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Report No: PAD3904

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A PROPOSED

CREDIT IN THE AMOUNT OF SDR 4.4 MILLION
(US$6.0 MILLION EQUIVALENT)
TO THE REPUBLIC OF DJIBOUTI

CREDIT IN THE AMOUNT OF SDR 23.1 MILLION
(US$31.5 MILLION EQUIVALENT)
AND GRANT IN THE AMOUNT OF SDR 23.1 MILLION
(US$31.5 MILLION EQUIVALENT)
TO THE FEDERAL REPUBLIC OF ETHIOPIA

CREDIT IN THE AMOUNT OF EURO 39.3 MILLION
(US$43.0 MILLION EQUIVALENT)
TO THE REPUBLIC OF KENYA

CREDIT IN THE AMOUNT OF SDR 35.2 MILLION
(US$48.0 MILLION EQUIVALENT)
TO THE REPUBLIC OF UGANDA

FOR AN

EMERGENCY LOCUST RESPONSE PROGRAM
AS PHASE 1 OF THE MULTI-PHASE PROGRAMMATIC APPROACH

WITH AN OVERALL FINANCING ENVELOPE OF
US$500 MILLION EQUIVALENT

MAY 7, 2020

Agriculture and Food Global Practice
Social Protection and Jobs Global Practice
Africa Region
Middle East and North Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {March 31, 2020})

Djibouti		**Ethiopia**	
Currency Unit =	Djiboutian Franc (DJF)	Currency Unit =	Ethiopian Birr (ETB)
DJF177.79 =	US$1	ETB32.80 =	US$1

Kenya		**Uganda**	
Currency Unit =	Kenyan Shilling (KES)	Currency Unit =	Ugandan Shilling (UGX)
KES105.04 =	US$1	UGX3796.50 =	US$1

EUR0.91328371 =	US$1
SDR 0.73270809 =	US$ 1

FISCAL YEAR

January 1 - December 31

Regional Vice President:	Hafez M. H. Ghanem; Ferid Belhaj
Country Director:	Deborah L. Wetzel
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ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
AFR	Africa
CDD	Community-Driven Development
CERC	Contingency Emergency Response Component
CfW	Cash for Work
CIG	Community Investment Group
COPCD	Channel One Program's Coordinating Directorate
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
CRC	Commission for Controlling the Desert Locust in the Central Region
CSA	Climate Smart Agriculture
CSO	Civil Society Organization
CT	Cash Transfer
DA	Designated Account
DAF	Directorate of Agriculture and Forestry
DALO	Damages and Losses
DFI	Development Finance
DFIL	Disbursement and Financial Information Letter
DLCO-EA	Desert Locust Control Organization for East Africa
DLERS	Desert Locust Early Response System
DLIS	Desert Locust Information Service (FAO)
DLVS	Directorate of Livestock and Veterinary Services
EHS	Environmental, Health, and Safety
ELRP	Emergency Locust Response Program
EO4SD	Earth Observation for Sustainable Development
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standard
ENVI	Image Processing Software
FAO	Food and Agriculture Organization of the United Nations
FCV	Fragility, Conflict and Violence
FDI	Foreign Direct Investment
FM	Financial Management
FY	Fiscal Year
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GEM	Geo-Enabling initiative for Monitoring and Supervision
GFRP	Global Food Crisis Response Program
GHoA	Greater Horn of Africa
GoD	Government of Djibouti
GoE	Government of Ethiopia
GoK	Government of Kenya
GoU	Government of Uganda
GHG	Greenhouse Gas

GIS	Geographic Information System
GHoA	Greater Horn of Africa
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HEIS	Hands-on Expanded Implementation Support
HISP	Household Income Support
HSNP	Hunger Safety Net Program
IA	Implementation Agency
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communications Technology
IDA	International Development Association
IDP	Internally Displaced Person
IFC	International Finance Corporation
IFR	Interim Financial Report
IGAD	Intergovernmental Authority on Development
IOD	Indian Ocean Dipole
IP	Indigenous Peoples
IPC	Integrated Phase Classification
IPF	Investment Project Financing
IPMP	Integrated Pest Management Plan
KALRO	Kenya Agricultural and Livestock Research Organization
KCSAP	Kenya Climate Smart Agriculture Project
KPI	Key Performance Indicators
LCC	Locust Command Centre
LIPW	Labor-intensive Public Works
LLRP	Lowland Livelihoods Resilience Project
LMP	Labor Management Procedures
LRS	Livelihoods Restoration Support
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
M&E	Monitoring and Evaluation
MIS	Management Information System
MITT	Multi-Institutional Technical Team
MoA	Ministry of Agriculture, Water, Livestock, and Fisheries Resources
MoALFC	Ministry of Agriculture, Livestock, Fisheries and Cooperatives
MoB	Ministry of Budget
MoF	Ministry of Finance
MoU	Memorandum of Understanding
MPA	Multiphase Programmatic Approach
MSAS	Ministry of Social Affairs and Solidarity
MTR	Mid-Term Review
NGO	Non-governmental Organization
NPC	National Project Coordinator
NUSAF	Third Northern Uganda Social Action Fund
NYS	National Youth Service
OPCS	Operations Policy and Country Services
O&M	Operations and Maintenance
PAD	Project Appraisal Document
PCU	Project Coordination Unit
PDO	Project Development Objective
PIM	Project Implementation Manual
PrDO	Program Development Objectives

PFS	Project Financial Statements
PIU	Project Implementation Unit
POM	Project Operations Manual
PMP	Pest Management Plan
PMU	Project Management Unit
PNSF	National Programme of Family Solidarity (Programme National de Solidarité Famille
POM	Project Operational Manual
PP	Procurement Plan
PPE	Personal Protective Equipment
PPSD	Plant Protection Services Division
PRG	Pesticide Referee Group
PSNP	Productive Safety Net Program
RBoA	Regional Bureau of Agriculture
RfQ	Request for Quotation
SAP	Special Purpose Account
SEA/H	Sexual Exploitation and Abuse and Harassment
SEP	Stakeholder Engagement Plan
SNNPR	Southern Nations, Nationalities, and Peoples Region
SoE	Statement of Expenditure
SOP	Standard Operating Procedures
SPRP	Strategic Preparedness and Response Program
SSAHUTLC	Sub-Saharan African Historically Underserved Traditional Local Communities
STEP	Systematic Tracking of Exchanges in Procurement
ToR	Terms of Reference
ToT	Training of Trainers
TPM	Third-Party Monitoring
ULV	Ultra-low Volume
UPDF	Uganda People's Defense Forces
UN	United Nations
VMG	Vulnerable and Marginalized Group
VRF	Village Revolving Fund
WBG	World Bank Group
WFP	World Food Programme
WHO	World Health Organization

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DATASHEE

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name
Djibouti, Ethiopia, Kenya, Uganda	Emergency Locust Response Program

Project ID	Financing Instrument	Environmental and Social Risk Classification
P173702	Investment Project Financing	High

Financing & Implementation Modalities

[✓] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[✓] 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)	

Expected Project Approval Date	Expected Project Closing Date	Expected Program Closing Date
20-May-2020	25-May-2023	25-May-2023

Bank/IFC Collaboration

No

MPA Program Development Objective

To respond to the threat posed by the locust outbreak and to strengthen systems for preparedness.

MPA Financing Data (US$, Millions)

MPA Program Financing Envelope	500.00

Proposed Project Development Objective(s)

To respond to the threat posed by the locust outbreak and to strengthen systems for preparedness.

Components

Component Name	Cost (US$, millions)
Surveillance and Control Measures	73.21
Livelihoods Protection and Rehabilitation	57.20
Coordination and Early Warning Preparedness	18.85
Project Management	10.74

Organizations

Borrower:	Republic of Djibouti Federal Democratic Republic of Ethiopia Republic of Uganda Republic of Kenya
Implementing Agency:	Office of the Prime Minister Uganda-Ministry of Agriculture, Animal Industry and Fisheries Food Security Coordination Directorate, Ministry of Agriculture, Natural Resources and Food Security Ministry of Agriculture , Livestock , Fisheries and Cooperation Ministry of Agriculture, Water, Livestock and Fish Resources

MPA FINANCING DETAILS (US$, Millions)

MPA Program Financing Envelope:	500.00
of which Bank Financing (IBRD):	0.00
of which Bank Financing (IDA):	500.00
of which other financing sources:	0.00

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	160.00
Total Financing	160.00

of which IBRD/IDA	160.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	160.00
IDA Credit	128.50
IDA Grant	31.50

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Djibouti	6.00	0.00	0.00	6.00
National PBA	2.00	0.00	0.00	2.00
Regional	4.00	0.00	0.00	4.00
Ethiopia	31.50	31.50	0.00	63.00
National PBA	10.50	10.50	0.00	21.00
Regional	21.00	21.00	0.00	42.00
Kenya	43.00	0.00	0.00	43.00
National PBA	14.33	0.00	0.00	14.33
Regional	28.67	0.00	0.00	28.67
Uganda	48.00	0.00	0.00	48.00
National PBA	16.00	0.00	0.00	16.00
Regional	32.00	0.00	0.00	32.00
Total	**128.50**	**31.50**	**0.00**	**160.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2020	2021	2022	2023
Annual	0.00	80.00	55.00	25.00
Cumulative	0.00	80.00	135.00	160.00

INSTITUTIONAL DATA

Practice Area (Lead)
Agriculture and Food

Contributing Practice Areas
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	Substantial
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	High
7. Environment and Social	High
8. Stakeholders	Substantial
9. Other	Substantial
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	Not Currently 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

Djibouti - Pursuant to Section I. B. 1 (a) of Schedule 2 of the Financing Agreement, the Recipient shall by no later

than one (1) month, after the Effective Date, prepare and adopt a Project operations manual ("Project Operations Manual" or "POM") containing detailed guidelines and procedures for the Implementation of the Project..

Sections and Description

Djibouti - Pursuant to Section I. B. 2 (a) of Schedule 2 of the Financing Agreement, the Recipient shall, by no later than one (1) month after the Effective Date, prepare a draft work plan and budget for Project implementation.

Sections and Description

Djibouti - Pursuant to Section I. A. 1 (b) (i) of Schedule 2 of the Financing Agreement, the Recipient shall, no later than three (3) months after the Effective Date, enter into a tripartite agreement with the Directorate of Agriculture and Forestry (DAF) and the PIU under terms and conditions acceptable to the Association and in accordance with the Project Operations Manual.

Sections and Description

Djibouti - Pursuant to Section I. A. 1 (b) (ii) of Schedule 2 of the Financing Agreement, the Recipient shall, no later than three (3) months after the Effective Date, enter into a tripartite agreement with the Directorate of Livestock and Veterinary Services (DLVS) and the PIU ("Tripartite Agreements"), under terms and conditions acceptable to the Association and in accordance with the Project Operations Manual.

Sections and Description

Djibouti - Pursuant to Section I. A. 1 (c) of Schedule 2 of the Financing Agreement, the Recipient shall, no later than one (1) month after the Effective Date, enter into a memorandum of understanding with the Ministry of Social Affairs and Solidarity, under terms and conditions acceptable to the Association Memorandum of Understanding (MoU).

Sections and Description

Djibouti - Pursuant to Section I. C. 3. of Schedule 2 of the Financing Agreement, the Recipient shall, no later than 1 month after the Effective Date, conclude and thereafter implement, until it has expired in accordance with its terms, a payment agreement, in form and substance satisfactory to the Association and in accordance with criteria and procedures set forth in the Cash Transfer Manual , with a Payment Service Provider, satisfactory to the Association for the payment of Cash Transfers (CT) to CT Beneficiaries

Sections and Description

Ethiopia - Pursuant to Section 1. A. 2(b) of Schedule 2 of the Financing Agreement, the Recipient shall, within sixty (60) days from the Effective Date with respect to staffing of PIT, appoint: (i) a pest management expert; (ii) at least one social and environment safeguards officer; (iii) a monitoring and evaluation officer; (iv) an information technology officer; and (v) a communications and knowledge management officer.

Sections and Description

Ethiopia - Pursuant to Section 1. A. 2(c) of Schedule 2 of the Financing Agreement, the Recipient shall, within sixty (60) days from the Effective Date with respect to staffing of MoF for purposes of Project implementation, appoint a financial management expert.

Sections and Description

Uganda - Pursuant to Section I. B. 1 (i) (a) of Schedule 2 of the Financing Agreement, the Recipient shall, not later than one month after the Effective Date prepare, in accordance with terms of reference acceptable to the Association, a Project implementation manual containing detailed arrangements and procedures for implementation of the Project.

Sections and Description

Ethiopia - Pursuant to Section 1. B. 1. of Schedule 2 of the Financing Agreement, the Recipient shall, within one (1) month from the Effective Date, finalize and adopt a Project Implementation Manual that has been prepared, reviewed and approved by the Association, such manual to be prepared in accordance with terms of reference satisfactory to the Association and setting forth the rules, methods, guidelines and procedures for the carrying out of the Project.

Sections and Description

Uganda - Pursuant to Section II. 2 of Schedule 2 of the Financing Agreement, the Recipient shall, not later than one (1) month prior to the mid-term review referred to in paragraph 3 of this Section II, furnish to the Association for comments, a report, in such detail as the Association shall reasonably request, on the progress of the Project.

Sections and Description

Ethiopia - Pursuant to Section 1. D. 1. (a) of Schedule 2 of the Financing Agreement, the Recipient shall, by no later than one (1) month after the Effective Date, prepare a draft work plan and budget for Project implementation,

Sections and Description

Uganda - Pursuant to Section II. 3. of Schedule 2 of the Financing Agreement, the Recipient shall, not later than eighteen (18) months after the Effective Date, undertake, in conjunction with all agencies involved in the Project, a comprehensive mid-term review of the Project.

Sections and Description

Djibouti - Pursuant to Section I. D. 1. (c) of Schedule 2 of the Financing Agreement, the Recipient shall, no later than 6 months after the Effective Date, adopt the operational manual of the CERC Part as shall have been approved by the Association.

Sections and Description

Kenya - Pursuant to Section IV.2 Schedule 2 of the Financing Agreement, Recipient undertakes and warrants that it shall not disburse any proceeds of the Financing to a Participating County to undertake activities under Part 2 of the

Project, unless and until there is a duly executed County Participation Agreement with the respective Participating County.

Sections and Description

Uganda - Pursuant to Section I. A. 2. (b) of Schedule 2 of the Financing Agreement, the Recipient shall, not later than 4 months after Effective Date, recruit the procurement specialist, financial management specialist, gender specialist, environmental specialist, and monitoring and evaluation specialist for purposes of staffing the Project Coordination Unit.

Conditions

Type	Description
Disbursement	Djibouti - Under Category 2, pursuant to Section III. B. 1 (b) of Schedule 2 of the Financing Agreement, no withdrawal shall be made until and unless, the Recipient, through MOA, has prepared and adopted the Cash Transfer Manual, under terms and conditions acceptable to the Association.
Disbursement	Djibouti - Under Category 3, pursuant to Section I. B. 3 (a) of Schedule 2 of the Financing Agreement, the Recipient shall prepare and thereafter adopt an Aircraft Annex to the Project Operations Manual under terms and conditions acceptable to the Association.
Disbursement	Under Category 3, pursuant to Section I. B. 3 (b) of Schedule 2 of the Financing Agreement, the Recipient shall enter into a service contract in accordance with Procurement Regulations, with a competitively selected supplier, to carry out Part 1.B(ii) in accordance with procedures and conditions approved by the Association.
Disbursement	Ethiopia - Under Category 1, pursuant to Section III. B. 1 (b) of Schedule 2 of the Financing Agreement, no withdrawal shall be made unless and until the Recipient has implemented the applicable material measures and actions – including preparing, carrying out consultation on, adopting and publicly disclosing relevant environmental and social assessment/management plans and instruments – set forth in the Environmental and Social Commitment Plan relating to disbursement of Financing for Part 1 of the Project.

Type	Description
Disbursement	Ethiopia - Under Category (2), pursuant to Section III. B. 1(c) of Schedule 2 of the Financing Agreement, no withdrawal shall be made unless and until the Recipient has implemented the applicable material measures and actions – including preparing, carrying out consultation on, adopting and publicly disclosing relevant environmental and social assessment/management plans and instruments – set forth in the Environmental and Social Commitment Plan relating to disbursement of Financing for Part 2 of the Project.
Type	Description
Disbursement	Uganda - Under Category 1, pursuant to Section 3. B. 1. (b), no withdrawal shall be made unless and until the Recipient has implemented the applicable material measures and actions – including preparing, carrying out consultation on, adopting and publicly disclosing relevant environmental and social assessment/ management plans and instruments – as set forth in the Environmental and Social Commitment Plan relating to disbursement of Financing for Part 1 of the Project).
Type	Description
Disbursement	Uganda - Under Category (2) a-c, pursuant to Section 3. B. 1. (c), no withdrawal shall be made unless and until the Recipient has implemented the applicable material measures and actions – including preparing, carrying out consultation on, adopting and publicly disclosing relevant environmental and social assessment/ management plans and instruments – as set forth in the Environmental and Social Commitment Plan relating to disbursement of Financing for Part 2 of the Project.
Type	Description
Disbursement	Kenya - Under Category 2 and 3, pursuant to Section III. B. 1 (c) (i) of the Financing Agreement,. unless and until the Recipient has implemented the applicable material measures and actions – including preparing, carrying out consultation on, adopting and publicly disclosing relevant environmental and social assessment/management plans and instruments – as set forth in the Environmental and Social Commitment Plan related to disbursement of Financing for Part 2 of the Project.
Type	Description
Disbursement	Kenya - Under Category (1), pursuant to Section III B. 1. (b) of the Financing Agreement, unless and until the Recipient has implemented the applicable material measures and actions – including preparing, carrying out consultation on, adopting and publicly disclosing relevant environmental and social

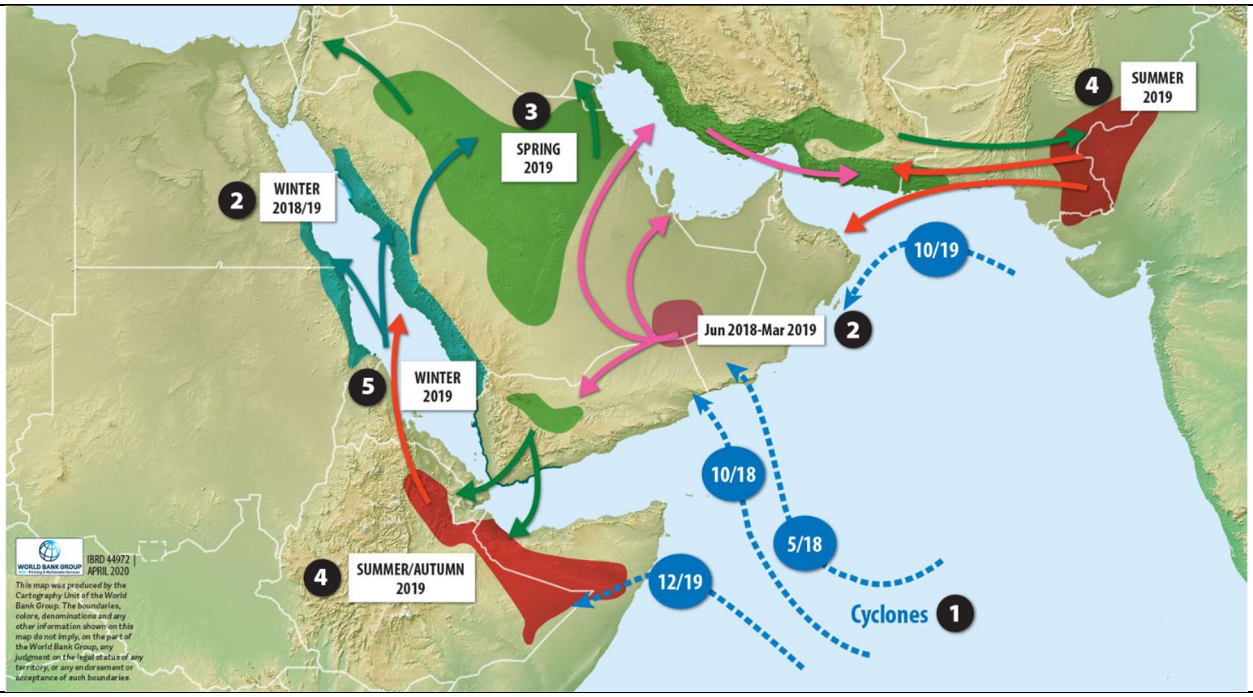
	assessment/management plans and instruments – as set forth in the Environmental and Social Commitment Plan related to disbursement of Financing for Part 1 of the Project.
Type Disbursement	Description Kenya - Under Category 2 and 3, pursuant to Section III. B. 1. (c) (ii) of the Financing Agreement, unless each county Participation Agreement has been duly executed and delivered to the Association.
Type Effectiveness	Description Kenya - Pursuant to Article V. 5.01 (a) of the Financing Agreement, the Project Implementation Manual has been adopted by the Recipient, in the form and substance satisfactory to the Association.
Type Effectiveness	Description Kenya - Pursuant to Article V. 5.01 (b) of the Financing Agreement, the Recipient has recruited or appointed, a deputy national Project coordinator, a Part 1 lead officer, 3 Part 2 officers, a Part 3 lead officer, a procurement officer, an environmental safeguards specialist, a social safeguards specialist, and a monitoring and evaluation specialist for the NCPU, with qualifications, experience and terms of reference acceptable to the Association.

I. STRATEGIC CONTEXT

A. Regional, Sectoral and Institutional Context

1. This document describes a programmatic framework approach for a regional response to the Desert Locust crisis, the 'Emergency Locust Response Program' (ELRP), using the Multiphase Programmatic Approach (MPA). Four "first mover" countries, the Federal Democratic Republic of Ethiopia, the Republic of Djibouti, the Republic of Kenya, and the Republic of Uganda are included as phase 1 of the ELRP MPA, and their project summaries are provided in Annexes 1 to 4.

