agricultural inputs and outputs, market-specific supply and demand, weather patterns, pests and pathologies, and water levels. Improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, the project would support informed decisions on various topics with adaptation contribution, such real-time weather or forecasted weather; crop production and food supply; animal and plant health, the prices and availability of seeds, fertilizers, and food stocks and other market information as well as other relevant information that would facilitate better climate risk management and adaptation planning	Improved information systems and the application of digital agriculture would contribute to up-to-date knowledge about land use and land use change dynamics. It would also provide information on areas that are subject to degradation due to the application of unsustainable practices. Based on this, in addition to climate adaptation outcomes, the project would support informed decisions on various topics with mitigation contribution, such real-time data on forest cover, land degradation, and soil health and other relevant information that would facilitate better climate risk management.
Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes (IDA US$40 million)		

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Subcomponent 2.1: Water Availability for Crops and Livestock (IDA US$28 million)	This subcomponent, through expanding irrigation services and improving multipurpose water management and availability, will increase farmers' resilience to climate change-induced weather variability by reducing water-deficit risks in their production systems, and potentially mitigating water-related conflict at the community level. The subcomponent will invest in efficient irrigation, building drought adaptive capacity. Proposed infrastructure will be informed by climate-resilient design standard considerations.	The subcomponent includes activities which contribute to reduction in methane emissions (through investments in water conservation systems) and energy consumption (energy-efficient and water-efficient irrigation systems such as drip irrigation, solar pumping, terracing, contour bunding) in operations. This subcomponent will invest in capacity building and training project beneficiaries in energy and water conservation.
Subcomponent 2.2: Rangeland Management (IDA US$12 million)	This component will invest in (a) large-scale reforestation efforts around pastoral and agropastoral settlements, (b) community-based rangeland management, (c) sustainable rangeland-based livelihoods, and (d) fodder production and storage. This subcomponent will contribute to restoring degraded rangelands through the use of drought-resistant, fast-growing, and nitrogen-fixing grasses and forage varieties identified and validated by crop research institutions, aiming to enhance the sustainable and resilient use of natural resources for food systems and livelihoods within priority areas, while improving animal health and food security through a sustainable management of land. Additionally, it aims to build and train river and rangeland authorities on effective protection of rangelands.	The subcomponent includes agricultural activities that contribute to increasing the carbon stock in the soil. Agroforestry, reforestation, and restoration of degraded lands can provide GHG emission reduction and improved carbon sequestration. Mitigation opportunities lie in improving or restoring watershed functions through activities such as afforestation and protected area management that also restore soil carbon pools; developing guidelines on watershed management and erosion control; and developing a long-term watershed conservation and restoration plan that aims to achieve in sustainable soil aggregation, land restoration, and reforestation in target areas. Additionally, this subcomponent includes activities that improve carbon sequestration through rangeland management. As mentioned above, according to the GHG assessment, the adoption of CSA technologies and practices by CIGs) of smallholder farmers, agro-pastoralists, or nomadic pastoralists—linked to activities under C1 and C2—will lead to a net reduction of 3.88 million tCO_2e in 20 years.
Component 3: Getting to Market (IDA US$20 million)		
Subcomponent 3.1: Farmer Producer Organizations and Agrifood Enterprises (IDA US$5 million)	This subcomponent will work with private, market-facing organizations, helping (a) establish and strengthen existing FPOs and (b) develop small and medium agri-food enterprises for value addition and marketing, linked to the FPOs (and	The financial and economic assessment of the Project's influence in the activities of FPOs, SMEs and PPPs (managing market infrastructure and other value chain services), is evaluated through investment models that are interlinked.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	through these to the CIGs). POs can provide farmers with access to up-to-date information and knowledge about best practices for adapting to changing climatic conditions, such as drought-resistant crops, irrigation technologies, and soil conservation methods. Additionally, they provide peer-to-peer learning experiences and improved access to diversified markets. A key selection criterion for FPO support is the inclusion of CSA technologies and practices in their investment proposals.	Following the Project's approach, FPOs and SMEs are supported to consolidating and adding value to inputs from CIGs (supported through activities under Components 1 and 2). Then, FPO's and SMEs could also benefit from linkages to PPPs managing key market infrastructure at larger scale. The investment models selected for the EFA are limited in terms of including more cases on PPPs participating in storage, sanitary and logistic services and including climate smar investments leading to higher energy efficiency and reduced food loss and waste, as intended by the Project. According to the GHG assessment, investments under Component 3 will lead to a net reduction of 1.04 million tCO_2e in 20 years.
Subcomponent 3.2: Market Infrastructure and Enterprise Development (IDA US$10 million)	This subcomponent will support the safety and marketability of crop and livestock products, including export promotion, by (a) developing and upgrading physical infrastructure and quality assurance services and (b) training value chain actors on food safety. Under this subcomponent, the project will generally adhere to the One Health approach. Proposed infrastructure will be informed by climate-resilient design standard considerations. Infrastructure and service upgrades in postharvest handling, storage, transportation, and testing and certification of agricultural products will be supported through direct investments and the development of PPPs. PPPs would further contribute to mainstreaming climate resilience and ensuring sustainability in the provision of strategic value chain services.	Subcomponent will investment in avoiding food losses along the value chain. To address this issue, improving market access and product transportation is key to reduce postharvest losses. By doing so, GHG emissions along the food supply chain can be reduced. As mentioned above, according to the GHG assessment, investments under Component 3 will lead to a net reduction of 1.04 million tCO_2e in 20 years.
Subcomponent 3.3: Access to Finance (IDA US$5 million)	This subcomponent will seek to enhance access to finance at various levels to catalyze adoption of climate-smart TIMPs by smallholder farmers and pastoralists. Enhanced access to financial services will allow farmers to access climate-smart	As mentioned above, according to the GHG assessment, investments under Component 3 will lead to a net reduction of 1.04 million tCO_2e in 20 years.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
	inputs and access to saving, credit, insurance, and trainings to enhance resilience.	
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (IDA US$35 million)		
Subcomponent 4.1: Ministerial Capacity Building and Agri-food Policy Assessments for the Crops Sector (IDA US$17.5 million)	This subcomponent will support policy and regulatory changes to enhance food security and food systems resilience, with the special aim of resilient agriculture. The component will support, -among others,- mainstreaming of food resilience into Somalia's strategic vision, development of national plans, and efforts to align price and policy incentives in agriculture and NRM, with the aim of achieving a climate-informed policy environment. Besides enhancing climate resilience capacities of public infrastructure and staff, the Project will carry out an assessment of "gaps" and opportunities to mainstream climate resilience in national agrifood policy and identify where technical assistance is immediately needed to formulate or update policies and action plans relating, among other topics, to seed systems, land tenure, food safety management, biosecurity, and other One Health arrangements. The Project activities have a significant alignment with the country's NDC. Therefore, Project implementation would provide relevant evidence to inform policy making	This subcomponent will invest in national and territorial cross-sectoral policies that aim to lead to climate change mitigation actions or technical support for such actions. Additionally, it will provide mitigation co-benefits as it builds capacities for farmer organizations, public officers, and institutions on climate-smart value chain development.
Subcomponent 4.2: Ministerial Capacity Building and Agrifood Policy Assessments for the Livestock Sector (IDA US$17.5 million)	This subcomponent will support policy and regulatory changes to enhance food security and food systems resilience, with the special aim of resilient livestock. The component will support, -among others, mainstreaming of food resilience into Somalia's strategic vision, development of national plans, and efforts to align price and policy incentives in agriculture and NRM, with the aim of achieving a climate-informed policy environment.	This subcomponent will invest in national and territorial cross-sectoral policies that aim to lead to climate change mitigation actions or technical support for such actions. Additionally, it will provide mitigation co-benefits as it builds capacities for farmer organizations, public officers, and institutions on climate-smart value chain development.