Figure 1 – Historical Timeline of Events on the Current Desert Locust Upsurge (2018-2019)



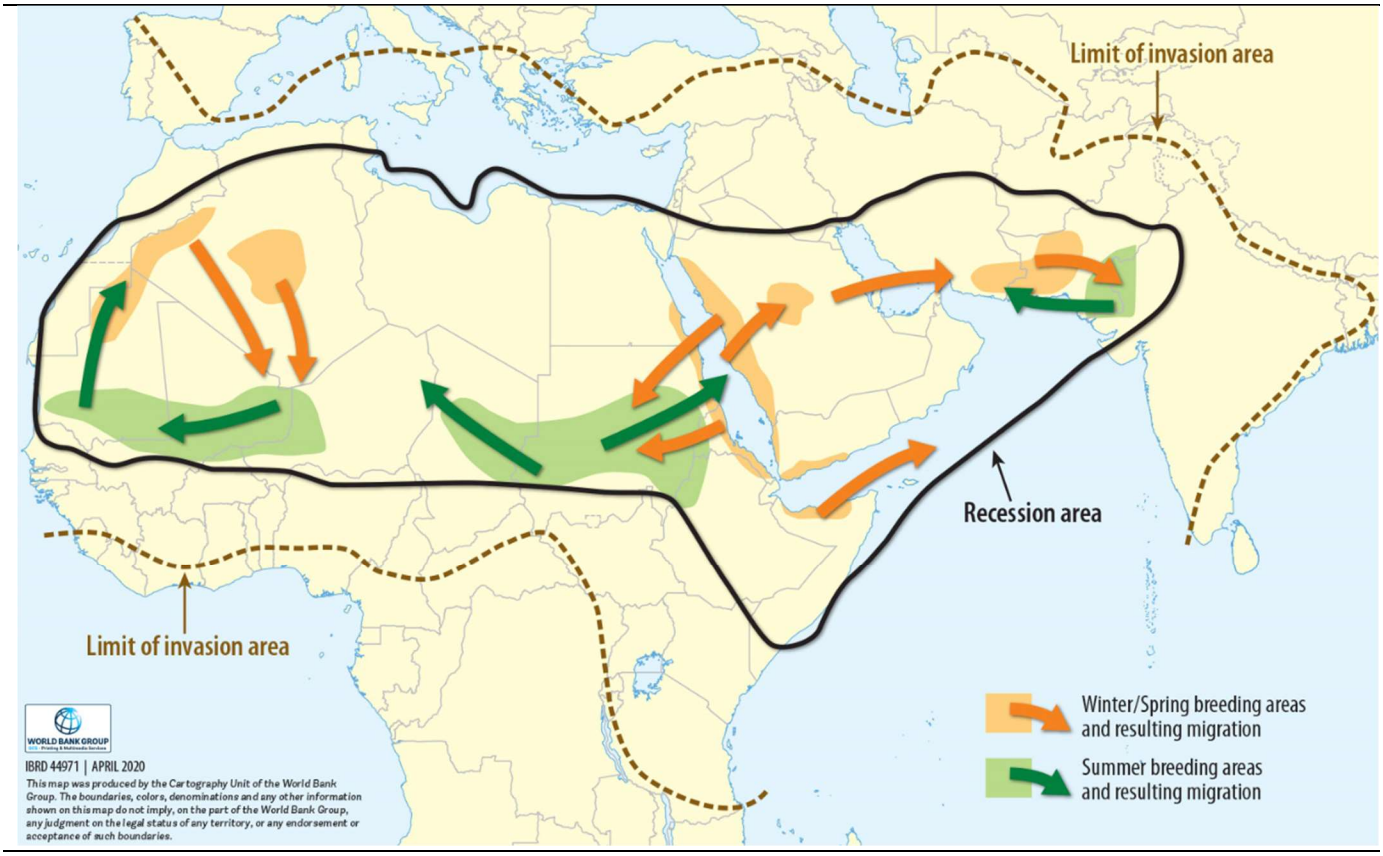
Source: Adapted from FAO 2020.

2. The worst Desert Locust plague in decades is threatening the food supply and livelihoods of tens of millions across East Africa, the Middle East, and South Asia. As of mid-April 2020, 23 countries from Pakistan to Tanzania have been affected. Since early 2020, locust swarms have spread across the wider East Africa region—ranging from Djibouti to as far south as Tanzania and as far west as the Democratic Republic of the Congo (DRC), where they were last seen in 1944. They have since also affected every country on the Arabian Peninsula. The risk for additional outbreaks in the Sahel in June, and possibly North Africa by October, has already been identified based on the upsurge in East Africa and prevailing weather conditions forecast beginning in July 2020.[1] The extent to which the locusts can travel during a plague—known as the invasion area—includes an area of some 32 million km^2 (see the outlined area in Figure 2 below) and locust swarms are now well into that invasion area. Figure 1 and Box 1 provide a timeline of the plague's development.

[1] FAO and the Commission for controlling the Desert Locust in the Western Region have developed 3 scenarios for the upcoming rainy season in the West Africa and Maghreb. Two of those scenarios show a strong likelihood that the East Africa upsurge will spill over into the region. The locust team is reaching out colleagues in West Africa for more information.

3. The Desert Locust (Schistocerca gregaria Forskål) is the most dangerous migratory pest in the world. It is a voracious eater and highly mobile when traveling in swarms, traits that make it a formidable threat to livelihoods and food security and a uniquely difficult and costly pest to combat, challenges and costs that will be severely amplified by the overlapping the Coronavirus disease (COVID-19) pandemic that is spreading across the regions. Each insect can consume its body mass each day (2 g), and when swarming, can travel up to 150 km or more in a day. A small swarm (1 km^2) can comprise as many as 80 million locusts and can consume the same amount of food in one day as 35,000 people. Larger swarms, like the one covering 2,400 km^2 spotted in Kenya in late January 2020, can consume as much as 1.8 million metric tons of green vegetation every day, according to the United Nations (UN), equivalent to enough food to feed 81 million people.

Figure 2 - Desert Locust Recession and Invasion Areas

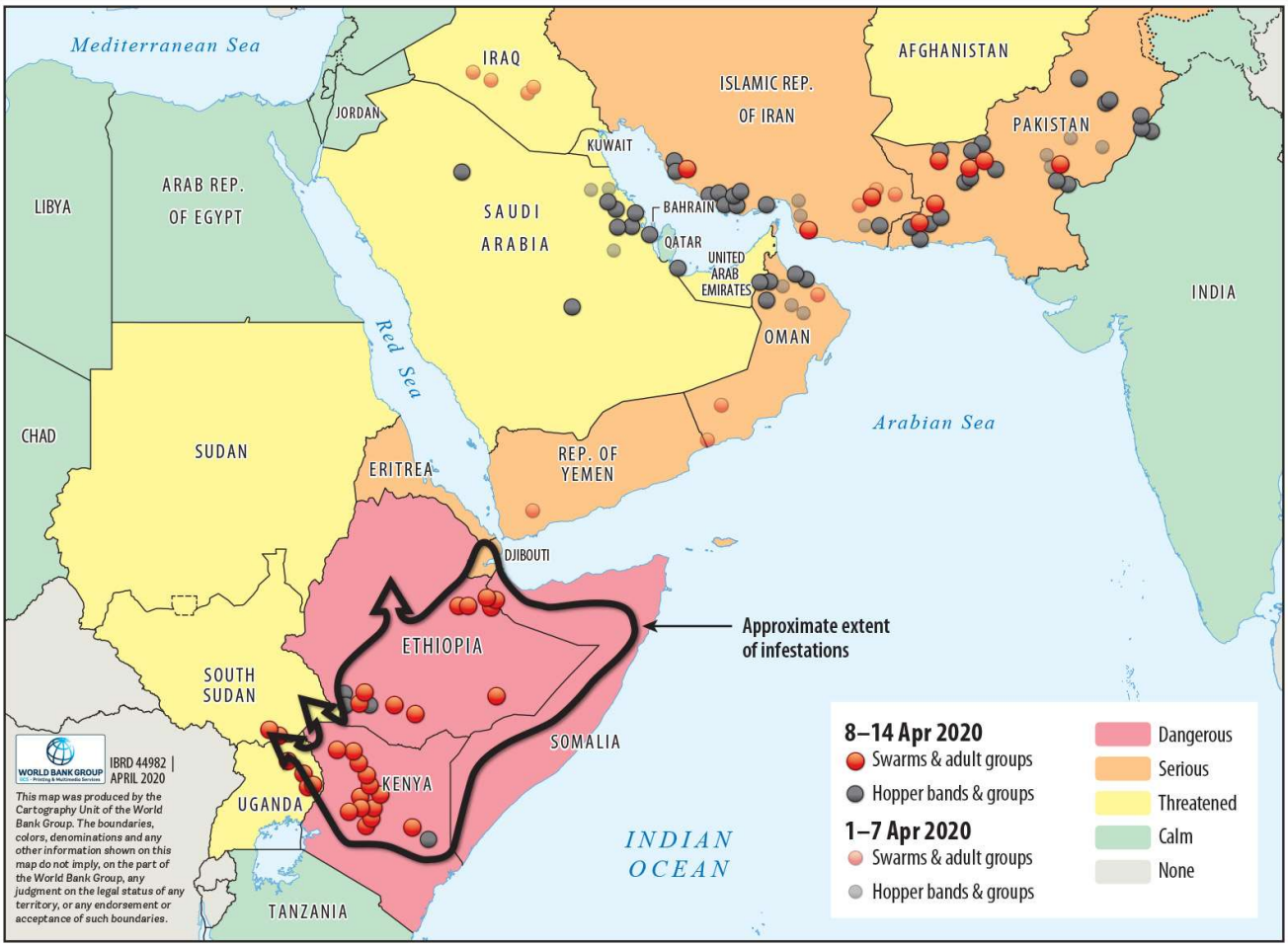


Source: Cressman, Keith. (2016). Desert Locust. 10.1016/B978-0-12-394847-2.00006-1.

4. Locusts know no borders, and to overcome the current upsurge, it is critical that every country in an affected region responds to control locust population growth. At a minimum, it is critical for neighboring countries to share information and lessons learned. Even where specific actions may be confined to a single country, the impact is regional—the locusts stopped in one country prevent it from spilling across borders to another as adult swarms are carried by the wind and can travel very quickly over long distances. The countries affected by the present locust crisis include several members of the Horn of Africa Initiative supported by the World Bank and other development partners. This emergency initiative fits into that initiative's priority pillar on promoting resilience. Several countries of the Horn of Africa region are affected, there is a regional spillover benefit, and a need for coordinated response that provides a strong rationale for funding from the IDA regional window.

5. The situation is both extremely alarming and deteriorating rapidly in areas affected by the locusts, according to the Food and Agriculture Organization of the United Nations (FAO). This is especially true for Kenya, Ethiopia, Somalia, and Yemen.[2] As of early April this year, widespread breeding and hopper development and emergence of new swarms are coinciding with the long rains, the spring cropping season, and the regeneration of pasture. This means that cropping conditions are broadly favorable across the region to vegetation growth, raising expectations of the occurrence of another generation of Desert Locusts. This alignment means that locusts at their most voracious stage (immature swarms) will have ample vegetation to support additional population growth. In the absence of effective control measures to tamp down on locust populations and prevent their spread, the number of locusts will multiply exponentially (by as much as 400 times) through June 2020. In this scenario, the potential damage and losses to crops, livestock and related assets for the region could reach as high as US$8.5 billion by the end of the year. Under the alternative scenario of highly but not fully effective control measures, damages and losses (DALO) are still expected to reach US$2.5 billion. In addition, the risks of the crisis spreading to neighboring countries in coming weeks and months remains acute (Figure 3).

Figure 3 – Map Showing the Approximate Extent of Current Infestation and Threat Levels, April 2020



Source: Adapted from FAO 2020.

[2] Kenya and Ethiopia are among "first mover" countries, along with Djibouti and Uganda, that will benefit from financing under the MPA.

Box 1 – Desert Locust Upsurge Timeline of Events (2018–2020)

2018

MAY and OCTOBER: Cyclones brought heavy rains that gave rise to favorable breeding conditions in the Empty Quarter of the southern Arabian Peninsula for at least nine months since June. As a result, three generations of breeding occurred that was undetected and not controlled.

2019

JANUARY: The first swarms left the Empty Quarter to Yemen and Saudi Arabia, reaching southwest Iran where heavy rains fell.
FEBRUARY-JUNE: Widespread spring breeding in Yemen, Saudi Arabia and Iran caused large numbers of swarms to form. Control operations were carried out in these three countries but were less successful in Iran and Yemen.
JUNE-DECEMBER: Swarms invade the Indo-Pakistan border area from Iran and up to three generations occur due to longer than normal monsoon, giving rise to large numbers of swarms; In Yemen, swarms form and move to North Somalia and Ethiopia where breeding occurs and more swarms form.
OCTOBER-DECEMBER: Swarms move from Ethiopia and N Somalia to Eritrea, Djibouti, E Ethiopia, the Ogaden, central and southern Somalia and reach northeastern Kenya; hopper bands and swarms form along parts of the Red Sea coastal plains in Yemen, Saudi Arabia, Eritrea and Sudan.

2020

JANUARY: Swarms continue to invade, spread, mature and lay eggs in Ethiopia and Kenya. Hatching occurs in northeast Somalia. Other swarms move into interior of Yemen and Saudi Arabia.
FEBRUARY: Swarms continue to invade Kenya, a few reach Uganda and South Sudan, groups reach Tanzania. Widespread hatching and bands in Kenya. Other swarms reach both sides of Persian Gulf.
MARCH: Widespread hatching causes a new generation of swarms to form in Ethiopia and Kenya. A few swarms invade Uganda and South Sudan. Widespread swarm laying and hatching in southern Iran.

Source: FAO 2020

6. The Desert Locust upsurge in Eastern Africa has been particularly extensive, affecting hundreds of thousands of hectares of farmland and rangelands across the region. The Government of Djibouti (GoD) estimated that the damage from infestations on vegetation cover (crops and pastures) caused a loss of around US$5 million for the six regions of the country (Arta, Dikhil, Ali-Sabieh, Tadjourah, Obock and the Djibouti-City suburb) areas. In Ethiopia, more than 156 woredas across 6 Regional States (Afar, Somali, Southern Tigrai, Eastern Amhara, South-Eastern Oromiya, Southern Nations, Nationalities, and Peoples Region (SNNPR)) have been affected. This in a country where 6.7 million people (almost 6 percent of the whole population) are already chronically food insecure. In Kenya, which is experiencing the worst outbreak in more than 70 years, Desert Locust swarms were reported in 26 counties by February 2020. Uganda has deployed more than 2,000 military troops to carry out control operations as swarms continue to arrive cross-border from western Kenya. The Federal Government of Somalia declared a national Desert Locust Emergency in February 2020 after locusts were reported in 44 districts.

7. Although ground and aerial control operations are underway, most government efforts to combat the locust invasion are overwhelmed. Across Eastern Africa, as elsewhere in the Middle East and South Asia, authorities are undertaking coordinated campaigns of ground and aerial pesticide spraying but the scale of the infestation is well beyond national capacity. As the leading technical agency for Desert Locust monitoring and management, the FAO launched an appeal in January 2020, and as of mid-April, is calling for more than US$150 million to support crisis response measures through July 2020 in some countries (Ethiopia, Kenya, Somalia, Sudan, and Yemen), but sizeable gaps remain. To date, the FAO has collected US$111 million in cash or pledges, but short- and long-term resource needs remain substantial. In addition to urgent locust control measures, cash transfers (CTs) and other emergency

assistance will be needed in the aftermath of locust damage to help meet the immediate needs of affected communities. Once those needs have been met, additional support for the restoration of livelihood and food production systems will be paramount.

8. **Resilience of countries and populations in the affected regions to shocks of this magnitude has been steadily weakened by climate change, fragility and conflict, and now suddenly and overwhelmingly by COVID-19.** COVID-19 presents a threat to humanity on a scale not been seen in a century. Governments, the private sector, international agencies and civil society are taking extreme measures to "flatten the curve" and limit the death rate due to illness and collapse of health systems. The virus and the actions to counter its spread are already having significant negative effects on countries, including those now facing a locust upsurge. People are being furloughed or completely losing their jobs, trade is slackening and forcing a decline in manufacturing, services, and transport, and even leading to a decline in oil prices. Certainly, the impact on societies and their economies will be significant and will endure beyond the outbreak itself. Immediate effects can already be seen on the locust response as supply lines for insecticides and other equipment slow down. Experts coming to aid in the locust response are being delayed in quarantine, if they can travel at all, and response teams need to make sure that they do not import COVID-19 to remote rural locations that have been affected by locusts.

9. **Weather extremes fueled by climate change were a major contributing factor to the current Desert Locust crisis.** Much of the region experienced severe drought in 2016/17 and 2018/19, alternating with extensive flooding in the third quarter of 2018 and the fourth quarter of 2019 (Box 1). Atypical weather conditions brought on by one of the strongest Indian Ocean Dipoles (IOD) in 60 years are among key drivers fueling the present outbreak. The effects of IOD resemble those of El Niño in that it shifts ocean temperatures and generates unusual weather patterns—in this case an unusually large number of strong cyclones. The cyclones brought unexpected heavy rains to the southern Arabian Peninsula that triggered excessive vegetation growth; with an ample food supply, the locust population exploded and swarmed. Rainfall totals that were about 400 mm above average in East Africa in the autumn of 2019 enabled locust populations to move far and quickly into that region. At the same time, swarms also moved through Iran and into Pakistan and India, causing damage to food and cash crops.

10. **Fragility, conflict, and violence (FCV) exacerbate the present crisis.** In East Africa and parts of the Arabian Peninsula, locusts are impacting some of the most vulnerable populations. For example, the Greater Horn of Africa (GHoA)[3] before the current locust invasion had already experienced the forced displacement of over 12 million people (including 4.2 million refugees) and had just over 22.5 million severely food insecure people, or meeting the criteria for Integrated Phase Classification-Phase 3 (IPC3)[4] or worse by December 2019. Anticipated food shortages and tightening food markets will likely amplify food insecurity and fragility in hard-hit areas and could trigger further population displacement and localized conflicts. FCV conditions also impede traditional approaches to locust control. Outbreaks often start in remote rural areas that require security escorts in FCV zones in order to control outbreaks, implement protection restoration of livelihoods, and provide continuing surveillance to avoid further threats. For example, Yemen historically managed monitoring and control measures for locusts in well-established breeding areas

[3] According to the United National Office for the Coordination of Humanitarian Affairs (OCHA), GHoA covers the following countries: Djibouti, Ethiopia, Eritrea, Kenya, Somalia, Sudan, South Sudan, Uganda

[4] According to the Integrated Phase Classification (IPC), at IPC2 the livelihood assets of affected households (HH) are stressed and being used unsustainably. At IPC3, HHs are using crisis strategies (e.g., pulling their children from school) and depletion of livelihood assets accelerates. At IPC4, HHs are at near complete and irreversible depletion or loss of livelihood assets. At IPC5, HHs have reached complete loss of assets.

during recession periods and prevented them from getting out of control. However, due to the current conflict, Yemen could no longer play that role. Similarly, when the swarms hit East Africa, Somalia's institutions were not prepared to manage such a heavy infestation.

11. The locust plague when combined with COVID-19, climate shocks, and FCV conditions will exacerbate adverse impacts on food supply, incomes, and food and nutrition security in affected areas. An immediate effect of locust swarms is to destroy vast amounts of food crops in the field immediately, and through attrition with animals deprived of access to pasture or fodder. Pastoralists engage in distress sales with consequent asset losses and falling income as herds lose weight and exhibit increased mortality. Their limited options include (a) migrating to find pasture, difficult when the entire region is experiencing similar problems, and which could lead to conflict with other pastoralist groups and with farmers; or (b) searching for alternative livelihoods if they are permanently decapitalized. Pastoralists also tend to be amongst those likely to fall into poverty in times of severe, prolonged crisis. FCV condition and containment efforts for COVID-19 restrict mobility, raise the costs of doing business, and tighten already scarce credit. Border closures, quarantines, supply chain ruptures, and trade disruptions will restrict people's access to sufficient, diverse and nutritious sources of food while further compressing incomes.

12. The consequences of inaction on locust control for farm and pastoral incomes and regional food supply are dire. FAO's mid-case scenario for the current locust crisis in East Africa without significant control measures would be depletion of 20-35 percent of pasture in affected areas, triggering abnormal livestock migration and animal losses or distress sales. It would also lead to crop failures, with a 30-50 percent cereals loss in affected areas. For the ten countries of GHoA and Yemen, the World Bank MPA team estimates potential annual losses (i.e. until the next locust-free main crop season) and damage (i.e. enduring harm to herds) at US$8.49 billion, of which US$1.80 billion comes from staple crops (broader than the main cereals) losses, US$2.28 billion from livestock production and livestock export losses, and US$4.41 billion from damage to livestock assets. These estimates were developed without considering the multiplicative impacts of an escalating COVID-19 pandemic outbreak.

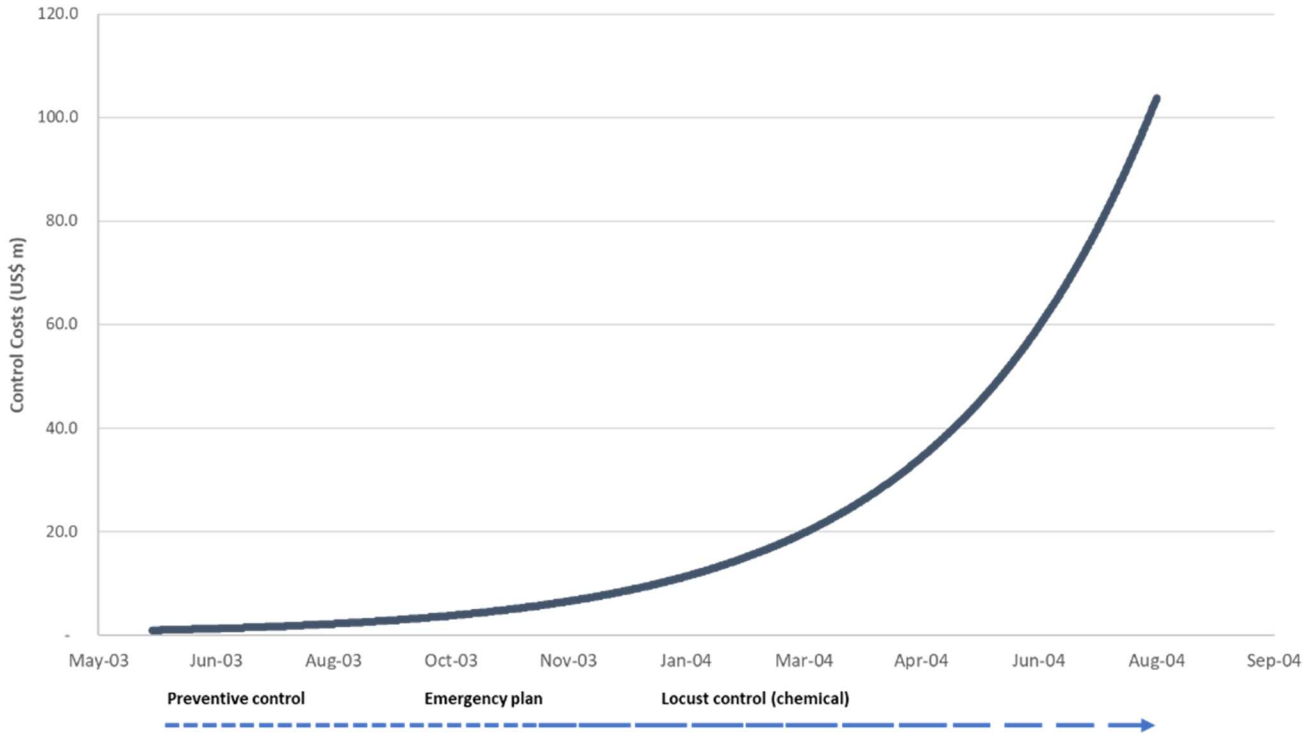
13. The poor are particularly vulnerable to livelihood loss and income shocks from locust damage as they have the least ability to save and smooth consumption in times of crisis. At times of crisis vulnerable households adopt negative coping mechanisms including reducing the quality and quantity of food consumed and removing children from school so that they can work, resulting in adverse long-term effects and deepening the challenge of breaking the intergenerational cycle of poverty. Child health and nutritional status typically deteriorate during a crisis, which hampers future productivity and welfare.[5] In the Horn of Africa, the potential of severe localized losses of food, fodder and forage, could result in over three million farmers and half a million pastoralists being added to the existing population of 22.5 million already classified as severely food insecure (IPC3+). The 2003-05 Desert Locust invasion in West Africa increased food insecurity and created pockets of famine in several Sahel countries. In Senegal, according to an assessment mission undertaken in 2004, some 124,300 rural households, 20 percent of the total population, needed emergency assistance. A study by the World Food Programme (WFP) in Mauritania, during the same period found close to 60 percent of the households interviewed were either food insecure or at risk of becoming so. The number of people requiring some form of assistance was as high as 400,000, or about 15 percent of the population.