AU

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Component 1: (Re-)Building Resilient Agricultural Production Capacity (IDA US$4 million)		
Subcomponent 1.1: Climate-Smart Technologies, Production Practices, and Policy Options	This subcomponent will invest in (a) a comprehensive review of factors restricting agricultural producers' access to climate-smart technologies and their transition to more sustainable and resilient production systems; (b) the development of continental framework papers focused on key themes (such as soil fertility and CSA) that inform policy makers and technical agencies drafting NAIPs, RAIPs, and other key policy documents; (c) the establishment of platforms that support debate and knowledge sharing about common regional challenges and solutions; (d) TA to Governments developing bankable investment plans; and (e) the monitoring of progress toward reform in selected countries, including the documentation and sharing of lessons learned. Thus, this subcomponent will help build climate resilience through enhanced understanding of CSA technologies and knowledge sharing.	The subcomponent includes agricultural activities that contribute to increasing the carbon stock in the soil. Additionally, the subcomponent will invest in research on low-carbon technologies, or other technologies instrumental to achieving full decarbonization, through supporting research and innovation that focus on climate-smart technologies and extension services that will build climate resilience and reduce emissions (for example, seeds with enhanced yields will lead to more efficient use of land, reducing the need for land clearing and subsequent emissions from deforestation. Additionally, improved seeds with drought-resistant or other climate-resilient traits will also reduce emissions by reducing the need for inputs such as irrigation, fertilizer, and pesticides)
Subcomponent 1.2: Post-Harvest Food Loss Mitigation Technologies (including Storage and Cold Storage)	Through investments in (a) processes to explore and promote postharvest technologies, business models, policies, and enabling regulations; (b) the development of national and regional action plans on cold storage and other approaches to postharvest loss mitigation; (c) communications and knowledge exchange on postharvest technologies; and (d) the identification of bankable postharvest technology development projects or programs, this subcomponent will promote climate resilience through enhanced agri-food market efficiency and access, reduced food waste and loss, and greater food security. Proposed infrastructure will be informed by climate-resilient design standard considerations.	Due to limited information at the time of the ex-ante GHG accounting, the assessment does not include additional co-benefits from activities implemented by the AU. However, regional support to develop research, transfer mechanisms and markets around energy efficiency and renewable energy technologies, as well as post-harvest handling and commercialization equipment is key for reducing food loss and waste in all countries.

Subcomponents and Activities	Climate Adaptation Activities/Investments	Climate Mitigation Activities/Investments
Subcomponent 1.3: Agricultural R&D and Extension and Advisory Services (Coordination and Strengthening)	This subcomponent will coordinate efforts around CSA, supporting development of knowledge-sharing platforms; regional conferences; identification and promotion of digital agriculture solutions, including digital advisory service solutions (public and private); and upskilling of staff responsible for making research accessible to a broad audience.	This subcomponent will upscale research on low-carbon technologies or other technologies instrumental to achieving full decarbonization.
Component 4: Promoting a Greater Focus on Food Systems Resilience in National and Regional Policymaking (IDA US$4 million)		
Subcomponent 4.1: Evidence-Based Planning	This subcomponent will fund AU'DARBE's technical support to countries undertaking reviews of existing NAIPs or developing new NAIPs. It will also help integrate critical new themes relating to CSA and climate resilience into the biannual CAADP reviews.	This subcomponent will invest in regional cross-sectoral policies that aim to lead to climate change mitigation actions or technical support for such actions. Additionally, it will provide mitigation co-benefits as it builds capacities for farmer organizations, public officers, and institutions on climate-smart value chain development.
Subcomponent 4.2: Strategy Development	The subcomponent will finance updating of the AU's business plan by 2024, ensuring that the thematic areas of climate resilience and CSA are prioritized.	
Subcomponent 4.3: Strengthening Foresight systems	This subcomponent will support addressing climate vulnerabilities through promoting knowledge and experience sharing on climate adaptation techniques and identifying common frameworks for research and innovation on CSA.	This subcomponent will provide funding for CSA, and low-carbon technologies instrumental to achieving full decarbonization.

ANNEX 7: Greenhouse Gas Accounting

1. **Background and methodology.** In its 2012 Environment Strategy, the World Bank adopted a corporate mandate to conduct GHG emission accounting for project financing. The quantification of GHG emissions is an important step in managing and ultimately contributing to climate change mitigation. The World Bank adopted the Ex-Ante Carbon-balance Tool (EX-ACT), developed by the FAO to assess the impact of agricultural and rural development investment lending on GHG emission and carbon sequestration. EX-ACT allows the *ex ante* assessment of a project's net carbon balance. It is defined as the net balance of CO_2 equivalent GHG that would be emitted or sequestered as a result of project implementation, compared to a without-project scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO_2 per hectare and year (tCO_2per year).

2. **Basic parameters, assumptions, and data sources.** The GHG accounting benefits from a localized assessment of activities. Therefore, the assessment was initially conducted at the country level and then aggregated to provide a global value for the MPA Phase 3. A technical note per country is available, which details the main parameters, assumptions, and data sources applied to estimate the GHG balance. The time frame of project implementation is 6 years and the capitalization phase is 14 years, and thus the analysis period is set for a total of 20 years. Dynamics of evolution are assumed to be linear for most of the variables. The analysis applies default 'Tier 1' coefficients. The construction of 'without-project' and 'with-project' trajectories is based on inputs from the Economic and Financial Analysis (EFA) per country.

3. **Results.** The project leads to a reduction of tCO_2e emissions annually and per hectare, compared to a business-as-usual baseline scenario. After 20 years, and for the whole MPA Phase 3, GHG mitigation benefits would amount to a reduction of 22.33 million tCO_2e. The main results of this GHG analysis are summarized in table A7.1. Tables A7. 2 to A7.5 present the results of the GHG accounting per country.

Table A7.1. Aggregated MPA Phase 3 - Results of the Ex Ante GHG Analysis in tCO_2e

Component		WITHOUT	WITH	BALANCE	COMOROS	MALAWI	SOMALIA	KENYA	Bal.
Land use changes									
	Deforestation	-	-	-	-	-	-	-	-
	Afforestation	-	(6,198,035)	(6,198,035)	(334,674)	(26,201)	(1,038,339)	(4,798,822)	(6,198,035)
	Other land-use	(1,105,958)	(6,274,800)	(5,168,841)	-	(685,654)	-	(4,483,188)	(5,168,841)
Crop land	Annual	565,468	(779,720)	(1,345,188)	(395,548)	(35,367)	(55,905)	(858,368)	(1,345,188)
	Perennial	(7,241,976)	(11,904,600)	(4,662,624)	-	(3,936,193)	(726,431)	-	(4,662,624)
	Flooded Rice	968,851	235,022	(733,830)	-	(733,830)	-	-	(733,830)
Grasslands & L.stock	G.lands	3,997,840	(4,096,740)	(8,094,580)	-	-	(4,494,396)	(3,600,183)	(8,094,580)
	L.stock	71,394,706	76,073,445	4,678,739	1,560	1,951,695	3,099,405	(373,921)	4,678,739
	Forest mngt.	1,976,216	(846,888)	(2,823,104)	-	-	(2,718,042)	(105,061)	(2,823,104)
	Inland wetlands	-	-	-	-	-	-	-	-
	Coastal wetlands	-	-	-	-	-	-	-	-
	Inputs and invest.	3,182,526	5,195,244	2,012,718	41,010	1,315,084	1,017,168	(360,544)	2,012,718
Total emissions, tCO2-e		73,737,673	51,402,928	(22,334,745)	(687,653)	(2,150,465)	(4,916,540)	(14,580,087)	(22,334,745)
Total emissions, tCO2-e/ha		334	142	(192)					
Total emissions, tCO2-e/ha/yr		17	7	(10)					

Table A7.2. Comoros FSRP - Results of the Ex Ante GHG Analysis in tCO_2e

Project name	Food Systems Resilience Project (FSRP)						
Continent	Eastern Africa	**Project duration (in years)**		**Total area (ha)**	6,000	**Global warming potential**	
Country	Comoros	Implementation	6	Mineral soil	6,000	CO_2	1
Climate	Tropical	Capitalization	14	Organic soil	0	CH_4	34
Moisture	Moist	Period analysis	20	Waterbodies	0	N_2O	298

GROSS FLUXES (In tCO_2-e over the whole period analysis)

PROJECT COMPONENTS		WITHOUT	WITH	BALANCE
Land use changes	Deforestation	0	0	0
	Afforestation	0	-334,674	-334,674
	Other land-use	0	0	0
Cropland	Annual	221,713	-173,835	-395,548
	Perennial	0	0	0
	Flooded rice	0	0	0
Grasslands & Livestock	Grasslands	0	0	0
	Livestock	52,296	53,856	1,560
	Forest mngt.	0	0	0
	Inland wetlands	0	0	0
	Coastal wetlands	0	0	0
	Inputs & Invest.	211,527	252,536	41,010
Total emissions, tCO_2-e		**485,536**	**-202,117**	**-687,653**
Total emissions, tCO_2-e/ha		**80.9**	**-33.7**	**-114.6**
Total emissions, tCO_2-e/ha/yr		**4.0**	**-1.7**	**-5.7**