14. Increasing food insecurity and loss of livelihood income will have a significant impact on human capital, as people forgo investments on adequate food, nutrition, and education. Increasing food prices would debilitate food

[5] Marzo, Federica; Mori, Hideki. 2012. Crisis Response in Social Protection. Social Protection and Labor Discussion Paper; No. 1205. World Bank, Washington, DC.

consumption in poorer households, known to be net purchasers of food. With calorie intake that is already inadequate, higher food prices will push them towards less nutritious foods. The health and nutritional status of children especially can deteriorate significantly during a crisis – something that can cause long-term effects on future productivity and welfare. It will also push affected households to eat next season's seed, sell off productive assets, withdraw children from school, and other negative coping mechanisms to meet short-term needs. Studies of past locust plagues found a notable decrease in school enrollment in boys and girls in areas affected by locusts as well as evidence of stunting in infants and children.[6]

Figure 4 – The Cost of Delay: West Africa locust invasion June 2003 – August 2004



Source: Adapted from CIRAD 2004.

(i) The World Bank Response

15. Time is of the essence. A rapid and comprehensive locust response is imperative. Beyond the immediate humanitarian concerns above, delayed action increases greatly costs down the road. WFP estimated in February 2020 that the failure to mount a timely response to stop the locusts would result in higher costs for humanitarian response in the long run— as much as US$1 billion, and far more in restoration costs than if the international community acts swiftly.[7] During the 2003-2005 locust plague, early warning systems alerted countries and the international community at the onset of the outbreak. The response was slow, and Desert Locust swarms invaded eleven countries in West Africa, severely disrupting agricultural production in many areas already suffering from food insecurity. Costs

[6] Philippe De Vreyer, Nathalie Guilbert, Sandrine Mesple-Somps, Impact of Natural Disasters on Education Outcomes: Evidence from the 1987–89 Locust Plague in Mali, *Journal of African Economies*, Volume 24, Issue 1, January 2015, Pages 57–100. And Linnros, E. Plant Pests and Child Health: Evidence from Locusts Infestations in West Africa. Working Paper. September 2017.

[7] WFP (2020). "Stop locusts in East Africa now or pay much more to help people later," News release, 14 February.

climbed significantly, from US$1 million to US$100 million in the first 14 months (Figure 4). During the campaign, an estimated 12.9 million ha were sprayed with over 13 million liters of pesticides. In addition, more than US$90 million were spent on food assistance, as well as for the rehabilitation of communities affected by the upsurge. Ultimately, it cost US$400 million to end the 2003-2005 plague, which caused an estimated US$2.5 billion in crop damage.[8]

16. A rapid regional response requires immediate action focused on three pillars. First, there is "control", the need to help affected countries monitor and assess looming locust dangers, control locust population growth, and curb their spread, while mitigating the risks associated with control measures**. Second,** there is "protect and restore"; countries need to move immediately to improve access to food and basic services for the vulnerable in the short-term, but also to secure the means to generate livelihoods and enhance human capital assets in the future. This pillar requires social protection and technical interventions in agriculture and livestock to prevent further food insecurity and permanent loss of human capital and productive assets. Productive assets such as livestock and other forms of household working capital are often sacrificed when households have no other way to cope with shocks. **Third,** there is "preparedness", the need to deal with the fact that the current outbreaks are climate-related and are likely to re-occur more frequently under climate change. Mitigating the impacts of future events will require learning from the present one and strengthening capacities for *ex ante* surveillance and control operations. This is to facilitate early warning and early response and do this in cost effective ways that are sustainable for national budgets going forward.

Box 2 – Lessons Learned from Past Responses to Desert Locust Outbreaks

While the multilateral evaluation of the 2003-2005 international campaign[9] offered a long list of recommendations for planning, implementation, monitoring and evaluation (M&E) of future campaigns, three key lessons from the US$78 million Africa Emergency Locust Project by the World Bank implemented during 2005-2009 in seven Sahelian countries stand out[10]:

- Baseline data are needed to substantiate qualitative data collected through surveys of beneficiary satisfaction. If it is not possible to collect baseline information before the start of the project, extensive efforts should be made to do so early in implementation.
- Regional projects with important environmental and safeguards aspects should be allocated adequate supervision budget to allow experienced environmental and safeguards specialists to participate in each mission, given the potential reputational risks, negative externalities at the regional level, and costs associated with compensation.
- To ensure sustainability, appropriate measures should be taken to systematically mainstream pest control, in general, and locust control; in particular, into follow-on, World Bank-supported agricultural development and natural resource management projects, as well as into crisis preparedness and response components of social protection policies.

Source: World Bank 2011

17. Throughout the implementation of the three pillars, there is a need to significantly improve community readiness to better prepare for the impacts, and mitigate the risks before, during and after the infestations have been overcome. Governments, at both national and local levels, and communities across the affected areas, will

[8] FAO (2006). Summary Multilateral Evaluation of the 2003–05 Desert Locust Campaign, April 2006.
[9] FAO (2006). Summary Multilateral Evaluation of the 2003–05 Desert Locust Campaign, April 2006.
[10] World Bank Independent Evaluation Group (2011). *IEG ICR Review.* Report Number: ICRR13845.

need timely information about combatting locust populations, how and when pesticides can be used and managed safely and effectively, and how to safely navigate its effects on plants, livestock, and water systems. Citizen engagement, community empowerment, mobilization and participation will be critical to developing community-led responses that would address immediate concerns and build resilience going forward.

18. The World Bank is well-positioned to respond to these needs in an integrated and regional fashion given its global, cross-sectoral expertise combined with understanding of country and context-specific conditions and needs. In addition, the World Bank has extensive experience in responding to crises (pandemics, natural disasters, economic shocks) while building resilience and improving future preparedness and response capability, respect and trust of client countries, and global partnerships (UN agencies/World Health Organization (WHO), other multilateral development banks, the International Monetary Fund (IMF), bilateral organizations, private sector). These responses also include response to locust crises, including the major regional upsurge in West Africa in 2003-05, discussed above. The proposed first instance response will build upon lessons learned from responding to other major cross-regional emergencies, including avian influenza in 2006-07, the food crises of 2008-2012, and the present COVID-19 pandemic.

19. The proposed ELRP MPA is the main lending approach of a US$500 million overall response of the World Bank to respond to the threat posed by the Desert Locust upsurge and to strengthen systems for preparedness of eligible countries. In the past few weeks, the World Bank has supported the triggering of a Contingency Emergency Response Component (CERC) of US$13.77 million from the National Climate Smart Agriculture Project (P154784) in Kenya on March 13, 2020, for locust control, within three days of the Government of Kenya's (GoK) request on March 10, 2020. In Djibouti, a CERC was triggered on April 30, 2020 at the request of the Government for just under US$0.6 million from the Towards Zero Stunting Project (P164164), the only project with a CERC in Djibouti. Where available, CERCs and other forms of reallocation from existing projects are providing rapid financial support to initiate the emergency response. However, the CERC activated financing amounts are modest relative to needs and are to only address the most immediate outbreak control issues. The Africa Region is providing US$200 million through its IDA18 Regional Window for locust control operations in five countries. The first four countries amount to US$160 million—Djibouti, Ethiopia, Kenya, and Uganda—and will go to the Board with the MPA project appraisal document (PAD). Overall, the MPA is seeking commitment authority for up to US$500 million. Of the first mover countries, Ethiopia and Kenya have a funding gap that needs to be filled in a subsequent phase. New countries will also be added if they become affected by desert locusts and request the World Bank's support.

20. The proposed program follows existing good practice in the World Bank, using flexibilities built into the system for rapid response, without requiring departure from existing policies in countries eligible to receive IDA funds. Given the severity of the present outbreak in the East African countries supported by the World Bank, the first phase of ELRP will focus only on IDA-eligible countries in the Africa (AFR) and Middle East and North Africa (MENA) regions. Given the presence of associated locust outbreaks in other countries, including the possibility of an outbreak in West and Northern Africa in the Summer and Fall of 2020, the World Bank may subsequently request the Board of Executive Directors for an extension of the ELRP Program with due modifications to enable lending to impacted IBRD countries for FY2021.

21. Finally, the International Finance Corporation (IFC) is developing a separate concept note to frame their response to the locust outbreak. Initial plans call for a line of credit facility like the one used in the Ebola response. The amount available to companies initially would be approximately US$100 million that could finance business

development or expansion based on criteria agreed with IFC specialists. Products for investment include manufacturing and services focused on swarm control (insecticide, planes, sprayers, safety gear, etc.), safety nets (biometric equipment, mobile phones, etc.), livelihood restoration (diversified and improved seeds, beehives, etc.), and prevention (satellite and data analysis firms, meteorological equipment, etc.). Biopesticide manufacturing in cases where the technology and intellectual property rights have been clarified is of interest. The small number of manufacturers operating in or with firms in the invasion zone have been overwhelmed by demand.

B. Relevance to Higher Level Objectives

22. The program is aligned with World Bank Group (WBG) strategic priorities, particularly the WBG mission to end extreme poverty and boost shared prosperity. The MPA with its focus on rural people and their livelihoods is critical to preventing sudden widening of the already large income gaps between rural and urban people in the covered countries. It is also critical to avoid the sudden impoverishment of large numbers of already vulnerable people. As the current form of massive locust upsurge is directly related to changing climate outcomes, the program is very much aligned to the WBG's objective of promoting more climate resilient development. The economic rationale for investing in the MPA interventions is strong, given that success can reduce the economic burden suffered both by individuals and countries where most people are still rural. Country specific projects under the program would complement both WBG and development partner investments in agriculture, social protection, and environmental stewardship.

23. The WBG is committed to assisting client governments to develop a fast, flexible, safe, and enduring response to the locust crisis, utilizing all WBG operational and policy instruments and working in close partnership with governments and other agencies. Following the lead of other World Bank major crisis response initiatives, such as the Global Food Crisis Response Program (GFRP, 2008-2012), programs which provided for an integrated approach across sectors and disciplines, the proposed WBG response to the Desert Locust upsurge will include rapidly disbursing financing, policy advice, and multi-sectoral technical assistance, building on the World Bank's existing instruments and policies that are inherently flexible and fit for purpose to support IDA/IBRD-eligible countries in addressing the impacts. The WBG response to locusts will also provide an operational platform that can help combine and coordinate country efforts and development partner support where needed to fund items like the technical components of the present MPA.

24. The program contributes to strengthening the humanitarian-development nexus, especially in FCV contexts. In the short term, it provides rapid resources to control the locus infestation and help affected people meet their immediate needs; while in the medium to long term, the program invests in the restoration of productivity and preventative systems. With this dual objective, the Program complements humanitarian efforts in the short term, but it lessens the burden on humanitarian interventions in the future by enhancing the resilience of households and therefore minimizing the number of people who may otherwise fall into emergency food insecurity. The program also works to strengthen the capacities of national institutions for future prevention and contributes to a strengthened social contract between the Governments and their citizens by effective response to the crisis.

25. Investments to be financed under this MPA are well aligned with both Government and World Bank strategic priorities. It directly responds to the priorities of the WBG Regional Integration Strategy of 2018, which is being updated later in 2020. Specifically, it addresses the global public goods/bads and promotes resilience agenda by

supporting both regional and cross-country coordinated actions. For Ethiopia, the project will support, in particular, priorities under Area 2: Building Resilience and Inclusiveness, of the Country Partnership Framework (CPF). In Kenya, the proposed project is fully aligned with domain two of the Country Partnership Strategy (CPS), which aims to protect the vulnerable and the poor from the impact of disasters and climate-related changes to their environments, and to ensure support for the poor by enhancing agriculture productivity and livelihoods. The World Bank Country Partnership Framework (CPF) for Uganda (FY16 – 21) aims to, *inter alia*: (i) improve service delivery, and (ii) enhance resilience of the poor and vulnerable. Further, by mitigating potential risks to food and nutrition security, the program addresses a key priority of the government's national development plan (NDP2) to support human capital development. The program is also broadly in line with the CPS for Djibouti (FY14-17, extended to FY18 through the Performance and Learning Review, report no. 83874-DJ), in particular, its first pillar on "reducing vulnerability", including through enhancing basic infrastructure services, strengthening institutions and promoting social development in disadvantaged areas. It is also aligned with the Djibouti forthcoming CPF (FY20-25).

C. Multiphase Programmatic Approach

26. The MPA, approved by the Executive Directors of the WBG on July 21, 2017[11], is selected for the emergency response. The MPA allows for adaptation to evolving circumstances and learning across phases. It provides a flexible approach to respond quickly to an evolving crisis across countries and time periods to provide rapid application of lessons learned.

(i) Rationale for Using MPA

27. The MPA is the most suitable approach for channeling IDA support to deal with the locust upsurge for the following reasons:

- The program is multi-country, but also allows for a series of national perspectives, permitting countries to join when they are ready, and to join at different implementation levels insofar as they subscribe to the same Program Development Objective (PrDO) and take the same basic approach.
- The MPA enables a flexible response to several affected neighboring countries with tailored approaches while at the same time endorsing an integrated approach, common objectives across sectors and countries, and a consistent management of regional risks (such as propagation of locust swarms between countries) for dealing with the emergency. The MPA also allows—and encourages—adjustments based on learned implementation experience within the framework of the PrDO. Most importantly the MPA allows the World Bank to quickly respond to changing client needs and timing, while maintaining overall objectives and approach.
- The level of infestation and risk differs among countries. Countries with on-going large infestations require a full range of proposed activities as soon as possible (control, livelihood protection and starting the rehabilitation process, and preparedness to deal with re-emergence). Others that are nearby and are highly likely to become compromised by migrating swarms need, in a first phase, to increase their preparedness. Once the locust invasion occurs, the countries would need to embark immediately on control, protection of their populations, and reinforcing resilience of damaged livelihood systems in affected areas. The MPA provides for considerable learning on best practices at the regional level during these emergencies and is a logical choice to address these

[11] Multiphase Programmatic Approach, report number 117742. Source: *http://documents.worldbank.org/curated/en/203081501525641125/Multiphase-Programmatic-Approach*

challenges in a phased manner with adaptive learning.

- Although the MPA will address the most pressing needs of the client countries through control of locust populations, the MPA also provides a logical platform to support the smooth transition between control and the necessarily linked phases of addressing the needs of people living in the affected areas. For example, in Ethiopia, a phase II response will likely be needed, and this can build on the learning gained from the first phase both in country and across the region. Immediate action is clearly needed to begin to protect livelihoods of vulnerable people and to begin to restore their ability to provide for themselves. Given an increased frequency of climate-related pest invasions and their impact on livelihood and food security, there is also a need to reinforce the enduring capacity to monitor and deal with outbreaks. Activities addressing the short, medium and longer-term fronts, therefore, need to proceed in tandem. Efforts will be made to ensure that short-term responses are consistent with protection and restoration of livelihoods and contribute to proposed longer-term capacity. Setting priorities and sequencing in the balance of interventions is essential.
- Through its programmatic framework and development objectives, the ELRP MPA provides a broader partnership platform for other bilateral and multilateral development partners. The MPA facilitates close coordination with clients and all multilateral, donor and regional agencies active in this area, such as but not limited to FAO and the Inter-governmental Authority on Development (IGAD). As a platform, the ELRP MPA avoids a fragmented approach to providing country assistance and help build a common strategy and program for each of the countries. This is also intended to draw on the expertise of each of these agencies and avoid duplication of effort and investments. Coordination would also be critical with ongoing sectoral projects funded by the World Bank to maximize the impact and sustainability of these efforts.

(ii) Program Development Objective with Key Program DO Indicators

28. The **PrDO** is to respond to the threat posed by the locust outbreak and to strengthen systems for preparedness.

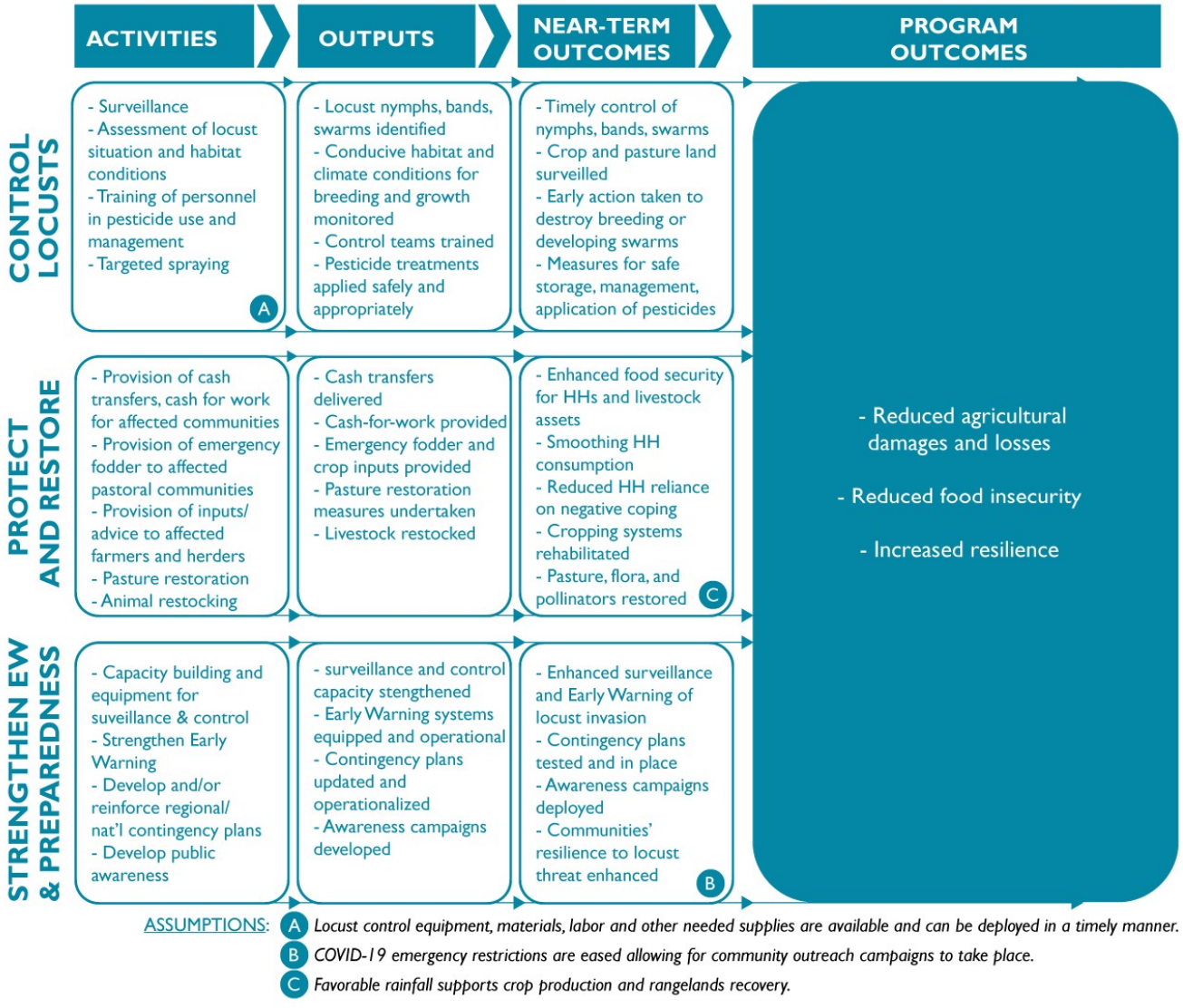
29. Progress towards the achievement of the PrDO would be measured by output, intermediate and outcome indicators. Countries would aim to address all aspects of the PrDO or focus on those most relevant to their situation and needs. At the aggregate level, the PrDO will help measure progress across ELRP participants. Country-level progress against the achievement of the PrDO will be monitored by the following outcome indicators (baseline and estimated targets are provided in the Results Framework):

- Countries (number) covered by the program (Number)
- Land area (ha) sprayed for locust control (Hectare (Ha))
- Supported countries (number) with locust control plans developed (Number)
- Land area (ha) of affected pasture/rangeland restored to productivity (Hectare (Ha))
- Land area (ha) of affected agricultural land restored to productivity (Hectare (Ha))
- Countries (number) with strengthened early detection capacity (Number)
- Affected households (number) supported by social safety nets, of which females (percent) are the direct recipient of benefits (Number)
- Regional coordination among affected countries improved? (Yes / No)

(iii) Program Theory of Change

30. The ELRP's outcomes will be achieved through four components: i) locust surveillance and control measures; ii) livelihoods protection and recovery support; iii) strengthening preparedness systems; and iv) project management. Figure 5 outlines the Theory of Change anchored on the PrDO as a statement of high-level outcome.

Figure 5 – Program Theory of Change



(iv) Program Framework

31. Table 1 provides an overall MPA Program framework. The first four countries, Djibouti, Ethiopia, Kenya and Uganda, are presented with the framework as phase 1. Projects for other countries will be added as they are processed under the MPA Program. Countries in subsequent phases cannot be pre-identified with certainty at this

stage because the locust upsurge is constantly evolving and carries some level of uncertainty due to myriad factors, including unpredictable rainfall and wind patterns. All of this calls for extra flexibility in some procedural requirements.[12]

Table 1 - MPA Program Framework

Phase #	Project ID	Sequential or Simultaneous	Phase's Proposed DO*	IPF or P4R	Est. IBRD Amount (US$ million)	Est. IDA Amount (US$ million)	Est. Other Amount (US$ million)	Est. Approval Date	Est. Env. & Social Risk Rating
1	(P173702) Djibouti, Ethiopia, Kenya, and Uganda	--	To prevent and respond to the threat posed by locust upsurge and to strengthen systems for preparedness of the participating countries.	IPF	0.00	160.00	0.00	May 20, 2020	High
	Other eligible IDA countries	Simultaneous	TBD	IPF		340.00			TBD
							Revised Financing Envelope	**500.00**	
							Board Approved Financing Envelope	**500.00**	

(v) Learning Agenda

32. The MPA Program will support adaptive learning in countries where financing is provided. This learning is necessarily focused in a manner suitable to an emergency operation, yet there is much to learn for other such operations. Country operations under the MPA will prepare and implement a country-specific learning agenda adapted to client needs, including selecting one or more of the following topics. These learnings will be synthesized by topic across participants and made available to all countries under the MPA with the assistance of World Bank staff working with other regional stakeholders and development partners. It is anticipated that learnings of greatest interest to clients will differ somewhat across countries and will likely evolve over time. Key topics of program interest for the MPA include the following:

[12] The Articles of Agreement of IBRD and IDA (IBRD Article III, Section IV, Section 1 (d) require that before making IBRD/IDA financing, a report of a Statutory Committee (StatCom) be completed. The StatCom must include the signature of representative of the member country where the project is located. Although the Articles do not require that a StatCom be made available before the Executive Directors (EDs) approve World Bank financing, it has been a long-standing practice that StatCom are in fact obtained before the EDs decide on World Bank financing. For this MPA, EDs' approval is being sought for the overall program financing in a situation where all possible recipients of such financing are not yet identified. Therefore, Management will obtain a StatCom from each member state that will be the recipient of the ELRP financing before the funds are committed by Management (i.e., before the legal agreement is signed). Such an approach is fully consistent with the requirements of the Articles.