SHARE PER GHG OF THE BALANCE (In tCO_2-e over the whole period analysis)

CO_2 BIOMASS	CO_2 SOIL	N_2O	CH_4	ALL NON-AFOLU EMISSIONS*
0	0	0	0	
-284,727	-50,116	75	94	
0	0	0	0	
0	-371,014	-9,759	-14,776	
0	0	0	0	
0	0	0	0	
0	0	0	0	
		786	774	
0	0	0	0	
0	0	0	0	
0	0	0	0	0
	0	5,442		35,567
-284,727	**-421,130**	**-3,455**	**-13,908**	**35,567**
-47.5	**-70.2**	**-0.6**	**-2.3**	**5.9**
-2.4	**-3.5**	**0.0**	**-0.1**	**0.3**

AVERAGE ANNUAL EMISSIONS (In tCO_2-e/yr)

WITHOUT	WITH	BALANCE
0	0	0
0	-16,734	-16,734
0	0	0
11,086	-8,692	-19,777
0	0	0
0	0	0
0	0	0
2,615	2,693	78
0	0	0
0	0	0
0	0	0
10,576	12,627	2,050
24,277	**-10,106**	**-34,383**

+ = Source / - = Sink
Results presented here include GHG fluxes on mineral and organic soils
See further down for detailed results on organic soils
* Includes fisheries, acquaculture and inputs & investments that are not included in the AFOLU definition.

Uncertainty level	tCO2-e/yr	Percent
Without	24,277	41%
With	-10,106	39%
Balance	-34,383	44%

Table A7.3. Malawi FSRP - Results of the Ex Ante GHG Analysis in tCO_2e

Project name	Malawi FSRP						
Continent	Eastern Africa	**Project duration (in years)**		**Total area (ha)**	36,600	**Global warming potential**	
Country	Malawi	Implementation	6	Mineral soil	36,600	CO_2	1
Climate	Tropical	Capitalization	14	Organic soil	0	CH_4	34
Moisture	Dry	Period analysis	20	Waterbodies	0	N_2O	298

GROSS FLUXES (In tCO_2-e over the whole period analysis)

PROJECT COMPONENTS		WITHOUT	WITH	BALANCE
Land use changes	Deforestation	0	0	0
	Afforestation	0	-26,201	-26,201
	Other land-use	0	-685,654	-685,654
Cropland	Annual	111,755	76,388	-35,367
	Perennial	-1,224,031	-5,160,224	-3,936,193
	Flooded rice	968,851	235,022	-733,830
Grasslands & Livestock	Grasslands	0	0	0
	Livestock	762,797	2,714,493	1,951,695
	Forest mngt.	0	0	0
	Inland wetlands	0	0	0
	Coastal wetlands	0	0	0
	Inputs & Invest.	1,985,871	3,300,955	1,315,084
Total emissions, tCO_2-e		**2,605,244**	**454,779**	**-2,150,465**
Total emissions, tCO_2-e/ha		**71.2**	**12.4**	**-58.8**
Total emissions, tCO_2-e/ha/yr		**3.6**	**0.6**	**-2.9**

SHARE PER GHG OF THE BALANCE (In tCO_2-e over the whole period analysis)

CO_2 BIOMASS	CO_2 SOIL	N_2O	CH_4	ALL NON-AFOLU EMISSIONS*
0	0	0	0	
-6,608	-19,593	0	0	
-132,593	-553,061	0	0	
0	-28,614	-6,753	0	
-3,416,926	-518,115	-1,152	0	
0	0	0	-733,830	
0	0	0	0	
		150,682	1,801,013	
0	0	0	0	
0	0	0	0	
0	0	0	0	0
	0	818,874		496,211
-3,556,126	**-1,119,383**	**961,650**	**1,067,183**	**496,211**
-97.2	**-30.6**	**26.3**	**29.2**	**13.6**
-4.9	**-1.5**	**1.3**	**1.5**	**0.7**

AVERAGE ANNUAL EMISSIONS (In tCO_2-e/yr)

WITHOUT	WITH	BALANCE
0	0	0
0	-1,310	-1,310
0	-34,283	-34,283
5,588	3,819	-1,768
-61,202	-258,011	-196,810
48,443	11,751	-36,691
0	0	0
38,140	135,725	97,585
0	0	0
0	0	0
0	0	0
99,294	165,048	65,754
130,262	**22,739**	**-107,523**

+ = Source / - = Sink
Results presented here include GHG fluxes on mineral and organic soils
See further down for detailed results on organic soils
* Includes fisheries, acquaculture and inputs & investments that are not included in the AFOLU definition.

Uncertainty level	tCO2-e/yr	Percent
Without	130,262	33%
With	22,739	35%
Balance	-107,523	33%

Table A7.4. Kenya FSRP - Results of the Ex Ante GHG Analysis in tCO_2e

Project name	KENYA_FSRP
Continent	Eastern Africa
Country	Kenya
Climate	Tropical
Moisture	Dry

Project duration (in years)	
Implementation Phase	5
Capitalization Phase	15
Total Duration of Accounting	20

Total area (ha)	252,000
Mineral soil	252,000
Organic soil	0
Waterbodies	0

Global warming potential	
CO_2	1
CH_4	28
N_2O	265

GROSS FLUXES

In tCO2-e over the whole period analysis

PROJECT COMPONENTS		WITHOUT	WITH	BALANCE
Land use changes	Deforestation	0	0	0
	Afforestation	0	-4,798,822	-4,798,822
	Other land-use	-1,105,958	-5,589,146	-4,483,188
Cropland	Annual	166,229	-692,139	-858,368
	Perennial	0	0	0
	Flooded rice	0	0	0
Grasslands & Livestock	Grasslands	2,021,250	-1,578,933	-3,600,183
	Livestock	976,136	602,215	-373,921
	Forest mngt.	24,435	-80,626	-105,061
	Inland wetlands	0	0	0
	Coastal wetlands	0	0	0
	Fisheries and aquaculture	0	0	0
	Inputs & Invest.	817,260	456,715	-360,544
Total emissions, tCO2-e		**2,899,351**	**-11,680,736**	**-14,580,087**
Total emissions, tCO2-e/ha		**11.5**	**-46.4**	**-57.9**
Total emissions, tCO2-e/ha/yr		**0.6**	**-2.3**	**-2.9**

SHARE PER GHG OF THE BALANCE

In tCO2-e over the whole period analysis

CO2 BIOMASS	CO2 SOIL	N_2O	CH_4	ALL NON-AFOLU EMISSIONS*
0	0	0	0	
-3,895,997	-902,825	0	0	
-817,988	-3,665,200	0	0	
0	-819,225	-1,248	-37,895	
0	0	0	0	
0	0	0	0	
0	-3,600,183	0	0	
		-22,706	-351,215	
-80,626	0	-5,321	-19,114	
0	0	0	0	
0	0	0	0	
0	0	0	0	0
	0	-109,313		-251,232
-4,794,611	**-8,987,433**	**-138,587**	**-408,224**	**-251,232**
-19.0	**-35.7**	**-0.5**	**-1.6**	**-1.0**
-1.0	**-1.8**	**0.0**	**-0.1**	**0.0**

AVERAGE ANNUAL EMISSIONS

In tCO2-e/yr

WITHOUT	WITH	BALANCE
0	0	0
0	-239,941	-239,941
-55,298	-279,457	-224,159
8,311	-34,607	-42,918
0	0	0
0	0	0
101,063	-78,947	-180,009
48,807	30,111	-18,696
1,222	-4,031	-5,253
0	0	0
0	0	0
0	0	0
40,863	22,836	-18,027
144,968	**-584,037**	**-729,004**

Uncertainty level	tCO2-e/yr	Percent
WITHOUT	144,968	45%
WITH	-584,037	44%
BALANCE	-729,004	45%

+ = Source / - = Sink
Results presented here include GHG fluxes on mineral and organic soils
See further down for detailed results on organic soils
* Includes fisheries, acquaculture and inputs & investments that are not included in the AFOLU definition.

Table A7.5. Somalia FSRP - Results of the Ex Ante GHG Analysis in tCO_2e

Project name	WB Somalia FSRP
Continent	Eastern Africa
Country	Somalia
Climate	Tropical
Moisture	Dry

Project duration (in years)	
Implementation	6
Capitalization	14
Period analysis	20

Total area (ha)	300,000
Mineral soil	300,000
Organic soil	0
Waterbodies	0

Global warming potential	
CO_2	1
CH_4	34
N_2O	298

GROSS FLUXES

In tCO_2-e over the whole period analysis

PROJECT COMPONENTS		WITHOUT	WITH	BALANCE
Land use changes	Deforestation	0	0	0
	Afforestation	0	-1,038,339	-1,038,339
	Other land-use	0	0	0
Cropland	Annual	65,770	9,866	-55,905
	Perennial	-6,017,945	-6,744,376	-726,431
	Flooded rice	0	0	0
Grasslands & Livestock	Grasslands	1,976,590	-2,517,806	-4,494,396
	Livestock	69,603,477	72,702,882	3,099,405
	Forest mngt.	1,951,781	-766,261	-2,718,042
	Inland wetlands	0	0	0
	Coastal wetlands	0	0	0
	Inputs & Invest.	167,869	1,185,037	1,017,168
Total emissions, tCO_2-e		**67,747,542**	**62,831,002**	**-4,916,540**
Total emissions, tCO_2-e/ha		**225.8**	**209.4**	**-16.4**
Total emissions, tCO_2-e/ha/yr		**11.3**	**10.5**	**-0.8**

SHARE PER GHG OF THE BALANCE

In tCO_2-e over the whole period analysis

CO_2 BIOMASS	CO_2 SOIL	N_2O	CH_4	ALL NON-AFOLU EMISSIONS*
0	0	0	0	
-1,047,501	9,163	0	0	
0	0	0	0	
0	0	-55,905	0	
0	-726,422	-8	0	
0	0	0	0	
0	-4,644,987	66,941	83,649	
		191,028	2,908,377	
-2,418,785	0	-61,333	-237,924	
0	0	0	0	
0	0	0	0	0
	0	232,438		784,730
-3,466,286	**-5,362,246**	**373,160**	**2,754,102**	**784,730**
-11.6	**-17.9**	**1.2**	**9.2**	**2.6**
-0.6	**-0.9**	**0.1**	**0.5**	**0.1**

AVERAGE ANNUAL EMISSIONS

In tCO_2-e/yr

WITHOUT	WITH	BALANCE
0	0	0
0	-51,917	-51,917
0	0	0
3,289	493	-2,795
-300,897	-337,219	-36,322
0	0	0
98,830	-125,890	-224,720
3,480,174	3,635,144	154,970
97,589	-38,313	-135,902
0	0	0
0	0	0
8,393	59,252	50,858
3,387,377	**3,141,550**	**-245,827**

Uncertainty level	tCO2-e/yr	Percent
Without	3,387,377	34%
With	3,141,550	34%
Balance	-245,827	41%

+ = Source / - = Sink
Results presented here include GHG fluxes on mineral and organic soils
See further down for detailed results on organic soils
* Includes fisheries, acquaculture and inputs & investments that are not included in the AFOLU definition.