- *Cost and effectiveness of control interventions:* cost and effectiveness assessments of prevention and preparedness activities; just-in-time assessments may be financed for the effectiveness of specific pesticides and bio-control methods and testing of methods and practices under participant country conditions.
- *Ease of adapting existing safety nets to locust-oriented protection of livelihoods:* difficulties encountered and lessons in rapid expansion of existing safety-net coverage and delivery systems to new participating households and individuals in zones affected by locusts and lessons in avoiding over-lapping of new coverage for locust-related cost with existing coverage for other reasons.
- *Improving the technical resilience of production:* assessments of the climate-smart approaches and gains from rehabilitating agricultural and livestock production destroyed by locusts under different contexts within country operations.
- *Improving stakeholder communication approaches:* including with and within local communities, for more effective and less disruptive locust control, livelihood protection, and production rehabilitation activities.

33. As part of the learning agenda, the program will take advantage of existing partnerships to build the capacity of early warning and response systems in client countries. For example, the strategic partnership between the WBG and European Space Agency (ESA) under the Earth Observation for Sustainable Development (*EO4SD)* initiative seeks to increase the uptake of satellite-based environmental information in the World Bank's regional and global programs. This objective is achieved by following a systematic, user-driven approach to meet longer-term, strategic geospatial information needs in individual developing countries and within international and regional development organizations. Activities are implemented with focus on stakeholder engagement to understand their requirements; this informs downstream service delivery and capacity building with end users in client countries to benefit operational activities and generate sustainable impacts. The institutional partnership leverages the respective strengths and combines the world-leading technical and analytical expertise of ESA and the entire European service ecosystem in the domain of Earth Observation with the WBG's country engagements through policy dialogue, development finance operations, and analytical advisory services. The EO4SD-fragility team is working on exploratory activities addressing locust invasion preparedness and response actions, based on the integration of EO data with in-situ information, all of which can be used to help clients better track locust infestation and assess damages.

II. PROGRAM DESCRIPTION

34. The aim of the ELRP is to respond to the threat posed by the Desert Locust outbreak and to strengthen systems for preparedness. This objective would be achieved by investing in the following activities at the program level. Individual country projects (under various subsequent MPA phases) will be within the same scope.

A. Program Components

35. The agricultural systems of the countries affected by the Desert Locust outbreak are highly vulnerable to the impacts of climate change and weather variability. Recent climate modeling[13] and climate change and disaster risk

[13] Cai, W., Wang, G., Gan, B. *et al.* Stabilized frequency of extreme positive Indian Ocean Dipole under 1.5 °C warming. *Nat Commun* 9, 1419 (2018). https://doi.org/10.1038/s41467-018-03789-6

screening conducted by a World Bank team suggest that global warming will lead to higher-than-average rainfall in the sub-region, stimulating higher vegetation growth and generating the conducive breeding ground for locusts. ELRP will address the vulnerability to climate-induced locust upsurge by strengthening capacity for ex ante surveillance and control operations. It will support investments in monitoring and control of locust population, as well as build resilience by rehabilitating the livelihoods of locust-affected communities. The program objectives will be achieved by supporting investments across three pillars that form the technical components of the ELRP MPA (Figure 6):

1. **monitoring and controlling** locust population growth and curbing the spread of swarms while mitigating the risks associated with control measures;
2. **protecting and rehabilitating** the livelihoods of locust-affected households to prevent human capital and asset loss, ensure food security, and return them to productivity; and
3. **preventing** future locust upsurges by strengthening capacity for *ex ante* surveillance and control operations to facilitate national and regional early warning and early.

36. The program will seek to minimize greenhouse gas emissions (GHG) across investments financed in Borrower countries. The program will include activities from the approved list in Annex A.C.1 of the Joint Report on MDB's Climate Finance.[14] Part of project activities qualify as generating climate change mitigation co-benefits under Category 4.1. Agriculture: Agricultural projects that improve existing carbon pools, from the A.C.1 List of activities eligible for classification as climate mitigation finance. The GHG accounting results for the first mover countries are summarized in Section IV, Project Appraisal Summary.

Figure 6 - Emergency Locust Response Program Pillars

37. The program would maintain quality despite preparation and implementation under emergency through a guidance note for investment projects under the program. A brief description of the standardized components follows:

Component 1: Surveillance and Control Measures

[14] Joint Report on Multilateral Development Bank's Climate Finance (2019). http://pubdocs.worldbank.org/en/650791574955718829/2018-joint-report-on-mdbs-climate-finance.pdf

38. This component will limit the growth of existing Desert Locust populations and curb their spread, while mitigating the risks associated with control measures and their impacts on human health and the environment. It has three sub-components that countries can select depending on the context and the priorities of governments responding to the crisis.

39. *Sub-component 1.1: Continuous Surveillance* activities would provide early warning, inform effective control operations, and mobilize assistance (under Component 2) to affected and at-risk communities to enable informed and climate-responsive locust management decision-making. Satellite images and the associated geospatial technologies would provide timely data to assess the risk of impending locust outbreaks. This information could be used for targeted preventative management actions in the locust breeding areas under changing climatic conditions. Habitat mapping will assess climate, soil and other variables to map susceptibility of land areas in space and time to locust outbreak (locust vulnerability map) or land areas that are already proliferated by locusts (locust impact map). Activities under this component would include but would not be limited to: i) monitoring observed breeding and egg-laying areas including breeding activities induced by weather variability and climate change to inform early action; ii) conducting ground surveys and other data collection to assess the locust situation and climate-induced habitat conditions; and iii) collecting and analyzing data to inform planning and ensure appropriate control methods are applied. Innovative approaches to surveillance—such as, the use of satellite maps, drones, eLocust3, GPS enabled cameras and meta-data analysis and climate information for locust risk mapping to better pinpoint outbreaks and to aid in damage assessments and response programming—would also be financed.

40. *Sub-component 1.2: Control measures* would reduce locust populations and prevent their spread to new areas through a range of targeted ground and aerial control operations. It would, whenever possible, emphasize neutralizing hopper bands using bio-pesticides before they develop into adult swarms, the control of which requires extensive use of conventional pesticides. Technology used would include insect growth regulators, bio-pesticides, or conventional chemical pesticides. Methods used would include ground and aerial spraying. A thorough pest management plan (PMP) developed under the management of the World Bank's environmental specialists and the Lead Environmental Specialist and expert on Pest Management, will be required of every project. Examples have already been developed in projects that have triggered CERCs to respond to the crisis. This component would finance spraying equipment, protective gear, data collection systems, training and other goods and services needed to support control measures. A full list would be outlined in project procurement documents and would align with the PMP and related safeguard instruments.

41. *Sub-component 1.3: Risk reduction and management* would monitor and assess the effectiveness of control measures and environmental and human health risks associated with locust control, and implement health, environmental and safety measures to reduce risks to an acceptable minimum. This sub-component will finance mostly technical assistance. Monitoring of control operations is necessary to assess whether adverse effects occur and under what circumstances so that they can be mitigated. Monitoring and building environment and climate literacy will also help increase outreach of reliable climate-smart pest management knowledge. Activities would include: i) testing of human health and soil and water for contamination from use of insecticides; ii) optimizing the selection of control strategies, protection measures, and insecticides based on situational and environmental assessments; and iii) providing safety and awareness training for spraying teams and other locust control personnel. Public awareness campaigns will keep the public informed about possible environmental and health effects of insecticides, before, during and after locust control operations.

Component 2: Livelihoods Protection and Rehabilitation

42. Beyond the immediate control measures deployed to curtail the proliferation and spread of the locusts, the next priority and the objective of Component 2 would be to help protect the poor and vulnerable in locust affected areas. The aim is to safeguard them from human capital and asset loss, enhance their access to food, and rehabilitate food production systems and livelihoods that have been damaged or destroyed by swarms. Activities under this component would be implemented through two mutually supportive sub-components: 1) Safeguarding Food Security and Protecting Human Capital; and 2) Restoring and Rehabilitating Agricultural and Pastoral Livelihoods for enhanced adaptation and resilience.

43. *Sub-component 2.1: Safeguarding Food Security and Protecting Human Capital* will protect the poor and vulnerable in locust affected areas from livelihood and asset loss by providing emergency income support in the form of CTs and/or cash for work (CfW), to smoothen consumption and enhance the purchasing power of vulnerable households to purchase food and basic needs. The subcomponent will target poor and vulnerable households at risk of food insecurity and/or who have lost their income as a result of the locust upsurge or who have experienced damaged to their livelihood assets. Farmers who may lose sale/income as a result of unintended damages from accidental pesticides spray impacts beyond the defined buffer zone on people, livestock, agricultural produce and livestock feed, will be considered eligible for the safety net support. An added element that would be provided for livestock holding households is fodder provision to replace impacted grazing land until restoration can be completed. CfW programs can support activities that can strengthen community defenses against locust invasion—e.g., construction of quality grain and seed storage.

44. Interventions under this subcomponent would be delivered through new or existing national government food security, social safety net, and community-driven development (CDD) programs. The existing programs would be scaled up either vertically to provide additional emergency cash top up to existing beneficiaries of poverty-based CTs, or horizontally to add new beneficiaries for an emergency cash or in-kind support. Given the fact that Locust Response and COVID-19 Response projects will be implementing in the same countries, the World Bank teams will monitor to ensure that the programs are well coordinated and have the appropriate measures to avoid overlapping and/or duplicating beneficiaries. The risk of this is relatively low given that COVID-19 projects will most likely be implementing in densely populated urban and peri-urban areas, while the Locust Response projects will implement in rural farming and pastoral areas. Additionally, where feasible the same programs would be used to respond to both crises, therefore enabling coordination of beneficiary targeting.

45. *Sub-component 2.2: Rehabilitating Agricultural and Pastoral Livelihoods* will support affected farmers and livestock holding households to restore their productive assets for sustained food security and enhanced adaptation and resilience. The subcomponent will promote the adoption of climate-smart crop and livestock practices for reduced GHG, enhanced resilience, and the implementation of livelihood support and diversification initiatives. Support will be provided for agroecosystem management approaches that enhance resilience of farm and landscape to changes in climate and pest. This would be achieved through delivering (i) climate-smart farmer packets to get food and fodder production damaged by locusts re-started as soon as possible; (ii) pasture restoration or temporary forage/feed provision and climate-resilient grazing management in pastoralist areas impacted by the locust upsurge; and (iii) in certain cases assisting with animal re-stocking with climate-resilient and stress tolerant breeds. Farmer packets would aim to diversify production and introduce improved, climate-resilient varieties that provide for higher yields and are resistant to pest/disease and other climate-related threats. Pasture restoration would be done in most

areas by establishing nurseries throughout the affected area to re-establish pasture flora. Legumes and grasses adapted to the local environment will be promoted to increase biodiversity and landscape resilience. Leguminous species are also beneficial for climate mitigation, fixing atmospheric nitrogen and improving soil fertility. Both crop and pasture restoration would need to support plantings that would promote the restoration of pollinator populations in the affected area. Provision of forage/feed or animals would be temporary measures to meet the needs of those livestock keepers in danger of being severely decapitalized as a result of the locust upsurge through animal loss or the need for distress sales due to lack of browse.

46. *Sub-component 2.3: Assessing Impacts and Targeting Response.* This sub-component would finance assessments of the immediate and medium-term impacts of the Desert Locust upsurge on crops and pastures and on food and nutrition security of the affected populations. These assessments would also help to inform the targeting and programming of response measures and provide lessons for other countries and phases.

Component 3: Coordination and Early Warning Preparedness

47. This component would strengthen the regional and national capacity for surveillance and control operations. At regional level, this could include developing technical partnerships with relevant organizations, such as the Desert Locust Control Organization for East Africa (DLCO-EA) and IGAD. Early warning systems will be strengthened to support prevention and rapid response to new and existing climate change-induced locust infestations, thereby limiting in-country and cross-border spread and intensification. Emphasis will be placed on building capacity to enable rapid and targeted short-term responses and long-term adaptation planning. At country level it would include support to the development and updating of regional and national contingency plans for Desert Locust crises, promoting learning across countries to boost competencies in forecasting, surveillance and control, and exploring the use of new technologies for surveillance, such as drones. Such efforts would take into consideration guidance from appropriate international and regional organizations. The program will also support the countries' participation in international collaborative efforts to prevent a re-occurrence of this natural disaster building the capacity of crop protection agencies, financing equipment and software, and strengthening preparedness and early warning systems at national and sub-national levels. This component will mostly finance technical assistance and outreach.

48. The program encourages action-oriented in-depth evaluation of select topics relevant to better prepare for future locust upsurges. An example might be assessments of the efficiency and effectiveness of specific project interventions such as biological control of locusts. Another example might be an assessment of how climate change is pushing locust swarms into new locations and changing the dynamics of re-emergence. Component 3 permits financing both these action-oriented assessments and the sharing of resulting insights amongst other participating countries under the MPA, including as needed travel of technical experts between participating countries for the purpose of learning or disseminating insights. It will encourage engagement with research institutions and regional organizations for the purposes of exchanging information and insights and, optionally, to assist in the above-referenced assessments of project experience.

49. The program will support investment to strengthen country capacities to monitor the locust situation under changing climatic conditions using Geographic Information System (GIS) spatial data and remote sensing approaches. The program will build capacity to monitor the relationships between weather trends and Desert Locust territories and identify the conditions for an outbreak and early population increases. This will include support for the development of country risk management plans that include roles and responsibilities of key stakeholders in

locust management for each of the countries.

Component 4: Project Management

50. This would finance the associated costs such as implementation support, financial management (FM), procurement, environmental and social management, communications and knowledge management. The communications component will help promote increased community awareness about the impacts of the locust swarms and the response efforts to support communities before, during, and after the crisis. Governments, at both national and local levels, will need information about combatting locust populations and how and when pesticides can be used safely and effectively. For local communities in areas that have been treated with pesticides, they will need information on how to safely navigate its effects on plants, livestock, and water systems and what precautions are to be taken before, during and after control operations (e.g., re-entry and withholding periods, dangers of reusing empty drums). Citizen engagement, community empowerment, mobilization and participation will be critical to developing community-led responses that will address immediate concerns and build resilience going forward.

51. Communications will play a critical role in the successful implementation of the ELRP through the country programs, internally within the World Bank, and among the World Bank and other donors. The country teams were encouraged to include financing for communication activities to ensure that governments, communities, and other stakeholders get the information about the threat presented by locusts, the measures required to combat them, and safety measures during campaigns. In addition, raising awareness about the services offered in Component 2 and the eligibility requirements will aid in targeting program benefits and reducing conflict over project services. Finally, communications will be critical to moving information among countries, regional, and international organizations to improve the ability of countries to respond to locust upsurges at the earliest point possible. At the program level, the World Bank's communications unit will manage the implementation of a communications plan that will include outreach to and coordination with participating Governments and regional and international organizations (e.g., FAO, WFP, IGAD, and the African Development Bank (AfDB).

B. Program Beneficiaries

52. The ELRP beneficiary profile can extend from regional organizations to national governments to individual households. At the program level, beneficiary countries, including the four first mover countries outlined in the annexes, can participate based on the degree to which they are affected or the threat level of locust populations. Aside from the financial support, the World Bank program will coordinate with others to facilitate knowledge sharing through workshops during implementation support on a variety of topics including technology for early warning systems, locust control technology and methods, etc.

53. By component, the beneficiary profile will necessarily vary. For example, the direct beneficiaries from Component 1 locust control activities would be quite vast. It will benefit those who rely on resources threatened by the locusts for income generation—e.g., farmers, pastoralists/herders who use the pastures and rangelands for their livestock, as well as users of common pasture and forest areas, and those who rely on agriculture and livestock production for their jobs (i.e., traders, transport, etc.). More indirectly, control efforts will benefit net buyers of food in the markets served by those producers. Given the broadness of this beneficiary population, the MPA will track the area treated by each project, but it will not seek to quantify such a large beneficiary population. The program will track the number of people trained in locust surveillance and identification and insecticide application. The

beneficiaries of Component 2 will be tracked according to the support they receive (e.g. CT, CfW, farmer "packets", animal fodder and/or fodder seed, etc.). Country teams will use a mix of geographic, needs-based, and participatory targeting approaches to identify beneficiaries. Special attention will be given to ensure that women, female-headed households and minority/vulnerable groups have access to the program. Eligibility criteria and targeting approaches will be described in the country annexes and in the operational manuals.

54. The MPA PAD will track beneficiaries by activity and country at the program level. Each country will implement a program framed by the MPA components; however, not every country will do every activity defined by the MPA. Depending on the presence of other programs by the World Bank or other donors, the beneficiaries target can vary under the MPA investment. For example, if a safety net program already exists in a country and can provide CTs to locust-affected households, a project can serve beneficiaries through livelihood rehabilitation activities. This will be noted as project progress is tracked.

C. Rationale for World Bank Involvement and Role of Partners

55. The current locust upsurge spans three interconnected regions (i.e. AFR, MENA, and South Asia (SAR)) in which the WBG is active, which allows it to work across regional boundaries to mount a coordinated response. The WBG's experience in the Africa Emergency Locust Projects in 2004, the Avian Influenza Control and Human Pandemic Preparedness and Response Program in 2006, the GFRP in 2008, and the current Covid-19 Strategic Preparedness and Response Program (P173789), all demonstrate the World Bank's capacity to rapidly launch, finance, and coordinate support to groups of countries that face a global threat in a changing environment. Leveraging its convening power built up through the Africa Food Security Leadership Dialogue, the World Bank is promoting a coordinated response with FAO and other development partners. It is also reaching out to donor partners—including the United States Agency for International Development (USAID), Germany, France, and others to seek solutions to providing support to countries currently not eligible for new IDA funding—e.g., Eritrea and Sudan. Furthermore, the WBG's proactive involvement in addressing the Desert Locust crisis increases the chances of maintaining the development goals achieved through its other investments by reducing the damage inflicted by locusts and reducing the negative effects of crisis coping strategies on the human development status of affected households.

56. Recognizing that ground and aerials spraying of Desert Locusts can lead to unintended and undesirable consequences, ELRP is coordinating closely with FAO as the leading technical agency globally on Desert Locust monitoring and management operations. Control operations invariably pose a risk to the environment, local communities and control teams. These risks and impacts will be mitigated via the use of standardized and known operational guidelines and procedures, including a comprehensive PMP, which will be prepared and disclosed by the Borrower before activities are initiated, in accordance with ESF and with the support of World Bank and FAO specialists. The PMP will address pest management approaches, pesticide use and management, institutional capacity, and M&E and will be informed by FAO Directives on Desert Locust Control, which are sufficient to fully meet the World Bank's ESF requirements. FAO will also support governments to responsibly procure, handle and administer pesticides, reduce the associated risks, and assess the positive and negative impacts of control interventions. This includes training and setting up basic facilities to monitor and address any issue that may arise from the control campaign, in line with FAO's Desert Locust Guidelines on Safety and Environmental Precautions. FAO will also support government to follow appropriate product and container disposal guidelines and provide environmental impact assessment kits.

Table 2 – International and Regional Organizations Supporting Countries' Response to Desert Locust Crisis

Food and Agriculture Organization of the United Nations (FAO)	Desert Locust monitoring, forecasting and control are at the heart of FAO's mandate. Its Desert Locust Information Service (DLIS) has been in operation for nearly 50 years. FAO's well-established field presence, ability to link up authorities from different countries, and expertise in Desert Locust management, make it the leading technical agency in combatting the locust upsurge currently impacting East Africa, the Middle East and South Asia.
Desert Locust Control Organization for Eastern Africa (DLCO-EA)	The DLCO-EA is a regional organization for pest and vector management to ensure food security in nine countries of Eastern Africa (Uganda, Kenya, Tanzania, Ethiopia, Sudan, South Sudan, Eritrea, Somalia, and Djibouti). The Headquarters are in Addis Ababa, Ethiopia.
Inter-governmental Association for Development (IGAD)	IGAD is an eight-country[15] trade bloc in Africa, headquartered in Djibouti. It hosts both the Climate Prediction & Applications Centre (ICPAC) and the Regional Food Security and Nutrition Working Group, which have been actively supporting members countries' response to the crisis with forecasting services, information sharing, and inter-agency coordination. The African Union has appointed IGAD to mobilize resources for the locust response and to collaborate the FAO.
FAO Commission for Controlling the Desert Locust in the Central Region (CRC)	Established in 1967 under Article XIV of the FAO Constitution, the CRC comprises 16 member states of the Near East and in the Horn of Africa. Its mandate is to promote regional cooperation and coordination as well as preventive locust management and to prevent plagues by strengthening national locust programs in preparedness, early warning and timely control.
Pesticide Referee Group	The Pesticide Referee Group (PRG) is a body of independent experts that advises FAO on the efficacy and environmental impact of different pesticides for locust control. This advice is based on a critical review of reports submitted by industry, research institutes, plant protection departments, of other available literature, and on the experience of its members and of FAO experts. The resulting advice systematically lists pesticides suitable for locust control from the scientific point of view. The PRG has no legal status. All uses of pesticides discussed in this report are fully subject to national legislation, regulation and registration.

57. In addition to the plant protection departments of ministries of agriculture in the region, various international organizations are also involved in the monitoring of locust populations and control operations against locust infestations, and of related food-security needs. As discussed above, FAO is the U.N organization coordinating and analyzing available surveillance information, assessing control and livelihood-support needs and issuing joint appeals for donor support at the country level with the relevant government departments. The WFP focuses on meeting the emergency food security needs of locust-affected vulnerable people. The International Committee of the Red Cross (ICRC) and National Red Cross and Red Crescent Societies also stand ready to help people recover from the infestation with cash grants, seeds and farming tools, and feed for livestock. The DLCO-EA is an Addis Ababa-based regional pest and vector management organization, with its main mandate the forecast and promotion of control operations against Desert Locust upsurges in the Eastern Africa region. Other regional organizations also monitor closely the risks to food security in the region, such as the IGAD Climate Prediction and Application Centre (ICPAC) and the U.S. AID-supported Food Early Warning System network (FEWS-NET) and Global Agricultural Monitoring (GeoGlam).

[15] IGAD members states include Djibouti, Ethiopia, Eritrea, Kenya, Sudan, South Sudan, Somalia, Uganda.