ANNEX 8: Gender Gap Analysis and Action Plan

Context

1. **Women make up about half of the agricultural workforce in AFE and contribute significantly to food production, processing, and marketing as well as household nutrition.** Yet, persisting gender gaps compromise women's productivity and their nutritional status as well as that of their families and communities. There is broad-based agreement that women and men farmers do not generally face the same production conditions and, as a result, do not necessarily make the same production choices, with implications for output and incomes. Understanding the constraints on women farmers and the forces that drive gender gaps in agricultural productivity is therefore crucial to close this persistent gap. Substantial gender gaps in productivity have arisen not because women are less efficient farmers but because women experience inequitable access to land, agricultural inputs, and credit. Such unbalanced distribution frequently stems from and is bolstered by deeply entrenched sociocultural norms and traditional expectations of gender roles. This structure of constraints is multifaceted. For example, women are more income and time constrained than men, which has repercussions on their ability to access credit, land, and appropriate levels of inputs. These constraints thus lead to sizeable gender gaps in the adoption of high-value crops and the use of agricultural implements, male family labor, pesticides, and fertilizer, among other elements. The intent of the MPA Program is to narrow specific gender gaps described in the following paragraphs, including (a) limited access to finance and agricultural inputs and technologies resulting in productivity differences (yields/ha); (b) limited access to education, training, and extension services; (c) double duty; and (d) exposure to GBV.

Major Driving Factors of Gender Gap in Agricultural Productivity Identified in Phase 3 Countries

2. **Women's limited access to high-value crops.** High-value crops include cash crops and exported crops and are usually farmed by men, while women are more likely to plant subsistence crops. Qualitative studies attribute these disparities to social norms which dictate that women have the primary responsibility for household food production. Furthermore, women may be unable to scale up to the level required for high-value crops if they are constrained by plot size, land ownership, limited access to climate change adaptation tools, and extension services. Extension services are one of the most common vehicles for disseminating knowledge and training in climate-smart agricultural technologies and practices. However, women in agriculture often have limited access to agricultural support services. Extension services are often dominated by men, resulting in potential gender bias in the diffusion of knowledge of, for example, new seed technologies and training in new farming techniques. Gender-responsive agricultural extension services have the potential to facilitate a shift to higher-value crops while at the same time promoting the use of more climate-friendly farm technologies. Women's access to high-value crops is further exacerbated not only by cash income but also by women's relative time poverty derived from domestic work and care labor. Gender differences in the planting of high-value crops account for 28 percent of the gender gap in Malawi with a cost to GDP of over US$28 million.[104] In Kenya, perceptions of crop ownership across four different districts indicate the gendering of crops; for example, crops for women include sorghum, bananas, vegetables, and other horticulture crops, while men are involved in growing tea, maize, coffee, and *Chrysanthemum*.[105] Somali society maintains clearly delineated gender

[104] UN Women. 2019. *The Cost of the Gender Gap in Agricultural Productivity Five African Countries.*
[105] JICA (Japan International Cooperation Agency). 2021. *Kenya: Country Gender Profile.*

roles and responsibilities: men are responsible for most activities related to camels, including buying, owning, grazing, milking, slaughtering, and selling them, and women are responsible for the sale and processing of camel byproducts such as milk and ghee. Men typically handle major livestock trade for export; women's engagement is usually local, at the subsistence level. [106] In the Comoros, women are mainly involved in food and market garden production and poultry farming. They also undertake cash crop production with less involvement in the marketing aspects, unlike fishing where they are responsible for the sale of fish.[107]

3. **Women's limited access to agricultural inputs**. Most of the evidence coming from Sub-Saharan Africa supports the claim that the inefficient allocation of agricultural inputs, not the efficiency of women farmers, is the main explanation for the gender gap in agricultural productivity. Decomposition studies[108] for Benin, Ghana, and Kenya indicate that gender differences in access to inputs account for most if not all the total gender gap in agricultural productivity. Access to other inputs such as mechanical traction, fertilizer, or pesticide follows the same pattern. In Malawi, experimental results indicate that although men use more fertilizer, enjoy greater access to extension services, and devote relatively more land to cash crops, female farmers are no less efficient than male in terms of crop yields when they are provided with equal access to inputs.[109] Across Phase 3 countries, female-controlled plots have relatively lower yields because inputs such as inorganic and organic fertilizer as well as pesticides are mostly used on male-controlled plots. Similar to women's limited access to high-value crops, one of the primary explanations for women limited access to agricultural inputs is their relative lower cash income which is also related to heavy demands on their time performing unpaid work at home.[110]

4. **Limited access to credit and land.** Women face difficulties in accessing formal credit through commercial banks due to their lack of collateral, and this problem is exacerbated by weak or nonexistent property rights for women. Land ownership is particularly rare for women in AFE with women representing only 0–10 percent of landholders in half the countries surveyed in the region by FAO and 10–19 percent in the other half.[111] This limitation has severe repercussions for women in accessing finance and agricultural inputs, services, and technologies, contributing to maintaining the gender gap in agricultural productivity. Women, for example, are less likely to own land, have access to financial resources and credit, and receive agricultural training and education compared to men. This lack of access to financial resources limits women's ability to invest in their agricultural businesses and increase their productivity and income. In the Comoros, challenges pertaining to land are largely due to the absence of a land registry, poor land registration, and the matrilineal system which affirms the indivisibility and inalienability of land, thus making it impossible for the woman, although customarily the owner, to use land, for example, in securing a bank loan. In Kenya, women head about 32 percent of households but individually hold only 1 percent of land titles.[112] Although women make up about 70 percent of Malawi's agricultural workforce, many lack access to land and other resources.[113] Women own only 17 percent of