58. IFC is evaluating a possible inter-sectoral and inter-regional response by supporting private sector investments and new clients across two broad interventions: (i) providing liquidity support to import and distribute critical chemicals and pesticides to meet the supply-deficit in the affected countries; and (ii) enhancing the manufacturing capabilities for biopesticides in those countries where viable. In addition, IFC is assessing potential Advisory Services interventions that could be deployed, especially in (i) rehabilitating affected smallholder farmers in the aftermath of the locust damage, with technical support and training in the procurement of seeds, tools, fertilizers, animal feed and forage, veterinary services, etc.; as well as (ii) supporting smallholder farmers who may potentially face the locust threat with necessary training in crop protection programs. IFC's indicative level of financing, compatible with similar past investments in relation to the Ebola crisis, would be of the order of about US$100 million comprising of an estimated US$50 million for IFC's own account and US$50 million mobilization from other DFI's or investments from private sector companies.

D. Lessons Learned and Progress on Learning Agenda

59. The WBG is well placed to support the response to the Desert Locust crisis; it can draw on extensive crisis response experience, including on past locust upsurges, the Global Food and Avian Influenza Crises in 2007-2008, and strong client relationships and global partnerships. For the Horn of Africa and Yemen, the World Bank balances and links immediate, short-term, and medium-term responses to the Desert Locust invasion now threatening the food supply and livelihoods of tens of millions in 23 countries across East Africa, the Middle East, and South Asia. Adopting lessons from past crisis responses, the program integrates immediate monitoring and control with livelihood protection interventions to provide a means for desperate people to avoid adverse short-term coping solutions; medium-term efforts to help affected households to recover the means to earn income and access food from agricultural and pastoral asset bases depleted or destroyed by the crisis; and forward-looking early warning and preparedness measures. The technical scope of the program has been developed in close consultation with the FAO, the leading technical agency overseeing monitoring and control activities, and in coordination with the IFC, now scoping a complementary program expected to focus on agribusiness and value chains.

60. Use of an umbrella programmatic approach can support a flexible, adaptive and integrated response calibrated to country needs and capacity. While the needed flexibility of countries at different stages of crisis and different needs is best supported by national projects, umbrella programs provide critical synergies in lesson-learning, design, and implementation. Such programmatic approaches help bring to bear lessons learned across sectors and countries on good technical practices, increase agility through streamlining project preparation procedures, enable countries to choose from a menu of relevant activities depending on country conditions, and can support client desires for high-level policy and regulatory harmonization, cooperation, and coordination between countries. Integration of monitoring and control activities with measures to protect and restore human capital and livelihoods, and support coordination and preparedness, have been shown to have been effective not only in mobilizing a rapid response, but also catalyzing attention and action on longer-term priorities that strengthen resilience.

61. Direct, rapid and effective crisis response is possible in the most challenging operational environments, but success hinges on carefully considered partnership and implementation support arrangements. The World Bank has developed substantive experience in supporting emergency response in fragile or active conflict situations, or where the client lacks the implementation capacity to coordinate a response. For example, in Somalia, South Sudan

and Yemen, the World Bank worked effectively with external partners with on-the-ground presence to mobilize a crisis response. Success factors in these cases include mutual understanding of respective roles and responsibilities; acceptance of the need to navigate organizational differences; and open lines of communication throughout implementation.

62. The present program addresses the national and regional public goods of effective locust response: control, livelihood and human capital protection, livelihood rehabilitation, and preparedness. The programmatic approach enables the effective exchange of good practice and experience, and helps ensure that, for example control measures taken in one country can build national capacity while at the same time helping reduce the risks faced by neighboring countries. Past locust responses have generated important guidance and technical lessons that can be applied to benefit all program participants including the very high cost of delay, good practice in procurement, storage, handling and safe use of pesticides, and on controlling locust populations while minimizing human and environmental impacts.

63. The program adopts lessons from earlier experience indicating that effective short-term responses rapidly delivered can help frame a longer-term institutional and policy agenda. World Bank support under the Global Food Crisis Response program was successful in helping mitigate the short-term negative effects of price increases through social protection, policy advice, and investment spurring near term supply response for food, complementing the emergency distributive responses of the UN system such as physical food aid. At the same time, it provided a transition to adaptive responses such as boosting agricultural productivity and increasing resilience. For example, timely, targeted cash transfers were successful not only in addressing short-term consumption poverty and food insecurity, but also in emphasizing the role that expanded social protection systems can play in supporting access to education, health care and nutrition. Evaluations of Kenya's Hunger Safety Net Program (HSNP) and Ethiopia's Productive Safety Net Program (PSNP) suggest that CTs provide protection against shocks by enabling households to avoid distress sales of livestock and other household assets and household goods.[16] Keeping people on the land, well-fed, and with access to inputs through vouchers helped ensure food supply response in the next agricultural season and containment over time of the worst aspects of food price spikes. This explicit "twin track" approach has been shown to have substantial payoffs in terms of future productivity, livelihoods and resilience – all critical dimensions of inclusive growth and poverty reduction. It is a role that the World Bank by virtue of its multi-sectoral technical expertise, developed procedures, and financial resources is uniquely positioned to support.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

64. With the growing spread of locust upsurge in countries across East Africa and the Arabian Peninsula, the implementation and supervision of the MPA and respective country-based operations will require an adaptive approach. While individual operations under the MPA will rely on strong coordination among implementation structures operating within the ministries and agencies responsible for implementation, these will also require a coordination and feedback mechanism to ascertain that the program objectives are being achieved in a cumulative manner.

[16] Merttens et al. (2013), Gilligan et al., 2009 (Ethiopia PSNP).

65. At the World Bank level, the ELRP Program will be monitored by the ELRP team[17] comprising the MPA task team and the country team leaders. The team will facilitate coordination between the country task teams and focal points in operational and technical units as needed and monitor implementation of the individual projects and keep World Bank Management and the Board of Executive Directors informed. In doing so, it will operate as a unified cross-country team to address key issues around aligning implementation of country-operations, monitoring achievement of key indicators, knowledge exchange and communication, developing harmonized reporting mechanisms and identifying gaps in monitoring, reporting and institutional coordination, along with ways to address these gaps through feedback loops and adaptive strategies.

66. To facilitate rapid and seamless flow of information to monitor program impact, the ELRP Coordination Team will oversee the implementation of the harmonized communications plan and support the coordination between the World Bank and PIUs, Government, and partners (i.e., FAO, WFP, IGAD, AfDB). Where needed, the Team will also engage competent communications firm(s) and coordinate with the media, civil society organizations (including faith- and community-based organizations (CBOs), youth, and women's groups) during program implementation to expand dissemination, build trust and buy-in, and foster ownership of response efforts. The Coordination Team will ensure that consistent and timely information is made available to all stakeholders (international, regional, national, and subnational); as and when needed, immediate steps are taken to better adapt coordination and implementation roles to better respond to, manage, and report back on the outbreaks and effectiveness of responses.

67. Implementation at the level of country operations will be the responsibility of respective borrowers and implementation agencies through new or existing Project Implementation Units (PIUs). Where needed, country-based implementation structures will be strengthened by recruitment of additional staff/consultants responsible for project management tasks including administration, M&E, communication, safeguards, procurement, and FM.

68. Implementation support arrangements under the program. The ELRP Coordination Team will focus on internal coordination with the various departments/units to ensure that all work together towards a common objective, to help client countries effectively deliver country operations. The team will ensure systematic coordination through conducting joint implementation support with the respective country operations as well as with development partners, multilateral and regional agencies that are involved in locust response. The Coordination Team will also hold periodic partners' coordination meetings to ensure harmonization of information and coordination among different response operations. The partners' coordination meetings will also serve as an opportunity to help build a common strategy for the program and various country operations and agree on joint tasks, to draw on the expertise from across different institutions, where needed agree on division of labor between the different international and local agencies according to their comparative advantage, and avoid duplication of investments and efforts by various partner institutions.

69. Given that under the current situation of COVID-19 related quarantines and social distancing measures will impact the supervision of locust response emergency operations for at least the immediate-term, the World Bank will utilize innovative approaches to ensure effective implementation support. These approaches build upon measures developed for the supervision of projects in high-risk FCV environments will be further adapted to address the supervision constraints posed by accessibility issues to individual project sites. With respect to effective

[17] The ELRP will not be managed by a newly created structural unit within the Bank, but will rather consist of functional/coordination responsibilities assigned to existing practice management units within AFR Sustainable Development.

information and communications technology (ICT), the World Bank is scaling up fit-for-purpose and cost-effective ICT methods to contribute to effective project implementation and supervision in access-constrained environments. These include, among others, the Geo-Enabling Initiative for Monitoring and Supervision (GEMS) and the Iterative Beneficiary Monitoring (IBM) tools, to provide sustainable real-time information and analyses of evolving conditions in the field and have proved useful in enhancing the World Bank's reach, operational effectiveness and delivery of development outcomes to vulnerable populations with ability to take stock, adapt and course-correct through an iterative feedback loop. Where required by local conditions, the Third-Party Monitoring (TPM) approach may also be adopted for country operations especially those in the FCV context. As practical guidance and pilots in various projects are being developed to increase efficiency and improve economies of scale and knowledge sharing across operations, the MPA will also adopt the lessons learnt to further inform appropriate supervision approaches for this program.

70. The communications component will help promote increased community awareness about the impacts of the locust swarms and the response efforts to support communities before, during and after the scourge. Governments, at both national and local levels, and communities across the affected areas, will need information about managing Desert Locust populations, how and when pesticides can be used safely and effectively, and—when their area has been treated with pesticides—how to safely navigate its effects on plants, livestock, and water systems. Citizen engagement, community empowerment, mobilization and participation will be critical to developing community-led responses that will address immediate concerns and build resilience going forward.

71. Given the magnitude of the scourge and the multiplicity of agencies involved, a good internal communication and feedback mechanism will be mobilized to ensure seamless coordination among all stakeholders (international, regional, national, and subnational) to better respond to, manage, and report back on the outbreaks and effectiveness of responses. The Coordination Team would serve as the point of coordination of all communications activities and deliverables, including the development of a communications plan whose implementation would be jointly supported by the communications teams of the various partnering agencies. A Locust Communications Taskforce would be set up in each country to oversee the implementation of the communications plan and would include representatives of Government, FAO, WFP, IGAD, AfDB and the WBG. The Coordination Team will help with the coordination among countries. When the need arises to outsource an activity to a competent communications firm, that would be recommended. The role of the media, civil society organizations (including faith- and CBOs, youth, and women's groups) is key during all phases to expand dissemination, build trust and buy-in, and foster ownership of response efforts. Their involvement would be built into the communications plan.

72. Activities involving Military and Security Forces. Under Operational Policy 8.00 (Rapid Response to Crises and Emergencies), the World Bank may assist "all borrower agencies and institutions" involved in an emergency response within the areas of its core competencies (e.g., support for infrastructure, public financial management, and capacity building). The World Bank has experience with implementing projects in humanitarian crises and in insecure conflict-affected areas that include certain activities undertaken by security or military forces unrelated to any strategic or security objectives. For instance, in 2010, following the devastating floods in Pakistan, the World Bank financed fuel required for rescue operations undertaken by military aircraft. In Cameroon, the World Bank financed road construction in an active conflict zone by the Army Corps of Engineers as no private contractors were available. And in the recently approved COVID 19 Emergency Response and Health Systems Preparedness Project for Sri Lanka (P173867), the World Bank funds are to finance construction of isolation units by Sri Lankan security forces.

73. Member countries may seek the World Bank's assistance for certain locust-related activities carried out by security or military forces, such as the spraying of pesticides in infested areas. Given both the necessity, in some cases, to resort to military support in responding to Locust outbreak emergency in the countries under this MPA, and the risks associated with such use of the military including possible abuses, the World Bank will undertake, when and as reasonably feasible, a rapid assessment of relevant factors and ensure appropriate environmental and social risk mitigation measures are reflected in relevant operation's documents. Staff will use guidance provided on the ESF website to assist with assessments and supervision of activities involving military and security forces.

B. Results Monitoring and Evaluation Arrangements

74. A monitoring and prospective evaluation framework for the program has been developed. It would be based on the results framework for each operation at the country level, to be supplemented by regional and sub-regional levels as required.

- For the overall program, the framework would focus on: (i) strategic relevance to the near- term support for locust upsurge response; (ii) responsiveness to client needs; and (iii) timeliness and agility of co-convening functions with country policymakers and strategic partners who complement the WBG's comparative advantage.
- For operations at the country, regional, or sub-regional levels, the ELRP framework provides a menu of results indicators to be customized for each operation, together with performance benchmarks. Among other things, the indicators would cover: (i) measuring the number of surveillance flights supported; (ii) measuring areas treated and with what; (iii) strengthening mission-critical national and regional institutions for early warning and early response operations to Desert Locust and other transboundary pest operations; (vi) measuring the number of people provided with social safety net support; (v) measuring the percentage of women among the direct recipients of the safety net support, (vi) number of households engaged in cropping through project support; (vii) number of pastoralist households receiving fodder and veterinary support; and (viii) process indicators tracking investments to address ecological damage from the locusts and the control measures.
- Recognizing the potential for improving response to locust emergencies in current and future phases of the program from learning from the experiences of participants in key locust response areas, participating countries will assess the potential from their M&E results to contribute to one or more of the four priority topics set out below under Learning Agenda, paragraph 32. The objective is to further an action-oriented learning for operations. It will likely not be possible to specify in advance which countries are most likely to be able to deliver new insights on which of the four priority topics. Country task teams will forward the country assessments to the MPA program leadership, which will ensure that country insights in this regard are synthesized with any input on similar topics from other participants and are extended to currently participating countries and new entrants to the Program.

C. Sustainability

75. Critical to the sustainability of country projects under the proposed MPA would be the continuous ownership of response by the various stakeholders, coupled with strong political support and the availability of an adequate flow of financial resources to carry out country projects. In addition, institutional sustainability would be ensured

by: (i) strengthening programs to maintain public awareness regarding spread and response interventions being undertaken; (ii) sustained surveillance and prevention and control activities, particularly in high risk areas; (iii) strengthened country capacity to manage at national and local levels the risk factors associated with the spread of locust and other pests; and (iv) effectiveness of programs to control the spread and mitigate the impact of locust outbreaks and other pest infestations.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

(i) Economic rationale for control and livelihood support interventions

76. The current Desert Locust upsurge in GHoA and Yemen is likely to linger for more than a single growing season, as it did in the Sahel in 2003-2005, and if unchecked will cause large-scale economic losses to crops, milk and meat production, and to livestock exports. The exact locations for the impact of locust infestations are difficult to assess *ex ante* because swarms are carried by wind, breeding is affected by variable climatic and environmental factors, and escalation of threats happen very quickly. Based on FAO assessment so far of current evidence, the likelihood is very high of major negative economic shocks and substantial deterioration in food security this year in GHoA and Yemen. These losses are becoming more evident with mounting reports of denuding of greenery and threatened losses of crops in affected zones despite the start of the long season rains in East Africa in March. Severe locust infestations also lead to damage directly to assets such as deaths (or distress sales) or poorer health and welfare (and thus lower prices) of livestock deprived of pasture throughout the region, but and also indirectly to the human capital in rural areas through impacts on nutrition, loss of schooling, and out-migration.

77. In this analysis, the potential direct impact on already food insecure households and the DALO on agriculture from an uncontrolled infestation in East Africa and Yemen are estimated, based on the most recent fields reports and impact assessments (limited to some countries only) from the FAO, the Famine Early Warning Systems Network (FEWS-NET)[18], and governments. Several benefit-cost ratios are also estimated, using currently available information about unit and overall benefits and costs of planned interventions. It is important to note that the numbers presented do not include indirect income losses from rural non-farm activities, including trade and consumption related one. There is reason to believe that these will be substantial for areas in GHoA affected by direct farming income compression, potentially of the same order of magnitude as the direct losses estimated here.[19]

78. Finally, the last big Desert Locust crisis in Africa, in the Sahel region in 2003-2005, caused an estimated US$2.5 billion worth of losses to harvests. According to a multilateral evaluation of the 2003–2005 Desert Locust campaign in the Sahel by FAO in 2006, losses for staple crops ranged from 80 to 100 percent in affected zones of Burkina Faso,

[18] Created in 1985 by the USAID, FEWS-NET is a leading provider of early warning and analysis on acute food insecurity. FEWS NET provides objective, evidence-based analysis to help government decision-makers and relief agencies plan for and respond to humanitarian crises.

[19] This is a major message of World Development Report 2008, *Agriculture for Development*, which synthesizes a large body of literature showing that under economic conditions such as those prevailing in rural areas of much of Africa, a dollar of income generated from farming leads to at least an additional dollar of income from non-farm activities through stimulation of local demand in rural areas with substantial underemployment. Similarly, the same report presented separate evidence suggesting that loss of farm income had a much stronger (at least two times) impact on poverty than loss of income in manufacturing or services.

Mali, and Mauritania. The number of people whose livelihood and food security suffered to varying degrees was estimated at 8.4 million. The total national and international cost of the campaign was estimated at about US$450 million, of which at least US$280 million was for control operations and more than US$90 million for food assistance and for rehabilitation of communities affected by the upsurge.[20]

(ii) Impact scenarios and potential damage and loss estimates for the current crisis

79. So far, Desert Locust impact on crops and pasture has been relatively limited and localized due to the positive impact of average to above-average rainfall since October in improving vegetation conditions across most parts of the region. Areas of pasture affected during January-March 2020 range from 5,000 ha in Djibouti to 180,000 ha in Somalia and to 1.35 million ha in Ethiopia, with an additional 197,163 ha of areas under staple crops cultivation also affected in Ethiopia, according to available information from FAO and FEWS-NET country sources. The corresponding monetary losses for Ethiopia so far (limited to the three months above, which encompass the "Bega (winter dry season) have been estimated for this analysis at US$19 million for staple crops and US$24.2 million for livestock.[21]

80. However, the current infestation coincides with the regeneration of rangeland and the start (in March) of planting activities of the main annual rainy season for much of the region and, without control, the FAO estimates that over 13 million rural people will be severely affected by the locust upsurge by mid-year; this figure could potentially double through unchecked spread to new areas in the second half of the year. Furthermore, the FAO has estimated the impacts through July 2020 of Desert Locust infestations in the absence of adequate control on food security under best, mid, and worst scenarios for Ethiopia, Kenya and Somalia, with the different scenarios being mostly dependent on weather developments and locusts' breeding and movements:[22]

1. *Best-case*: a 5-20 percent depletion of pasture in localized areas would allow livestock migration to adjacent unaffected grazing areas. Overall, a 20-30 percent loss of cereals harvest in locust-affected areas is projected.
2. *Mid-case*: depletion of 20-35 percent of pasture in affected areas, triggering abnormal livestock migration and animal losses/distress sales. It would also lead to crop failures, with a 30-50 percent cereals loss in affected areas.
3. *Worst-case*: 35-60 percent depletion of pasture in many areas, triggering abnormal livestock migration to distant grazing areas. Crop failures would result in a 50-75 percent cereals loss in the affected areas.

81. For these three countries, the FAO has estimated potential losses of cereal production in the current main rainy season ranging from 0.95 million tons, or US$246 million, under its best-case scenario to 2.4 million tons, or US$615 million, under its worst-case scenario. Under the best-case scenario, furthermore, an additional 355,000 people would join the ranks of those already in crisis or worse (moving from IPC Phase 2 to Phases 3 or 4), 1.6 million

[20] FAO (2006). Summary Multilateral Evaluation of the 2003–05 Desert Locust Campaign: Towards a More Effective Response to Desert Locusts and their Impacts on Food Security, Livelihoods and Poverty. Evaluation team: L. Brader (Evaluation Team Leader), H. Djibo, F.G. Faye, S. Ghaout, M. Lazar, P.N. Luzietoso, M.A. Ould Babah, 2006. April 2006.
[21] Applying unit values (US$/ha) shown in Table 3 and adjustment factors to reflect seasonal impact on harvests and livestock productivity during the three months of January to March. The corresponding loss estimates for Djibouti are US$11,197 and US$674,852 for Somalia.
[22] In all these three FAO scenarios, populations in urban areas are considered not likely to be directly impacted by Desert Locust damages. The impact on crops is estimated by the FAO only for the main cereals.

under its mid-case scenario and 3.2 million in the worst-case scenario.[23]

82. The potential economic DALO in the ten countries in GHoA and Yemen that are under the purview of the Emergency Locust MPA were estimated by the World Bank by applying various assumed loss and adjustment factors to a baseline valuation (taking three-year averages over 2016-2018) of their main agricultural assets and outputs. These relied mainly on international databases to maximize cross-country data consistency.[24] The baseline regional output has been estimated at US$50.84 billion (US$25.66 billion for staple crops; US$24.26 for meat and milk; and US$0.91 billion for livestock exports) and the value of relevant assets (livestock) at US$118.13 billion.

83. Under a mid-case scenario, which assumes no or minimally effective control as defined in the broad terms summarized above by the FAO, the potential DALO for the region is estimated at US$8.49 billion. Of this, US$1.80 billion comes from staple crops (broader than the main cereals) losses, US$2.28 billion from livestock production and livestock export losses, and US$4.41 billion from damage to livestock assets. Table 3 illustrates the results for each country of applying the potential DALO percent rates based on the best assumptions by the MPA team described above to the baseline values of staple crops, livestock products (milk and meat) and exports, and livestock assets.[25] Even if ongoing and planned measures are highly effective in controlling the locust populations, the direct and short-term DALO are expected to be as high as US$2.55 billion over the next 9-12 months (or two growing seasons in many areas) in the region.

Table 3 - Potential Staple Crops and Livestock Damage and Losses in 2020 from Uncontrolled Infestation

(in current US$, million)

East Africa +	Staple Crops Prod. Losses	Livestock Prod. Losses	Livestock Assets Damages	TOTAL DALO
Djibouti	0.1	8	11	19
Eritrea	10	24	71	105
Ethiopia	785	419	1,592	2,796
Kenya	74	576	661	1,311
Somalia	23	232	416	670
South Sudan	24	84	84	193
Sudan	534	612	1,037	2,183
Tanzania	119	15	42	176
Uganda	215	202	394	811
Yemen	14	108	100	222

[23] FAO (2020). East Africa Desert Locust Outbreak: Potential food security and crop impacts by mid-2020 in Kenya, Ethiopia and Somalia. Draft internal paper, dated 27 March 2020.

[24] For countries for which production values of crops were not available from FAOSTAT, average unit prices derived for the other countries (excluding outliers) were used to multiply available production volume data (also from FAOSTAT). And for missing prices that are necessary to estimate the monetary value of livestock, expert guess estimates (US$500 per cattle, US$800 per camel, and US$50 per sheep or goat) were applied uniformly across the region. The only data points remaining unfilled in the baseline valuation for the current analysis are livestock exports from Eritrea, which are not available in the U.N. COMTRADE database, unlike for all other nine countries. The baseline regional output has been estimated at US$50.84 billion (US$25.66 billion for staple crops; US$24.26 for meat and milk; and US$0.91 billion for livestock exports) and the value of relevant assets (livestock) at US$118.13 billion.

[25] The (considerable) methodological detail and judgement calls pertaining to how the baseline and these DALO estimates were calculated are available on request from the TTLs. The approach is conceptually aligned with FAO practice, but covers a wider variety of crops (not just cereals), brings in other data sources, and makes adjustments and assumptions where needed, particularly in the case of assessing the cost of damage to livestock assets.

Total	1,798	2,281	4,408	8,487

Source: 2020. Calculated by the MPA Team, details available on request.

(iii) Benefit-cost analysis of control and livelihood protection measures

84. Benefits and costs for the currently planned emergency locust control campaign are estimated below in two different ways. The main direct benefits of the overall locust crisis response are avoided damage (e.g. avoided animal deaths, poorer weight health) and losses (from reduced staple food production, lower meat and milk yields and lower livestock exports) to agriculture. Indirect but significant benefits of the campaign are not included as per the discussion above. Direct costs are related to the control measures (surveillance, spraying, impact assessments), rural livelihood safeguarding activities (farming packages such as seeds for replanting, pastoral packages such as feed cubes, and cash plus interventions) and other livelihood-protection measures (unconditional CTs and CfW as partial compensation for lost income). Table 4 illustrates the unit control costs per hectare across the three country groupings from the most recent FAO appeals, with the average of US$66 for seven GHoA countries taken as the benchmark unit cost for this analysis.

85. The simplest approach to benefit-cost assessment in this context is to compare the benchmark unit control cost of US$66/ha with the unit agricultural benefit assumed to be equivalent to the avoided loss of staple crops annual production on the affected land being sprayed (before planting times). The result depends mainly on how much control it is assumed the interventions achieve. Applying the FAO mid-case scenario assumption of 30-50 percent loss of (cereal) crops in affected areas to the baseline staple crop average output value of US$321 per ha implies benefits of control measures in the US$107-160 per ha range for avoided losses. This yields conservatively direct benefit-cost ratios for crops of 1.6-2.4. Applying in a similar fashion the FAO mid-case scenario assumption of 35 percent loss of pasture in affected areas to the baseline livestock average output and assets value of US$828 per ha (Table 5) and assuming a pass-through adjustment, a floor estimate of livestock-related direct unit benefits per ha of sprayed pasture land would be as low as one tenth, or US$83/ha, of the total baseline yield for pasture land. On this most conservative basis, the direct benefit-cost ratio related to livestock for control measures over pastureland is 1.3. If locust losses on affected areas without effective control measures, on the other hand, amounted to 100 percent of cropping (as was the case in significant parts of the Sahel in 2004 due to greatly delayed response) and to one third of the total livestock value (production, exports and assets), then comparable direct benefit-cost unit ratios for completely avoiding such losses would be as high as 4.9 for crops and 4.2 for combined livestock.[26]

[26] The unit direct benefits in these calculations assume implicitly that control measures are covering all the locust-affected land areas in the region and that they are highly effective, such that the overall locust population in each country is controlled at least to the extent of surviving locusts not returning to the sprayed areas. The benefits of control measures over locust-affected areas, however, extend far beyond those same areas, as such activity can be expected to protect much if not most of the other yet-to-be-affected areas.

Table 4 - FAO Planned Control Activities 2020

	Targeted Areas (ha) for Spraying	Control Costs total (US$ million)	Unit Control Costs (US$/ha sprayed)
Somalia	540,000	22,600	0.04
Sudan	300,000	7,500	0.03
Yemen	150,000	3,000	0.02
Other GHoA (7 countries)	820,000	54,130	**0.07**
TOTAL GHoA & Yemen, 2020	**1,810,000**	**87,230**	

Source: FAO regional appeals February 2020; FAO-MoAI country appeal for Somalia April 2020.
Note: Yemen's targeted area for control is derived by subtracting that explicitly mentioned for Sudan in the FAO regional appeal addendum from the aggregate for the two countries.

86. An alternative approach is to assess the overall benefits on agriculture versus overall campaign costs for both control and livelihood support interventions, assuming that the set of planned control measures will be highly though not fully effective in eradicating the infestation. Conservatively, the potential DALO in the absence of effective locust control of US$8.49 billion shown in Table 3 could be reduced by 70 percent by the ongoing and planned control and livelihood protection and rehabilitation measures, with residual damages and losses of US$2.49 billion. This implies an expected net benefit of US$5.94 billion in overall avoided agricultural damages and losses. The combined cost of control and livelihoods protection activities proposed under the FAO recent appeals is US$191.4 million. The additional (to FAO and its donors) livelihood-related interventions to be funded by the World Bank under the present MPA and other World Bank locust-themed activities in the countries covered by the MPA are assumed for this analysis to cost US$400 million. On such a basis, dividing US$5.94 billion in total agricultural benefits by total control and livelihood-support costs of US$591 million yields an overall direct benefit-cost ratio of 10.1.

87. In conclusion, the analysis has shown a huge potential economic cost--estimated at US$8.49 billion in the course of a single year of inaction with respect to the locust crisis in GHoA and Yemen. Estimated short-term direct benefit-cost ratios above, while high enough to fully justify the proposed interventions with a large margin, if anything underestimate the value of early action. For example, quantified benefits do not include income support such as from unconditional CTs and CfW programs, nor do they take into account future benefits from better preparedness with stronger regional and country early warning and control systems, or the present value of the stream of future benefits from preserving or rehabilitating assets critical to livelihoods, including human capital. The true benefit-cost ratios of the ERLP, therefore, are substantially higher than conservatively estimated above.

Table 5 - Staple Crop and Livestock Average Value of Output per Hectare (baseline; average 2016-2018)

AGRICULTURAL YIELDS IN EAST AFRICA +	All Staple Crops	Livestock Products (Milk & Meat)	Live Animals Exports	Livestock Assets (Carrying Capacity)
	(US$/cultivated ha)	(US$/pasture ha)	(US$/pasture ha)	(US$/pasture ha)
Djibouti	**738.5**	**28.3**	**23.8**	**151**
Eritrea	**162.2**	**31.6**	**-**	**229**
Ethiopia	**491.0**	**168.9**	**0.1**	**1,606**
Kenya	**290.8**	**241.3**	**0.2**	**692**
Somalia	**118.6**	**45.0**	**7.1**	**216**
South Sudan	**207.4**	**116.5**	**-**	**292**

Sudan	**312.3**	**108.5**	**11.5**	**480**
Tanzania	**612.6**	**410.2**	**0.3**	**2,826**
Uganda	**160.5**	**75.2**	**0.1009**	**367**
Yemen	**115.7**	**44.0**	**0.0118**	**101**
Average (simple)	**321.0**	**126.9**	**5.4**	**696.0**

B. Greenhouse Gas Accounting

88. **The World Bank uses the Ex-Ante Carbon-Balance Tool (EX-ACT) to estimate the impact of agricultural investment lending on GHG emissions and carbon sequestration.** EX-ACT is a land-based appraisal system for assessing a project's net carbon balance – the net balance of tons of CO_2 equivalent (tCO_2eq) of GHGs that were emitted, or carbon sequestered as a result of project interventions – compared to a "without project" scenario. A GHG analysis was conducted for each of the "first mover" countries under this MPA, their results are summarized below:

- **Djibouti.** The estimated areas to be brought under Climate Smart Agriculture (CSA) intervention is 2,000 hectares (ha), 10,000 ha of pasturelands is expected to be improved through input application, and an estimated 242,000 animals will receive improved feeding and animal health services. The net carbon balance over a period of 10 years is estimated to be -291,086 tCO_2e (approximately -29,108 tCO_2e per year) At a conservative carbon price (US$40/t), the value of the reduced GHG emissions under the Djibouti Locust Response Project is about US$11.6 million.
- **Ethiopia.** It is estimated that the total area under which the project will promote CSA intervention is 197,617 ha, approximately 29,642 ha of the pasturelands will receive improved inputs, and an estimated 2,124,000 animals will receive improved feeding and animal health services. The net carbon balance over a period of 10 years is estimated to be -3,216,221 tCO_2e (approximately -321,622 tCO_2e per year). At a conservative carbon price (US$40/t), the value of the reduced GHG emissions under the Ethiopia Locust Response Project is about US$128.6 million.
- **Kenya.** The estimated areas to be brought under CSA interventions is 87,269 hectares (ha), 16,363 ha of pastureland is expected to be improved through input application, and an estimated 1,160,000 animals will receive improved feeding and animal health services. The net carbon balance over a period of 10 years is estimated to be -1,789,494 tCO2e (approximately -178,989 tCO2e per year). At a conservative carbon price (US$40/t), the value of the reduced GHG emissions under the Kenya Locust Response Project is about US$71.6 million.
- **Uganda.** The estimated areas that will be improved under CSA interventions is 50,408 ha, over 7,000 ha of land use change is expected through the promotion of tree planting, 15,000 ha of degraded lands will be improved, and 3,200 animals will be introduced to the project area with improved feeding practices. The net carbon balance over a period of 10 years is estimated to be -2,395,307 tCO2e (approximately -239,530 tCO2e per year). At a conservative carbon price (US$40/t), the value of the reduced GHG emissions under the Uganda Locust Response Project is about US$95.8 million.

C. Fiduciary

(i) Financial Management

89. In light of the need for urgency in the response, processing of operations will be accelerated. Documentation will be based on simplified project templates for all operations under the Emergency Desert Locust Response Program. Since project rationale, results framework, and components are expected to be similar across projects, teams will prepare a streamlined, short and focused PAD.

90. Flexible FM arrangements, modeled along those allowable under emergency operations, will be applied to the MPA. Streamlined procedures to expedite decision making and approval of FM exceptions under country projects would be agreed for implementation. For operations indirectly engaging UN agencies, the FM arrangements, including the Single Audit Principle, are detailed in the Standard Form Agreements between the individual UN agencies and respective Borrower Governments.

91. Across projects under the program, FM risks include: i) risks of corruption and non-transparent allocation of benefits associated with the provision of CTs, livelihood support and restoration assistance; ii) decentralized CDD-type operations; iii) weak internal audit capacity especially at the sub-national level; iv) delays in disbursement and financial reporting; v) COVID-19 restrictions which limit the scope of FM review and audit; and vi) weak FM capacity at community level. These key FM risks will be mitigated through: i) confirmation of receipt of CTs by the intended beneficiaries; ii) prevention and detection of double enrolment/registration which could lead to double payment; iii) identification and validation beneficiaries during payment and mitigating the risk of double dipping; and iv) security of cash in transit, beneficiaries and beneficiary data. In addition, projects will be implemented by existing PIU's which have sufficient FM capacity with experienced staff and tested FM arrangements. FM arrangements will be further streamlined, for instance in Ethiopia where direct disbursement approaches will be adopted at sub-national level, with comprehensive FM procedures manuals under existing projects. The fact that ELRP activities will primarily build on existing activities with communities reduces that risk further.

92. The agencies defined in each country project will be responsible to maintain adequate FM arrangements. The key FM risks pertaining to the implementation of the proposed country projects, together with the residual FM risk rating will be noted for the individual country projects and will be updated during implementation. Each country will prepare and submit to the World Bank quarterly Interim Financial Reports (IFRs). The IFR will be submitted one month, 45 days, and 60 days after the end of the calendar quarter for Uganda, Kenya and Ethiopia, respectively. Each country will prepare and submit project-specific annual audited financial statements. The formats for the financial reports will be similar to those of the existing projects.

(ii) Procurement

93. Procurement under the MPA will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised in November 2017 and August 2018). Procurement by countries will follow the World Bank's Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised in November 2017 and August 2018). The Projects will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, revised in January 2011, and as of July 1, 2016. Countries will use the Systematic tracking of Exchanges in Procurement (STEP) to plan, record and track procurement transactions.

94. The major planned procurement across countries is expected to include major equipment and materials,

including pesticides, works, consulting and non-consulting services. Country projects will prepare streamlined project procurement strategies for development (PPSD). Procurement plans will be agreed with individual countries.

95. Country procurement approaches will utilize the flexibility provided by the World Bank's Procurement Framework for expedient emergency procurement. Key measures to rapid procurement include: (i) use of simple and fast procurement and selection methods fit for an emergency situation including direct contracting, as appropriate; (ii) streamlined competitive procedures with shorter bidding time; (iii) use of framework agreements including existing ones; (iv) procurement from UN Agencies enabled and expedited by World Bank procedures and templates; (v) use of procurement agents; (vi) force account, as needed; and (vii) increased thresholds for Requests For Quotations and national procurement, among others. If requested by the Borrower, the World Bank may provide procurement hands-on expanded implementation support (HEIS) to help expedite all stages of procurement– from help with supplier identification, to support for bidding/selection and/or negotiations to contract signing and monitoring of implementation. Up to 40 percent for retroactive financing is permitted for but activities covered under this provision should be implemented in accordance with World Bank safeguards and fiduciary policies. For example, projects should not pay for pesticide spraying that has already occurred, but they could pay for pesticides that meet the standards set by the World Bank.

96. Country projects may be significantly constrained in purchasing critically needed supplies and materials due to significant disruption in the supply chain, especially for pesticides. Recognizing the significant disruptions in the usual supply chains for these products that may lead to price volatility and bidders only providing short validity periods, the Borrowers will adopt emergency procedures ensuring efficient procurement processes, including direct contracting, and rapid approvals. UN agencies experienced and specialized in procurement commodities, materials, and equipment necessary for the Project implementation may be used.

97. Procurement will be carried out by the agencies defined in each country project. Streamlined procedures for approval of emergency procurement to expedite decision making and approvals under country projects would be agreed for implementation.

D. Legal Operational Policies

98. Each project under the program will identify if these policies are applicable in the country.

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

E. Environmental and Social

99. Environmental risks and impacts: The MPA will utilize the World Bank's Environmental and Social Framework (ESF), which provides a holistic tool for identifying and managing environmental and social risks and opportunities in the design and assessment of the project. On **Component 1**, the main potential environmental risks and impacts associated with these activities related to the Desert Locust control operations that include: (i) transport, handling,

storage of the pesticides, dosage (i.e., proper calibration of the spraying equipment to get the right dose of active ingredient per hectare) during treatment and disposal of used pesticide containers; (ii) risk of polluting ecologically sensitive habitats such as wetlands, national parks and water bodies; (iii) risks that pasture, local water sources and cropping areas may be contaminated; (iv) potential contamination and poisoning of the pesticides control teams; (v) risk of diversion of pesticides for other uses; (vi) inappropriate use of pesticides; (vii) potential high risk of accumulation of obsolete stocks. On **Component 2**, the potential environmental risks and impacts associated with these activities include: (viii) potential soil erosion and pollution; (ix) dust emissions; (x) generation of solid waste; (xi) occupational health and safety risks related to minor construction works for the proposed construction of grain and seed storage facilities; (xii) potential disease outbreak for proposed re-stocking of livestock; (xiii) potential degradation of the rangelands; and (xiv) potential contamination and poisoning by farmers handling farming pesticides.

100. Environmental risks. The program overall environmental risks are considered High as the application of the pesticides will cover large swathes of areas in Djibouti, Ethiopia, Kenya and Uganda impacted by the Desert Locust infestations. The application of these pesticides pose a risk of potentially negative impacts on local populations dependent on natural resources for their livelihoods such as pasture and crop fields. Given the large areas to be covered, the quantity of pesticides to be used is large and there is risk of accumulation of obsolete stocks. The use and application of pesticides through ground and aerial spraying is likely to impact sensitive ecological areas such as water bodies, wetlands, national parks and reserves, forests, soils, pasture grasslands, standing crops, etc. This potential impact will be mitigated by identifying and mapping out sensitive ecological and agronomical areas, establishing and respecting Standard Operational Procedures (SOPs) and a judicious choice of pesticides (i.e. Biopesticides could be used in/near potentially sensitive areas). Also, use and application of the pesticides will pose adverse effects on the health of the workers on field control teams and on local communities where both ground and aerial spraying operations may take place. This risk will be mitigated by testing and monitoring the acetylcholinesterase blood level of personnel involved in the locust control campaigns for acetylcholinesterase before, during and after the campaign. The testing will help to monitor exposure to chemical pesticides and put in place a rotation of applicators to avoid/limit overexposure and potential health impacts.

101. The environmental risks for Kenya, Uganda and Djibouti has been rated as Substantial due to the proven mitigation measures that will be put in place, SOPs, training of the field control teams and operators and the respective governments and Implementing Agencies (IAs) that are working with FAO for technical support on the Desert Locust control activities. In addition to the above measures, the environmental risks for Ethiopia has been considered as High, because they will procure large quantities of pesticides for the locust control operations and stockpiling which could result with large quantities of pesticides becoming obsolete and the associated cost of disposal for the chemical pesticides is significant. Also, the capacity of the Client is assessed to be inadequate.

102. Pest management approach. The program will adopt an Integrated Pest Management Plan (IPMP) approach. Countries will use both synthetic chemical pesticides and biopesticides for the Desert Locust control activities. The formulation of the pesticides will be in Ultra-low Volume (ULV) formulations. Most of the synthetic chemicals registered by the Countries are organophosphates, which will be used for both aerial and ground spraying for locust control activities as they are fast-acting, effective, non-persistent, moderately hazardous. Countries with technical support from FAO will select the method of treatment dependent on the phase of the locust populations. These organophosphates are WHO Class II. Malathion proposed to be used in Uganda and Ethiopia is WHO Class III and slightly hazardous. The countries have selected to use biopesticide Metarhizium *acridum*, which has minimal risks to

the environment and the applicators and is safe to other species of insects, animals, and humans. Biopesticides will be the preferred treatment for hoppers and for spraying near or around ecologically sensitive areas and cropping areas. Kenya has selected to use the chemical pesticide Fenitrothion 96 percent ULV, which is a WHO class II, formulated as ULV and the biopesticide Metarhizium. Uganda has selected the Fenitrothion 96 percent ULV, Deltamethrin ULV, Malathion ULV, Chlorpyrifos 480g/l EC and biopesticide Metarhizium *acridum*, to be used targeting locust nymphs. Ethiopia has selected Malathion 50 percent EC to control hopper bands, Chlorpyrifos 24 percent ULV, and Malathion 95 percent ULV.

103. The Desert Locust control activities will integrate environmental monitoring during and post-campaign, these activities will include: (i) training of monitoring teams; (ii) pre and post medical examinations of the control teams; (iii) procurement of monitoring equipment; (iv) ecological monitoring; (v) occupational health monitoring; (vi) residue sampling; and (vii) evaluating the health and environmental impacts post the campaign.

104. Social risks and impacts. The principal social risks associated with the project fall broadly into two main categories i) risks to the community and workers from the locust control measures under Component 1 and ii) the social risks associated with the livelihood restoration and enhancement measures under Component 2. Primary risks under Component 1 include risks to community and workers health through proximity to locust control measures as well as potential livelihood impacts through control measures impacting livestock and crops. In addition, labor influx associated with these control measures may impact upon the community through sexual exploitation and abuse (SEA) of vulnerable communities or spreading disease (including COVID-19) to otherwise isolated rural communities with limited access to health services. The primary social risks under Component 2 include the risks of exclusion of vulnerable people and groups most in need of assistance, risk of exacerbating social tension through pastoralist migrations to avoid the impacts of Desert Locusts on forage, presence of internally displaced peoples (IDPs) or refugees and/or labor risks associated with cash for works projects.

105. Consequently, the social risk mitigation measures will focus on: (i) communication, stakeholder engagement, and grievance redress with affected communities; (ii) ensuring effective engagement with Sub-Saharan African historically underserved traditional local communities where they are present; (iii) mitigating social tensions through community involvement and engagement; (iv) addressing gender dimensions of the operation including gender-based violence (GBV) and (v) labor aspects including worker safety.

106. Social risk rating. The overall social risk rating for this MPA is high due to concerns for the health and safety of community members from labor influx to support spraying activities. While many country projects are likely to have a social risk rating of substantial or lower, the MPA has an overall risk of High to allow for country specific circumstances which warrant a higher rating. For the first Phase operations presented here, Djibouti and Ethiopia have social risk ratings of substantial and Kenya and Uganda have high social risk ratings.

107. Environment and social risk classification. As both the environment and social risk ratings for the MPA program are high, the Environmental and Social Risk Classification (ESRC) for the MPA Program is also High.

108. Environmental and social risk management instruments. Prior to appraisal of the MPA, each of the "first-mover countries prepared and disclosed an Environmental and Social Commitment Plan (ESCP), ESRS and Stakeholder Engagement Plan (SEP), which includes guidance on outreach activities and the establishment of grievance redress mechanisms (GRM) prior to undertaking Desert Locust control activities. Below is a generic list of project plans which

may be appropriate for country specific operations However, selection of appropriate instruments will depend on the specific activities under each operation and to the extent appropriate will rely on existing instruments already in use on associated projects.

109. Environmental and social risks associated with Component 1 will be managed by the preparation of an Environmental and Social Management Framework (ESMF), which will include detailed annexes of IPMPs (including waste management measures), GBV Action Plan and Labor Management Procedures (LMPs) as appropriate for the country circumstances. Environmental monitoring of the Desert Locust control activities with environmental impacts, occupational health and safety and pesticides residue will be an important part of the ESMF. Where groups that meet the requirements of environmental and social standard ESS7 are present, culturally appropriate community engagement mechanisms have been included in the SEP to ensure meaningful engagement on locust control measures. These instruments will be prepared and disclosed before disbursement of funds for this Component.

110. Environmental and social risks associated with Component 2 covering livelihood protection and rehabilitation activities, will be managed for unconditional CTs by preparing an Environmental and Social Management Plans (ESMPs) covering environmental and social risks as related to the use of money to purchase additional pesticides and security risks. A Labor Management Procedure (LMP) will also be prepared as required. LMPs will outline WHO provisions for protecting workers from COVID-19 as part of EHS provision and prohibitions on child and forced labour as per ESS2 and International Labor Organization (ILO) conventions. Where groups that meet the requirement of ESS7 are present Indigenous People Plans or frameworks will be prepared for this component. The instruments will be prepared and disclosed before disbursement of funds for this Component.

111. Environmental and social risks associated with Component 3 on early warning and response planning will ensure that the requirements of the ESF are considered in the preparation of any plans and documents. Due to the emergency nature of this project, the environmental and social instruments required may be deferred, the production and implementation of these instruments will be presented as disbursement conditions for the relevant components in the ESCPs developed for each country.

112. Risks and impacts management measures. The following measures will be taken into consideration to minimize these potential negative risks and impacts on communities, ecologically and agronomically sensitive areas and for pesticide control teams: (i) the respective IAs will adopt and comply with FAO technical guidelines on safety and environmental precautions for the use of pesticides, use of WBG EHS Guidelines and applicable national laws and regulations; (ii) strict compliance regarding use of the current FAO list of recommended pesticides products with minimal environmental impacts on the control teams, communities and environment; (iii) carry out inventory of ecologically and agronomically sensitive areas; (iv) provide appropriate and adequate Personal Protective Equipment (PPEs) and training and inductions for the operators, medical teams, transporters, store keepers and field control teams; (v) conduct regular analysis and monitoring of levels of cholinesterase for the operators and field control teams involved in pesticide applications; (vi) carry out awareness-raising and provide relevant, timely information to local communities on pesticide treatment schedules and potential negative impacts; (vii) prepare and operationalize emergency preparedness and response procedures; (viii) carry out regular in-depth environmental monitoring of selected organisms, soil and water for pesticides residues during and after the treatment activities, with the support and involvement of multi-disciplinary lead agencies on wildlife, water, environment, health and safety etc.; (ix) proper management and disposal of obsolete pesticides.