[106] Somalia Country Economic Memorandum Volume 1. World Bank and FAO (2018).
[107] Gender Profile of the Union of the Comoros. African Development Bank (2020).
[108] World Bank. 2012. *World Development Report 012: Gender Equality and Development*. Washington, DC: World Bank.
[109] Gilbert, Robert, Webster Sakala, and Todd Benson. 2002. "Gender Analysis of a Nationwide Cropping System Trial Survey in Malawi." *African Studies Quarterly* 6 (1): 1–21.
[110] UN Women. 2019. *The Gender Gap in Agricultural Productivity in Sub-Saharan Africa: Causes, Costs and Solutions*.
[111] FAO. 2018. *The Gender Gap in Land Rights*. http://www.fao.org/3/I8796EN/i8796en.pdf.
[112] Federation of Women Lawyers.
[113] UN Women.

documented land in Malawi.[114] Although far from equal, national statistics show that relatively more women own land in Malawi than in most other countries in Sub-Saharan Africa.[115] In Somalia, the supreme Islamic and legal texts used in the country uphold that the land rights of Somali women are in principle equal to men's rights. However, the practical application of legal and religious frameworks often falls short of protecting and promoting women's land rights.

5. Phase 3 activities that have been designed to address the identified drivers of the gender gap in agricultural productivity are illustrated in table A9.1.

Table A9.1: Phase 3 Gender Action Plan (activities to close and track gender gap)

Gap	Activities	Indicator	Components/Subcomponents by Country				
			Comoros	Kenya	Malawi	Somalia	AU
Women's limited access to high-value crops	**Facilitate women's shift to high-value crops and access to nonlabor inputs, through the following:** • Promote gender-responsive agricultural extension services, including: (a) training of extension officers on gender gaps; (b) active participation of female farmers in the design/delivery of the training; (c) assess the baseline and target an increase in the number of female extension and Phase 3 staff to build and strengthen farmer groups, offer training/sensitization, manage demonstration plots, and provide female farmers with advice and information • Improve access to technical and market information through a range of accessible media and means for women, including radio and print media	CSA technologies and practices transferred to extension services or POs with project support (number), **of which gender-sensitive technologies and practices (number)**	1.4	1.1 1.2 1.3	1.1 1.2 2	1.1 1.2 1.3	1.1 1.3
Women's limited access to agricultural inputs	**Improve women's access to nonlabor agricultural inputs by the following:** • Establish gap baselines to measure improvements in women's productivity • Establish quotas for matching grants and e-vouchers for women (at least 30 percent) • Provide digital literacy training for women (women will have the ability to receive support from the project ensuring that illiteracy is not an obstacle)	**Percentage decrease in yield gap between beneficiary female and male farmers (at least 25% of existing gap)** (the baseline to confirm the productivity gap between men and women will be measured	1.1 2.2 2.3	2.1 2.2	3.1	3.1	

[114] United States Agency for International Development 2015.
[115] Oxfam 2018.

Gap	Activities	Indicator	Components/Subcomponents by Country				
			Comoros	Kenya	Malawi	Somalia	AU
	• Leverage existing women's groups for training and commercial purposes, such as collective access to fertilizer, markets, for improved for improved women's access to CSA and nutrition-sensitive agriculture • Special incentives for e-vouchers • Support women in the matching grant application process and/or simplification of the process • Encourage the submission of business proposals from women by promoting the creation of women's cooperatives and FFS groups through targeted training and capacity building on entrepreneurship, market links, and CSA and nutrition-sensitive agriculture technologies and practices	during implementation to track progress across countries)					
Limited access to credit and land	• Special incentives for matching grant investments that target female farmers, such as higher scores for prioritizing matching investment proposals and expressions of interest from women • Support to women in the matching grant application process and/or simplification of the process • Encourage the submission of business proposals from women by promoting the creation of women's cooperatives and FFS groups through targeted training and capacity building on entrepreneurship, market links, and CSA and nutrition-sensitive agriculture technologies and practices • Revision of policy frameworks to promote greater equality in terms of land rights and access to credit	Agri-food SMEs and cooperatives supported by the Phase 3 (number)	3.1	3.1 3.2	3.2 1.3	3.3	

ANNEX 9: Implementation Support Plan

1. The objective of implementation support is to ensure that the relevant regional and government agencies implement the Phase 3 projects properly. It is also to ensure that the resources and staff allocated by the World Bank are sufficient to support Phase 3 project implementation. The strategy basically aims at making the implementation support to the recipients more flexible and efficient and therefore focuses on the principal risks identified and the agreed risk mitigation measures to be undertaken as described in section VI. It will consist of (a) semiannual implementation support missions carried out jointly by the World Bank, the participating countries, CCARDESA, IGAD, and AU as well as technical partners (CGIAR centers, FAO, and so on) when technical needs arise; and (b) TA in areas of weaknesses and where new approaches/procedures have been introduced.