113. Environmental health and safety (EHS) and social risk management assessments. The design of locust control activities adheres to the well-established EHS risk management processes developed by FAO. Respective Preparation of IPFs for respective countries will adopt FAO guidelines. The Task Teams will assess the capacity of IAs to manage environmental and social risks associated with this program and recommend capacity strengthening measures as necessary. The capacity of the environmental, health and medical staff should be strengthened on monitoring and trainings focused on compliance with guidelines and quality standards, EHS procedures and regulations or supplemented with external resources to assist with implementing and monitoring the project. In addition, the capacity of implementing partners to undertake meaningful communications and sensitization with communities and manage the social risks of project activities will be assessed as part of the ESMF preparation process.

114. Stakeholder consultation and engagement activities will ensure timely and meaningful consultations. Robust community engagement will be conducted before commencement of project activities as well as sensitization on the availability of a project GRM to support the systematic uptake, processing and resolution of project related complaints and grievances. Specifically, for spraying activities, a rapid information dissemination campaign will be designed and disseminated to fit the local context and requirements, including through local radio in appropriate languages. Communities will be sensitized on the techniques and timing of spraying, the chemicals used, its impacts on human health, crops and livestock, and risk mitigation instructions appropriate to the specific spraying. All community engagements, including consultations, will be developed to minimize the risk of introducing disease – particularly COVID-19 - into remote communities.

115. Community consultations will include targeted consultations with key community representatives (for instance, elders and traditional leaders in the case of Indigenous Peoples / Sub-Saharan African Historically Underserved Traditional Local Communities (SSAHUTLC) to: (a) receive feedback to adapt the actions to local needs, with special attention to vulnerable groups such as the elderly and people with disabilities, who will be supported in sheltering from the impacts of the spraying; and (b) targeting and implementation of appropriate livelihood interventions. A SEP has been prepared for each IPF project in the MPA series and includes culturally appropriate communication approaches for SSAHUTLCs or indigenous peoples for Component 1 activities.

116. In the in initial phase of operations, project activities will be implemented in rural and remote areas, where sub-Saharan African historically underserved traditional local communities are present and in areas prone to social tensions and communal and political conflict, inhabited by many marginalized communities, including IDPs and refugees. ESMFs will need to be developed with sensitivity to local conflict dynamics and be implemented in a way to avoid escalating local tensions. Furthermore, there is a risk that local community dynamics may result in attempts to capture the benefits of the livelihood restoration activities of Component 2 activities for a particular group. These challenges shall be included in the design of beneficiary targeting measure and management plans for Component 2 activities as appropriate.

117. As is frequently the case in emergency situations, some countries under the MPA (such as Uganda in the first phase) will utilize security forces for carrying out select project activities including spraying of pesticides in affected areas. Given both the necessity, in certain cases, to resort to military support in responding to the locust outbreak emergency in the countries under this MPA, and the risks associated with such use of the military including possible abuses, the World Bank will undertake, when and as reasonably feasible, a rapid assessment of relevant factors and ensure that appropriate environmental and social risk mitigation measures are reflected in relevant operation's documents. Staff will use guidance provided on the ESF website to assist with assessments and supervision of activities

involving military and security forces.

118. The locust invasion in affected countries may further expose women/girls to insecurity. The low status of women in many communities, preexisting high prevalence of GBV, and high levels of poverty, are all likely to be exacerbated by the locust infestations resulting in heightened vulnerability to GBV for the community. With the possible deployment of external personnel, including agricultural extension workers, military personnel, contracted workers, and/or paramilitary cadets, to conduct ground spraying in these areas, communities may be exposed to increased risks of sexual exploitation, abuse and harassment (SEA/H) by project workers. Moreover, gender-based violence could also result from intrahousehold conflict over the receipt of cash and/or sexual exploitation of community members who are extorted for sexual favors in exchange for registration or release of funds. Therefore, each Country specific IPF will develop a GBV action plan, including a code of conduct for all workers, and allocate an appropriate budget for its implementation.

V. GRIEVANCE REDRESS SERVICES

119. 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 WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond.[27] For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

120. Overall program risk is rated as Substantial after mitigation measures. The program risk reflects the aggregation of project risks in each participating country, which will necessarily vary. The MPA is an emergency operation starting in one of the most fragile subregions in the world, which has high levels of poverty, 22.5 million people facing severe food insecurity, 10.8 million experiencing forced displacement, and conflict. Given the pre-existing fragile and conflict conditions, the risk to be introduced by new countries, and the addition of the health and economic shocks presented by the COVID-19 pandemic, the initial overall program risk is high. To manage the risk the program will, inter alia: (a) provide a standard technical design with quality assurance elements to help country teams in implementation; (b) use emergency procedures, such as direct contracting, expedited contract approvals, and using specialized UN agencies for better procurement; and (c) manage a learning agenda to raise the quality of implementation across all participating countries.

[27] For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service.

121. Political and governance risks are rated as Substantial. Evidence from past crisis response has revealed the significant cost of delay between the onset of the invasion and the implementation of control measures. If locust populations spread and population grow exponentially, the costs of controlling them rise in tandem. During the 2003-2005 locust plague in West Africa, countries and the international community were slow to respond to alerts from early warning systems. Desert locusts invaded eleven countries, severely disrupting agricultural production and exacerbating widespread food insecurity. There is now substantial buy-in by all governments that the locust threat requires a rigorous response; however, given the number of conflict areas at least in the initial phase of the MPA, the team will keep political and governance risk as substantial. Working in collaboration with, and sometimes through, UN organizations will help mitigate the risk.

122. Governance concerns in countries participating in the program will require specific attention. The provision of CTs, livelihood support and rehabilitation assistance raise risks of corruption, and non-transparent allocation of benefits, especially when administered at the local level. To mitigate the risk, country project operational manuals (POMs) will include appropriate measures and approaches to ensure transparency and accountability. Similarly, implementing and executing agencies at all levels will be trained and have access to continuous implementation support and guidance. While noting the importance of a rapid, agile and adaptive response, equal attention will be given to integrity risk management and mitigation.

123. Key political risks include sustaining political commitment beyond immediate control activities to address the persistent, medium-term, effects on livelihoods. The COVID-19 pandemic introduces extraordinary and potentially crippling complications to national locust control and livelihood rehabilitation efforts and raises the risk of negative regional spillovers. This MPA, prepared rapidly using streamlined procedures, presents a simplified, integrated program of standard locust control and rehabilitation informed by experience and guidance from Desert Locust experts. Where countries face limitations on coordination and implementation capacity, country operations will draw on established institutional and implementation systems, adjusting, strengthening and scaling-up capacity as necessary. The MPA makes explicit provision for critical strategic communication to build public trust and share information. Additionally, the Horn of Africa is one of the priority 'hot spots' for the World Bank's regional integration program and there has been strong active engagement between country and regional stakeholders. These platforms will provide a good basis for discussing the risks associated with ELRP.

124. Macroeconomic risks are rated as Substantial. The locust crisis is unfolding as the world is bracing against the COVID-19 pandemic, compounding the size and severity of economic and financial shocks in locust-affected areas. Government finances, already limited, are being stretched to breaking point even as countries face a locust invasion. Layoffs in formal and informal sectors are widespread, trade is slackening and forcing a decline in manufacturing, services, and transport, and depressing oil prices. Immediate impacts on locust response are already being felt as supply lines for insecticides and other equipment are being disrupted. Border closures, quarantines, and market, supply chain and trade disruptions are likely to restrict households' access to sufficient, diverse, and nutritious sources of food, especially in countries hit hard by the virus or already affected by high levels of food insecurity. The locust impact will be felt more in rural areas—impacting agriculture and pastoralist households and households dependent on food system value chains. In the Horn of Africa, the potential of severe localized losses of food, fodder and forage, could result in over three million farmers and half a million pastoralists being added to the existing population of 24 million already classified as severely food insecure (IPC3+), and adding to the existing eight million internally displaced people, according to FAO and WFP projections. The options for mitigation beyond the actual

interventions is limited. The program will be implemented in a very precarious environment. Measures, such as dollar denominated CTs will be considered, and the use of retroactive financing may increase access to critical supplies that have been stockpiled by UN agencies.

125. Sector strategies and policy risks are rated Substantial. Agriculture continues to be an important engine of growth, the main employer, and the primary sector for poverty alleviation in East Africa and most IDA-eligible countries. However, agriculture in East Africa is highly vulnerable to a range of shocks besides locust invasions, including for example increasingly frequent weather shocks (drought or flooding) associated with climate change, world market shocks affecting global commodity and food prices, arbitrary policy interventions by trading partners, human health shocks and stringent measures associated with them such as in the case of COVID-19, and the ravages of agricultural diseases and pests, of which locusts are but one. Even one at a time, these shocks can greatly affect production of food and exports, market access and prices, and frequently push large numbers of rural people back into (or further into) poverty. Resilience of rural people in these countries to such agricultural shocks is especially low where educational attainment is low, there are few realistic employment alternatives, credit markets are missing, liquidity is scarce, and infrastructure is poor. The simultaneous appearance of more than one shock in a country at a single time typically leads to greatly aggravated effects as in the case of locusts and COVID-19. Such multiplicative shocks generate great volatility in agriculture and food that in turn has repercussions throughout the entire economy and society. To reduce agriculture sector vulnerability to systemic shocks, especially increasingly frequent ones such as those associated with climate change (including locusts of many hazards facing countries), countries in East Africa need to define or update integrated agricultural risk management strategies that allow for the simultaneous experiencing of more than one of the major shock categories. Furthermore, there needs to be an emphasis on the most vulnerable farming and pastoral communities. To do so, a set of policy reforms should be defined that would contribute to: (i) mitigating the risk (frequency and severity) of shocks impacting adversely the agriculture sector through early warning systems and public investments in preparedness for response; (ii) increasing the country's resilience to shocks through enhanced coping mechanisms, including the delivery mechanisms for social safety nets and food, and rural finance interventions improving access of smallholder farmers and pastoralists to finance; (iii) and emphasis over time in improving the "climate smartness" of farming through policy and technology.

126. Fiduciary risks are rated High. The project includes several mitigation measures to reduce fiduciary risks including rapid disbursement procedures and simplified procurement in accordance with accepted emergency procedures. However, there are significant risks related to failed procurement including the inability to procure sufficient quantities of appropriate pesticides, PPE or delivery equipment given increased demand and limited supply. Disruptions to supply chains may result in price volatility and shortened bidding opportunities. Restrictions and limitations on trade introduced in response to the global COVID-19 pandemic may further complicate timely and efficient procurement. Quarantines and movement restrictions may also limit site access by control teams or other service providers particularly to isolated or insecure areas. To mitigate these challenges, the Program permits Borrower use of emergency procedures including direct contracting and expedited contract approvals. Where necessary, UN agencies with experience and capacity in specialized procurement of necessary commodities, materials and equipment can be used. Environmental and Social Risk is rated High. Please refer to paras. 99-118 for a description of the environmental and social risks, as well as their mitigation measures.

127. Stakeholder risk is rated Substantial. Rural areas in East African countries are characterized by complex arrays of stakeholders with an interest in use of rural space, food systems, and poverty alleviation, which means that diverse

stakeholder groups beyond client Governments will be anxious to see effective locust control, but also may be concerned with how resources are used to protect and restore the most vulnerable and increase resilience, and will likely have ideas of their own in this regard. Provincial and local governments, community organizations and producer groups, the domestic and foreign private sectors, and an especially large number of development partners with an interest in rural and poor people will all be aware of the locust crisis and what it could mean. However, rapid mobilization for emergency response under the central Government requires rapid decision-making that does not always have time and space for adequate consultation of other stakeholders. This can lead to discontent, especially if compounded by mis-targeting of critical interventions for locust control and livelihood protection due to inadequate consultations.

128. These risks can be mitigated by proactive efforts to build on existing projects that are already well embedded in communities in locust-affected areas, organizing widespread consultations with communities, and assisting clients to operate effective crisis communications strategies. In addition, most of the concerned countries have Agriculture Sector Working Groups, typically chaired by Ministries of Agriculture and Livestock, with modest funding and organizational assistance often provided by the World Bank, FAO, or the EU country delegation. Efforts should be made to assist clients to use these standing groups to better assist information flows and coordinate activities related to locusts.

129. The residual risks for Institutional Capacity for Implementation and Sustainability and Technical Design of Program are rated Moderate. The individual activities outlined by the MPA can carry substantial or even high risk—e.g., using pesticides, labor intensive public works, distribution of CTs, etc. However the project's use of internationally accepted guidelines for pesticide campaign management (including health and safety and community outreach), and the preference for building on existing World Bank projects (particularly safety net projects) where institutional arrangements and established protocols ensure inclusion and good governance, lower the overall technical risk to moderate. The World Bank's operational partnership with FAO – the leading technical agency in locust control – is central to effective safe and coordinated national and regional locust control. The design of the program reflects the lessons from past locust campaigns—e.g., West African and Madagascar. Sustained World Bank support for social safety nets in many participating countries, also helps support a sustainable program, drawing on established and well-targeted CT systems and CfW systems that can provide income and livelihood rehabilitation support to rural communities affected by locust outbreaks.

A. Other Risks

130. The use of military as part of Borrower's response to the Desert Locust Emergency. Member countries may seek the Bank's assistance for certain Program activities to be carried out by security or military forces including distribution and use of pesticides and spraying equipment. Project procurement by security or military forces is not permitted. Given the necessity to resort to military/security support in an emergency response, in some instances, and in view of the risks associated with the use of military and or security forces – including possible abuses – the World Bank will undertake, when and as reasonably feasible, a rapid assessment of such factors and ensure that relevant and appropriate environmental and social risk mitigation measures are included in operational documentation and legal agreements and that these measures are applied, and that compliance is monitored throughout implementation.

131. Risks related to the production, acquisition, application, storage and disposal of pesticides are rated

Substantial. Constraints on the macroeconomic environment are described above, and this will impact the accessibility of the needed agri-chemicals for the locust response. Beyond the acquisition of pesticides, the security of transport and storage of all equipment and the safety of workers and communities are high risks for a locust control operation. The risk of diversion of pesticide is always there, but the larger risk is mismanagement of pesticide stores that ultimately exposes workers and communities to health risks. At a greater risk of diversion, based on experience in earlier locust control programs is the diversion of the drums pesticides are stored in. These large, heavy-duty containers that could serve many purposes if they hadn't been used to store pesticides. Storage management plans and occupational health and safety procedures are central to managing these risks. For this, the Bank follows the FAO's SOPs for any pesticide campaign and insists on FAO training of any actors in a control campaign. Resources that FAO has developed include: Pesticide storage and stock control manual, Desert Locust Guidelines: Safety and environmental precautions, and Guidelines on Management Options for Empty Pesticide Containers. These and other FAO resources will be used by the ERLP teams to guide activities in components 1 and 3. It is important to note that beyond procuring chemicals, a locust control campaign includes personal protective equipment, equipment for secure storage, and drum crushers (to prevent the diversion of pesticide containers). Even with significant technical aspects to mitigate risk, the World Bank team conservatively will only lower the risk to substantial so that these risks are monitoring rigorously throughout the life of the project.

132. In view of these risks, all program-supported activities will be undertaken in accordance with the relevant FAO Desert Locust Control guidance, safety and environmental precautions, and standard operating procedures. These detail safety and environmental precautions intended to reduce the risks associated with locust control to an acceptable minimum, and outline safety measures to be undertaken before during and after control operations. The World Bank is currently exploring the development of a Memorandum of Understanding (MoU) to be signed by all participating countries. This would detail the specific guidelines under which program-supported control activities would be conducted.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY: Africa
Emergency Locust Response Program

Project Development Objective(s)

To respond to the threat posed by the locust outbreak and to strengthen systems for preparedness.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	End Target
To respond to the threat posed by the locust outbreak and to strengthen systems for preparedness			
Countries (number) covered by the Program (Number)		0.00	7.00
Land area (ha) sprayed for locust control (Hectare(Ha))		0.00	712,188.00
Supported countries (number) with locust control plans developed (Number)		0.00	7.00
Land area (ha) of affected pasture/rangeland restored to productivity (Hectare(Ha))		0.00	189,115.00
Land area (ha) of affected agricultural land restored to productivity (Hectare(Ha))		0.00	20,500.00
Countries (number) with strengthened early detection capacity (Number)		0.00	7.00
Affected households (number) supported by social safety nets,		0.00	242,000.00

Indicator Name	DLI	Baseline	End Target
Of which females (percent) are the direct recipient of benefits (Number)			
Regional coordination among affected countries improved? (Yes/No)		No	Yes

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	End Target
Monitoring and Controlling Swarms			
Locust monitoring system operational (Yes/No) (Yes/No)		No	Yes
Control teams (Number) trained in safe use of pesticides (Number)		0.00	150.00
Pesticide inventory stored in accordance with appropriate international safety standards (Yes/No) (Yes/No)		No	Yes
Livelihoods Protection and Restoration			
Share (percent) of beneficiary households self-reporting improved food consumption (Percentage)		0.00	70.00
Affected farmers (number) receiving input packets (Number)		0.00	177,000.00
Affected livestock holding households (number) receiving emergency fodder (Number)		0.00	184,208.00
Affected livestock holding households (number) receiving replacement livestock (Number)		0.00	11,000.00
Person work-days (number) generated by emergency cash-for-work schemes of which (percent) benefiting women (Number)		0.00	1,200,000.00
Coordination and Early Warning Preparedness			

Indicator Name	DLI	Baseline	End Target
Awareness raising communications campaigns conducted (Yes/No) (Yes/No)		No	Yes
Share of communities (percent) with locust response engagement plans developed (Percentage)		0.00	70.00
National locust outbreak emergency risk communication plan tested (Yes/No) (Yes/No)		No	Yes
Project management			
Program funds (amount, US$) disbursed within six months after program effectiveness (Percentage)		0.00	40.00
Grievances registered and resolved by the program (percentage) (Percentage)		0.00	90.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Countries (number) covered by the Program	Number of countries covered under the program	Quarterly	World Bank Group Operations Portal	Aggregation of operational data	Project team
Land area (ha) sprayed for locust control	Total land area sprayed for locust control	Monthly	Country-level project data	Aggregation of operational data	Project coordinating unit
Supported countries (number) with locust control plans developed	Number of program-supported countries with	Monthly	World Bank Operations	Aggregation of operational data	Project team

	locust control plans developed		Portal		
Land area (ha) of affected pasture/rangeland restored to productivity	The indicator will measure the land area that had sustained significant vegetative loss but had recovered that vegetation sufficiently to maintain typical livestock population. It would track the cycle of vegetation loss and regeneration after project intervention.	Biannually	Country-level project data	Aggregation of operational data	Project coordinating unit
Land area (ha) of affected agricultural land restored to productivity	This would track the land where crops had been lost due to locust infestation but were replanted in the wake of the locust damage.	Biannually	Country-level project data	Aggregation of operational data	Project coordinating unit
Countries (number) with strengthened early detection capacity	Number of countries with demonstrated enhanced early detection capacity	Biannually	Country-level project data	Aggregation of operational data	Project coordinating unit
Affected households (number) supported by social safety nets, Of which females (percent) are the direct recipient of benefits	Number of households receiving social assistance to mitigate the effects of locust damage; the share of females that are the direct recipients of these benefits	Monthly	Country-level project data	Aggregation of operational data	Project coordinating unit
Regional coordination among affected countries improved?	This indicator will be tracked by the MPA team taking into account the number of countries that	Midterm and end of project	Country project MIS, interviews with client	Supervision visits, client country governments	Country PIUs, ELRP MPA team

	have strengthened early detection capacity a tested national locust outbreak emergency risk communication plan. In addition, the team will take into account the role of regional and international organizations and whether the majority of countries are working with them.		country governments		

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Locust monitoring system operational (Yes/No)	Assessment of whether country-level locust monitoring systems are operational	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Control teams (Number) trained in safe use of pesticides	These would be people trained in the use of protective equipment, spraying equipment, safety measures, and pesticide application techniques.	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Pesticide inventory stored in accordance with appropriate international safety standards (Yes/No)	Country-level assessment of safety of storage of locust pesticide inventory	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Share (percent) of beneficiary households self-reporting improved food	Household assessment of food consumption	Biannually	Country-level project data	Country-level project data	**Country project**

consumption					**management unit**
Affected farmers (number) receiving input packets	Number of farmers receiving input packets	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Affected livestock holding households (number) receiving emergency fodder	Number of livestock holding households receiving emergency fodder	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Affected livestock holding households (number) receiving replacement livestock	Number of livestock holding households receiving replacement livestock	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Person work-days (number) generated by emergency cash-for-work schemes of which (percent) benefiting women	Number of person work-days generated for affected populations though emergency cash-for-work schemes, share of which benefitting women	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Awareness raising communications campaigns conducted (Yes/No)	Assessment of whether awareness raising communications campaigns have been conducted	Biannually	Country-level project data	Country-level project data	**Country project management unit**
Share of communities (percent) with locust response engagement plans developed	Assessment of communities with tailored locust response plans	Biannually	Country-level project data	Country-level project data	**Country project management unit**
National locust outbreak emergency risk communication plan tested (Yes/No)	Assessment of readiness to launch locust emergency risk communication plan	Biannually	Country-level project data	Country-level project data	**Country project management unit**

Program funds (amount, US$) disbursed within six months after program effectiveness	Total amount of program funds disbursed within six months of program effectiveness.	Once, semi-annually	World Bank Group Operations Portal	Aggregation of operational data	Project team
Grievances registered and resolved by the program (percentage)	This will track the number of grievances or other queries submitted to the country projects that were managed to resolution. It not only marks the existence of a grievance redressal mechanism, it measures the degree to which it is operational.	Quarterly	Quarterly progress reports	Monitoring GRM tracking system	Project implementing units in each MPA country

ANNEX 1: DESERT LOCUST RESPONSE PROJECT FOR THE REPUBLIC OF DJIBOUTI

I. STRATEGIC CONTEXT

A. Country Context

1. Djibouti is a small lower-middle income country that is home to a population of about one million people and has borders with fragile and conflict-affected countries like Somalia, Eritrea, and Yemen**.** The country's population is highly concentrated in the capital city, Djibouti City, with more than 85 percent of the citizens living in urban areas. Owing to its modern logistics infrastructure and proximity with the larger and landlocked Ethiopia, Djibouti has experienced steady growth in recent years. Its annual real gross domestic product (GDP) increased on average by 4.4 percent in per capita terms in the last two decades, taking its nominal GDP per capita to US$3,000 in 2018. The economy is highly concentrated on the service sector with trade and logistics constituting the bulk of the economy with close to 45 percent of GDP. The stability of the country in a regional context marked by violent conflicts partly explains this economic surge, driven by the presence of military bases, port-related activities, as well as an increase in Foreign Direct Investments (FDI) with the building of public infrastructure. Djibouti depends almost entirely on the global supply chain and imports for its food consumption and medicines.