2. The implementation support strategy will use several instruments to review progress and respond to implementation issues, including the following:

a. **Implementation support mission.** The World Bank will conduct joint semiannual review and implementation support missions with country teams and regional bodies mentioned above. The implementation support missions will have the combined aim of reviewing the quality of implementation, providing solutions to implementation problems, and assessing the likelihood of achieving the PrDO and PDOs. More specifically, they will: (i) review implementation progress by component (including the level of implementation of recommendations made by former review missions), including institutional development aspects; (ii) provide solutions to implementation problems as they arise; (iii) review the action plan and disbursement Phase 3s with the national and regional PIU for the next six months; (iv) review the project's fiduciary aspects, including disbursement and procurement; (v) verify compliance of project activities with the fiduciary agreement and the World Bank's environmental and social ESF policies; (vi) review case studies and survey results to ascertain results indicators and determine progress toward the PDO with regard to the targets set within the Results Framework and assess the quality of implementation; and (vii) review the quality of capacity-building activities, which are crucial for an effective implementation of the project. The missions will combine some field visits whenever feasible, field-based focus group discussions, and interactive workshops with stakeholders for feedback. They will also include regional workshops with participation of countries from FSRP Phase 1 and Phase 2 to ensure cross-learning as well as national workshops to highlight implementation issues, pick up emerging implementation lessons, and share mission recommendations, including agreements on actions moving forward. Reviews of quarterly/annual reports and various studies will also be undertaken.
b. **MTR.** An MTR will be carried out midway in the implementation phase. It will include a comprehensive assessment of the progress in achieving FSRP objectives as laid out in the Results Framework. The MTR will also serve as a platform for revisiting design issues that may require adjustments to ensure satisfactory achievement of the PrDO and PDO.
c. **Other reviews.** Each year, the World Bank and the line ministry in each country will consider the need for additional analytical, advisory, knowledge sharing activities, and/or third-party reviews. Such reviews will be planned for over and above the semiannual implementation support missions.
d. **Implementation completion.** At the close of the Phase 3, each government, as well as CCARDESA,

IGAD, AU, and the World Bank, will carry out separate implementation completion reviews to assess the success of the Phase 3 and draw lessons from its implementation.

e. **FSRP task team set up.** Arrangements made for the preparation phase will be maintained during implementation support, involving a regional task team leader (TTL) as well as country-based co-TTLs in FSRP countries and co-TTLs from participating Global Practices (DRM, Water, and Environment) to the extent possible. The regional TTL will be supported by one operational analyst. This arrangement will enhance interaction with FSRP countries and improve monitoring of progress.

f. **TA.** Implementation support will include specialized technical support from the World Bank, CCARDESA, IGAD, AU, and possibly other bilateral/multilateral agencies for critical aspects of the Phase 3 project, including proper FM/procurement and the monitoring of social and environmental aspects. The objective of the TA will be to help the Phase 3 teams internalize good practices and resolve implementation bottlenecks, as they are identified during missions. TA will include training workshops to develop core resource skills within implementing units and the clients' teams, helping finalize manuals, and reviewing and advising on ToR for required studies and technical support missions.

3. The first two years of implementation will need technical support to put in place the specific tools required for activity planning and implementation; the focus will later change to more routine monitoring of progress, troubleshooting, and assessments based on the Results Framework. Country implementation support missions will be every six months, followed by regional wrap-up workshops to discuss and exchange views on progress, experiences, best practices, and challenges for each country. A common rating process will be done at the end of each wrap-up mission.

4. The implementation support missions will be complemented by regular short visits by individual specialists to follow up on specific thematic issues as needed. The team will also hire consultants to provide technical support to PIUs and implementing agencies. Regional trainings will be provided by the World Bank on key thematic areas such as ESF, procurement, M&E, gender, and MFD. In addition, the FAO Investment Center, IGAD, CCARDESA, the AU, ASARECA, and SADC's FANR as well as consultants may be mobilized periodically to provide TA to IAs in the form of hands-on training and mentoring.

5. Fiduciary teams based in each of the World Bank country offices (procurement and FM specialists) will closely supervise the Phase 3's fiduciary management. They will participate in the country implementation support missions and facilitate capacity building for the Phase 3's fiduciary staff. At least once a year, the procurement staff will organize a post review of procurement activities.

6. On procurement, the World Bank will provide implementation support to the recipient through a combination of prior and post reviews, procurement training to Phase 3 staff and relevant IAs, and periodic assessment of the Phase 3's compliance with the Procurement Manual. Implementation support missions will be geared toward (a) reviewing and updating procurement documents, (b) providing detailed guidance on the World Bank's Procurement Regulations, and (c) monitoring procurement progress against the detailed PP. Following the recommendations of the fiduciary assessments of the IAs, and in addition to the prior review supervision to be carried out from World Bank offices, the semiannual supervision missions will include field visits, of which at least one mission will involve post review of procurement actions.

7. The World Bank ESF specialists will have responsibility for supervising environmental and social aspects. Each year, they will provide implementation support to the environmental and social aspects, participate in regional meetings to discuss findings, and draft action plans to improve implementation.

8. Table A9.1 summarizes the proposed skill mix and number of staff weeks during Phase 3 implementation. It is anticipated that this may change over time as demand increases.

Table A9.1 Proposed Skill Mix

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
TTL	20	4	Washington, DC based
Agriculture research/extension	6	4	FAO Corporate Partnership
Trade specialist	4	2	Consultant
ICT specialist	4	2	Consultant
Operations analyst	10	2	Washington, DC based
Country-level Co-TTLs	36	18	Country office based
DRM, Water, and Environment Co-TTLs	18	6	Washington based
Procurement specialists	6	2	Country office based
FM specialists	6	2	Country office based
Environmental specialist	2	2	Country office based
Social specialist	2	2	Country office based
M&E specialist	4	2	Region based
Communication specialist	2	1	Country office based
Gender specialist	4	2	Region based

ANNEX 10: Map of the Food Systems Resilience Program MPA by Phase