2. Despite the strong economic growth, challenges remain in reducing poverty in the country. Growth is clouded by several pockets of poverty across different geographic areas. According to the latest poverty assessment (EDAM[28] 2017), close to 21 percent of the population live in extreme poverty. Approximately 75 percent of the rural and 20 percent of the urban population are food insecure. Among children under five years, 21 percent are stunted, and 8 percent are extremely malnourished. Anemia is prevalent among pregnant women and children, reaching 32 and 43 percent for respective group, and 58 percent of children under five are vitamin A deficient.

B. Sectoral and Institutional Context

3. The economic, human and environmental impacts of the current Desert Locust upsurge, driven in part by climate change, are substantial and growing. About 1,700 farms located in 23 production areas and 5,000 hectares of pasturelands in Djibouti have been infested with Desert Locust. Currently, 70 percent of the rural populations, representing about 4,450 agricultural and pastoralist households dependent on food system value chains are subject to food insecurity. The total locust-related damages and losses for the entire 2020 agricultural season are estimated at US$19.1 million, including US$11 million of livestock asset damages, US$8 million in livestock production losses, and US$0.1 million in staple crop production losses.

4. Djibouti's capacity to manage and control the locust upsurge is limited. Djibouti has very limited existing institutional capacities to manage and control Desert Locust outbreaks and upsurges. The Ministry

[28] EDAM : Enquêtes djiboutiennes auprès des ménages sur les indicateurs sociaux (the Household Survey).

of Agriculture (MoA) lacks equipment for pesticide applications (including, for aerial applications, it fully depends on assistance from Ethiopia), and the required infrastructure for storage and management of pesticide stocks, during and after Desert Locust crises. The technical capacity of the MoA to ensure Desert Locust surveillance and monitoring as well as locust management and control operations and communication at country and regional levels, is also limited. Moreover, the country lacks the legal framework for pesticide management (import, registration, distribution, storage quality control, etc.) in conformity with the International Code of Conduct for Pesticide Management (ICCPM).

5. As an immediate response to the Desert Locust upsurge in Djibouti, the World Bank has already mobilized US$0.6 million through a Contingency Emergency Response Component (CERC) under the Towards Zero Stunting in Djibouti Project (P164164), to which this project will be complementary. The CERC responds to some of the emergency needs, including, to: (i) purchase equipment, logistic, and pesticides for immediate Desert Locust control (US$0.214 million); (ii) initiate preliminary capacity building activities to develop an early warning system for early response to future Desert Locust crises (US$0.1 million); and (iii) assist farmers and agro-pastoral households affected by the current Desert Locust upsurge to restore their livelihoods (US$0.286 million). In addition, FAO has mobilized US$3.2 million through international donors (Governments of the Netherlands and Germany, Gates Foundation and Master Card) to assist in Desert Locust control operations and restoration of livelihoods.

C. Relevance to Higher Level Objectives

6. The proposed project is well aligned with the World Bank's and GoD's development priorities. The project is well aligned with both Government and World Bank strategic priorities indicated in their development strategies and programs. It is also aligned with: (a) the CPS for FY14-17 (report no. 83874-DJ, extended to FY18 through the Performance and Learning Review), in particular, its first pillar on "reducing vulnerability", including through enhancing basic infrastructure services, strengthening institutions and promoting social development in disadvantaged areas; (b) the Systematic Country Diagnostic (SCD) – report no. 134321-DJ (2018-2023); and (c) the forthcoming CPF for FY20-25. It will contribute to the WBG's enlarged MENA strategy (March 2019) Pillar of Resilience to Shocks. The project will strengthen country systems to effectively respond to emergencies and/or disasters by building capacity at all levels. Through provision of appropriate resources to all the key structures layered with strategic communications approach, the project will aim to ensure that timely actions are taken in line with issues raised at different levels. The project's focus to support vulnerable households to preserve, protect and rebuild their livelihoods will go a long way in enhancing resilience of the poor and vulnerable. Further, by mitigating potential risks to food and nutrition security, the project addresses a key priority of the Government's vision 2035 to consolidate human capital and building state capacity and its action plan called Strategy of Accelerated Growth and Promotion of Employment (SCAPE) 2015-2024.

II. PROJECT DESCRIPTION

A. Project Development Objective

7. PDO Statement. The Project Development Objectives (PDO) are to prevent and respond to the threat posed by the locust infestation outbreak and to strengthen Djibouti's systems for preparedness.

B. Project Results Indicators

8. Progress towards the achievement of the PDO and results would be measured by the following indicators, in line with the indicators of the ELRP MPA. Indicators to track citizen engagement track include awareness raising communication campaigns conducted and grievances registered and resolved by the program.

Table 1.1 – Results Indicators for Djibouti

Indicator	Baseline	Project-End Target
PDO-level (outcome) indicators		
Land area (ha) sprayed for locust control	0	10,000[29]
Land area (ha) of affected pasture or rangeland restored to productivity	0	1,000
Land area (ha) of affected agricultural land restored to productivity	0	500
Affected households (number) supported by social safety nets	0	2,000
Of which females (percent) are the direct recipient of benefits	0	50
Intermediate Results Indicators		
Component 1: Surveillance and Control Measures		
Control teams (Number) trained in safe use of pesticides	0	100
Pesticide inventory stored in accordance with appropriate international safety standards (Yes/No)	No	Yes
Component 2: Livelihoods Protection and Rehabilitation		
Share (percent) of Safety Net beneficiary households self-reporting improved food consumption	0	70
Affected farmers (Number) receiving input packets	0	1,000

[29] The total affected area is estimated at more than 20,000 ha. The CERC will allow for the treatment of 3,000 ha and the planned area to be treated by the current project is estimated at 10,000 ha.

Affected livestock holding households (Number) receiving emergency fodder	0	1,000
Affected livestock holding households (Number) receiving replacement livestock	0	1,000
Component 3: Coordination and Early Warning Preparedness		
National Locust emergency risk communication plan tested (Yes/No)	No	Yes
Component 4: Project Management		
Awareness raising communication campaigns conducted (Yes/No)	No	Yes
Grievances registered and resolved by the program (Percentage)	0	80

C. Project Components

Component 1: Surveillance and Control Measures (US$2.27 million equivalent)

9. This component would support the Republic of Djibouti in strengthening its regulatory framework and institutional capacity for the management of climate change-induced Desert Locust crises and setting up a sound legal basis for the management of pesticides used in Desert Locust control activities. Efforts will focus on determining the likely impacts of climate change on pest establishment, development, phenology, behavior, interactions with host and natural enemies, etc. in specific agricultural settings. Activities under this component will limit the growth of existing Desert Locust populations and curb their spread, while mitigating the risks associated with control measures and their impacts on human health and the environment. The component will be designed to enable informed and climate-responsive locust management decision-making. Satellite images and the associated geospatial technologies can provide timely data to assess the risk of impending locust outbreaks. This information could be used for targeted preventative management actions in the locust breeding areas under changing climatic conditions. Habitat mapping will apply climate, soil and other variables to map susceptibility of land areas in space and time to locust outbreaks or land areas that are already affected by locusts. Activities to be supported would be continuous surveillance and monitoring, spraying of locust swarms, assessing environmental and social impact of the locust populations and control measures, and delivery of training and capacity building to field teams to ensure that operations are carried out in a safe and effective manner. The component would finance equipment and capacity building to enable improved locust monitoring and control in Djibouti. Significant participation of local communities is expected in locust monitoring and surveillance activities. Local communities will receive training and relevant equipment.

10. Sub-component 1.1: Improving Desert Locust Surveillance and Monitoring in the Infested Areas. A preliminary review of the existing and available infrastructure (i.e., storage facilities), technical capacities (trained staff, tools and surveillance equipment) and logistic resources (vehicles and financing) to

undertake surveillance and monitoring activities established significant gaps in the area of Desert Locust surveillance. It was recommended to improve the equipment and technical capacity in the five regions affected by Desert Locust invasions (Arta, Dikhil, Ali-Sabieh, Tadjourah and Obock). The project will, therefore, procure the necessary equipment for land surveillance (elocust3, GPS, camping kits, dissection kits, 4 WD pickups), as well as finance the staff and operating expenditures for locust surveillance and monitoring. The project will also organize the necessary training-of-trainers (ToT) sessions for the representatives from the five regions to ensure further organized trainings of the affected communities in conformity with the FAO Directive on Desert Locust surveillance. It is expected that three representatives from each of the five regions would be trained. Communities will also be equipped to actively participate in the Desert Locust surveillance and monitoring.

11. Sub-component 1.2: Support for Control Measures. The objective of this sub-component consists of developing the public sector and community capacity to control desert locust populations and to prevent their spread into new areas. Under the sub-component, the project will (i) procure the necessary ground equipment (vehicle-mounted sprayers, portable atomizers, portable rotaries and calibration equipment); (ii) procure a small agriculture single-seat and single-engine sprayer aircraft designed for pesticide application during aerial control operations with the associated service package for its operation, training and maintenance; (iii) finance the operating costs associated with ground and aerial control operations; (iv) procure ULV formulations of bio pesticides and chemical pesticides; (v) set-up of a harmonized registration system with the desert locust-affected neighboring countries; and (vi) organize the appropriate training on maintenance of ULV sprayers and pesticide stock management, taking into account FAO Directives and PRG recommendations and FAO guidelines on Good Practice for Aerial Application of Pesticides.

12. All procured equipment, including the small agriculture single-seat and single-engine sprayer aircraft, will remain under the government ownership which will ensure the availability of the equipment when it is needed. At the outset of the project, the Government is expected to start the operation by contracting an experienced operator to do all the operations based on their own manuals, existing operations in other countries (which will be endorsed by the Djiboutian authorities and given an aircraft certificate). The procurement of the sprayer aircraft aims to strengthen the country's autonomy and preparedness in case of locust outbreaks. Desert locust outbreaks usually happen simultaneously in a number of countries, thus aircrafts for aerial control may not be readily available for rent (which is the case during the current outbreak). The project will therefore finance a full package of assets (the aircraft) and services to ensure that the aircraft is properly maintained and operated. The project will finance technical assistance to support the MoA in the design of the aircraft technical specifications, specifications for the service agreement, the tendering process, and the selection of the supplier. The signing of the contract between the GoD and the operator will be done before or at the time of signing the contract for the purchase of the sprayer aircraft (depending on the type of the service provider, it could also be the supplier of the aircraft). After an initial period of 12 to 18 months, Operation and Maintenance (O&M) of the aircraft will be transferred from the private operator to the MoA or another appropriate agency. The initial operation period by the private operator would ensure that complete implementation arrangements are in place before O&M of the aircraft is transferred. To ensure that the sprayer aircraft is

only used for the intended purposes[30], a logbook system will be established to maintain the records of its use. The operational handbook (aircraft annex to the POM) with the procedures for use of the aircraft will be developed as part of the POM. The World Bank's team will include an aircraft engineering specialist to monitor and advise the MoA on the acquisition of the aircraft.

13. Field teams will be trained on the appropriate use and maintenance of equipment and pesticide handling and equipped with portable atomizers, to actively participate in the locust control, maintenance of ULV sprayers and management of pesticides stock and empty containers. This sub-component will also establish and reinforce, as necessary, the legal basis for pesticide life cycle management and establishment of a harmonized registration system with those existing in Desert Locust-affected neighboring countries (for example, Ethiopia), members of DLCO and /or IGAD. Around 10,000 beneficiaries are expected to be reached with control measures.

14. Sub-component 1.3: Risk Reduction and Management. Activities financed under this sub-component will: (i) support monitoring and assessing environmental and human health risks as well as reputational risks associated with locust ground and aerial control; (ii) implement health, environmental and safety measures, as well as the mitigation measures related to the potential reputational risks, to reduce these risks to an acceptable minimum.[31] The project will procure: (i) pesticide equipment in conformity with FAO Directive on pesticide equipment, application and maintenance (under Sub-component 1.2); (ii) certified pesticide products and bio pesticides as recommended by the PRG; (iii) ChE Cholinesterase Test System for the control of Acetyl Choline esterase and Personal Protective Equipment (PPE); and (iv) organize the appropriate ToT sessions of representatives from the five regions to further organize trainings of the affected communities in conformity with the FAO Directive on Desert Locust surveillance, maintenance of ULV sprayers and pesticide stock management. In addition, personnel involved in the project and exposed to pesticides (storage, transport, calibration, empty containers, handling, etc.), should have a health certificate, insurance, take a Acetyl choline esterase test before, during and at the end of Desert Locust control and at the end of the control campaign, and should be trained on the appropriate use of PPE. Communities would also be trained on risks to health and management measures. Monitoring and building environmental and climate literacy will also help increase outreach of reliable climate-smart pest management knowledge. At the end of the Desert Locust control campaign, soil, water and plant samples will be taken for pesticides residue analysis by a nationally or regionally accredited laboratory. Finally, the project will evaluate the technical and economic feasibility of establishing a laboratory for pesticide quality control and pesticide residue analysis.

Component 2: Livelihoods Protection and Rehabilitation (US$2.0 million equivalent)

15. This component will contribute to assisting locust-impacted households, including farmers and pastoralists, to protect and restore their income and livelihoods and build resilience. It will support: (i) livelihood protection through safety net response; and (ii) livelihood restoration through replacement of productive assets. Adoption of climate-smart crop and livestock management practices will be promoted as well as livelihood diversification activities that are less dependent on climate and weather variability.

[30] The aircraft can be used for other eligible agriculture and health-related reasons, such as for spraying mosquitoes, etc.
[31] A Pesticide Management Plan (PMP) has been already prepared under an on-going CERC financing desert-locust-related activities. This PMP will be adapted to the current proposal.

The Project Operational Manual (POM) will include detailed description of the approach and methodology in identifying and selecting the beneficiaries, including clear eligibility and disbursement criteria, demarcation of roles and responsibilities, monitoring, verification/cross-verification and reporting mechanisms.

16. Sub-component 2.1: Safeguarding Food Security and Protecting Human Capital. The aim of this sub-component is to target the most vulnerable households in highly locust-affected geographic areas to be determined based on MoA data. The sub-component would provide emergency income support in the form of unconditional CTs in order to enhance the purchasing power of vulnerable households to buy food and basic consumption items and to prevent them from selling of productive assets such as livestock. The sub-component would be delivered through the existing well-established CT program of the Ministry of Social Affairs and Solidarity (MSAS). This program, the *Programme National de Solidarité Famille* (PNSF), currently delivers CTs to about 12,000 poor and vulnerable households.[32] This well-targeting Safety Net program will be leveraged for the implementation of this component to ensure adequate targeting and timely implementation. An approach based on community-based targeting may be the most appropriate to identify poor and vulnerable households who are significantly affected by the Desert Locust invasion.

17. Targeting at the household level will follow the existing approach under PNSF, whereby community-based targeting based on pre-identified eligibility criteria (including a household without income, without productive assets, with children under 5 or a senior or disabled person, etc.). The targeting methodology for CTs will be adapted from the community-based targeting process used for PNSF. In addition to the poverty-based criteria for community targeting used by PNSF, communities will also be asked to identify those households who have suffered lost income from the invasion of locusts. The CTs will be provided in geographic zones identified using MoA data on the zones most affected by locusts. PNSF aims to promote inclusion of women and expects that transfer recipients within households will be 50 percent women. The PNSF community targeting process, which will be used for this locust project, also aims to promote the inclusion of minorities and people with disabilities.

18. Payment of CTs to affected communities will be undertaken through the PNSF system, which uses the regional treasuries of the Government under the control of the Ministry of Budget (MoB) to make physical cash payments given that mobile payments are not possible in most rural areas. A payment fee of 1 percent of the amount transferred, will be paid to the MoB for the services of its regional treasury agents. It is also necessary to cover the costs of the MSAS agent who accompanies the MoB during the payment. The extent possible the project will explore use of suitable ICT technologies for ensuring outreach to beneficiaries and ensuring appropriate monitoring of the implementation.[33] All this process will be detailed in the operations manual.

[32] To benefit from the PNSF, households are targeted either through community-based targeting in rural areas or through a Proxy Means Test (PMT) in urban areas.

[33] ICT technologies have been proven useful in to reach farming communities and implementing activities ranging from community mobilization and engagement to processing data, making payments, monitoring compliance, tracking beneficiaries, and incorporating user feedback, and social accountability strategy, which includes systematic mechanisms to provide information to and feedback from communities.

19. The procedures for physical cash payments will be adapted to incorporate physical distancing, hand-washing, and other protective measures to prevent the transmission of the coronavirus disease (COVID-19). A GRM will be put in place to ensure transparency and accountability of cash delivery. Beneficiary households would be concurrently enrolled in the national social registry, which serves as the gateway for eligibility for nine Government social programs including subsidized health insurance and food distribution. The sub-component will cover 2,000 households with CTs, of which 50 percent of the direct recipients of cash are expected to be women. The households would receive the PNSF amount of DJF10,000 (US$56) per month for a period of 8 months. This will be paid in three tranches (3,3, and 2 months).

20. Sub-component 2.2: Restoring and Rehabilitating Agricultural and Pastoral Livelihoods. The objective of this sub-component is to support locust-affected farmers and livestock holding households to restore their productive assets for sustained food security. The subcomponent will prioritize the adoption of climate-smart crop and livestock practices for reduced GHGs, enhanced resilience, and the implementation of livelihood support/diversification initiatives. Support will be provided for agroecosystem management approaches that enhance resilience of farm and landscape to changes in climate and pests. Climate-resilient grazing will be supported, including while legumes and grasses adapted to the local environment will be promoted to increase biodiversity and landscape resilience. Leguminous species are also beneficial for climate mitigation, fixing atmospheric nitrogen and improving soil fertility. The project will finance: (i) farmer packets to (re)start crop and fodder production; (ii) livestock production-related packets with inputs for pasture restoration in pastoralist areas impacted by the invasion, and where needed - assisting with animal re-stocking; and (iii) vaccination campaigns to prevent disease outbreaks (e.g., rift valley fever) and provision of animal health services. A total of 3,000 households are expected to be reached by the sub-component activities, of which 50 percent are expected to be women. This sub-component will use the community-based targeting process, where Local Steering Committees, set up by the community development programs, Regional Councils and communities would be asked to identify those households who have suffered damages of their productive assets from the locust upsurges. In-kind distribution would be ensured by the Regional Directorate of Agriculture, in collaboration with the Prefecture and the Regional Councils. A GRM will be put in place to ensure transparency and accountability of provision of the support, securing against patronage and leakage.

Component 3: Coordination and Early Warning Preparedness (US$1.1 million, equivalent)

21. This component will support establishment of a robust system integrating Early Warning, Logistic (equipment, transport and human resources) and Early Response System to trigger timely control operations. It will also establish and overall coordination mechanism for climate change-induced Desert Locust surveillance and control. Early warning systems will be developed and implemented to support prevention and rapid response to new and existing climate change induced locust infestation, thereby limiting in-country and cross-border spread and intensification. Emphasis will be placed on building capacity to enable rapid and targeted short-term responses and long-term adaptation planning.

22. Sub-component 3.1: Early Warning Preparedness. This component would strengthen the regional and national capacity for surveillance and control operations. Over years, there is a persistent gap in

preparedness for early response to stop recurrent desert locust outbreaks. In this regard, the project will use an innovative approach using the most updated Information and Technology (IT) to design, test and deploy a Desert Locust Early Response System (DLERS) composed of three sub-systems: Desert Locust Early Warning System (DLWS), Desert Locust Operation System (DLOS), and Pesticide Stock Management System (PSMS). This integrated system will have the most up-to-date information to trigger informed climate-induced desert locust ground and/or aerial control operations for swarm control. The system may also cover and be linked to monitoring and response mechanisms for other disasters and adverse climate events.

23. This integrated system is based on an application installed on tablets for field data entry on locust situation; monitoring and maintenance of necessary equipment and logistic; and quantities and qualities of pesticides stocks. Tablets are equipped with GPS, Camera and Internet connection, Digital Forms for data collection on surveillance sites (observed breeding, egg-laying areas and the movement of developing nymphs, hopper bands, and adult locust swarms and habitat conditions), pesticide storage and equipment for pesticide application and surveys (pesticide stores, equipment, logistic, and pesticide products). Data entered in tablets would be instantly sent to the Central Cloud Server equipped with an application for data analysis, locust infestation vulnerability mapping, and reporting. Selected staffs from the five affected regions will be trained on the use of the system. In addition to the central server in Djibouti, the DLERS will be extended into a regional Cloud receiver hosted in DLCO to share up-to date information on surveillance, equipment and expertise with other countries in East Africa and MENA. DLCO will also receive periodic reports containing among others: data on Desert Locust early warning, quantities and qualities of pesticide application equipment, pesticide stocks and logistic, geographical distribution, storage conditions and photos of stocks. Periodic reports are produced and disseminated to all stockholders for information and or appropriate actions.

24. Sub-component 3.2: Coordination at National Level and with Regional Organizations. The project will finance the rehabilitation of a building in Djibouti City and in Obock, and the construction of storage facilities for pesticides and other necessary equipment. The objective is to support the National Desert Locust Center (NDLC) to ensure continuous Desert Locust management and to integrate into the regional locust monitoring system. The program will build capacity to monitor the relationships between weather trends and desert locust territories and identify the conditions for an outbreak and population upsurges. Habitat mapping will apply climate, soil and other variables to map susceptibility of land areas in space and time to locust outbreaks (locust vulnerability map) or land areas that are already proliferated by locusts (locust impact map). This sub-component will finance the necessary IT equipment, expertise and recurrent costs for the center's operations. The NDCL will be linked to the regional network to prevent or manage any future desert locust outbreaks.

Component 4: Project Management (US$0.63 million equivalent)

25. Project Management. This would finance the costs associated with the project management, such as implementation support, FM, procurement, monitoring of the environmental and social safeguards of the project, as well as M&E.

26. The Component will also ensure awareness raising, communication and knowledge management activities. This Component will help promote increased community awareness about the impacts of the Desert Locusts and the response efforts to support communities before, during and after the upsurge. Governments, at both national and local levels, and communities across the affected areas, will need information about combatting and managing swarms, how and when pesticides can be used safely and effectively, and—when their area has been treated with pesticides— how to safely navigate its effects on plants, livestock, and water systems. A public awareness campaign will be implemented to keep the public informed about possible environmental and health effects of insecticides and empty pesticide containers before, during and after locust control operations. It is expected that 1,000 beneficiaries will be reached through the public awareness campaign. A GRM will be established, to collect and monitor complains, at the national and regional levels, the results of which will be used to improve project implementation. Citizen engagement, community empowerment, mobilization and participation will be critical to developing community-led responses that will address immediate concerns and build resilience going forward.

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

27. A CERC is included in the project as a US$0 component, in accordance with World Bank IPF Policy, paragraphs 12-14, for projects in Situations of Urgent Need of Assistance or Capacity Constraints, to provide immediate response to an Eligible Crisis or Emergency, as needed. This will allow for a rapid reallocation of project proceeds in the event of a natural or man-made disaster or crisis that has caused, or is likely to imminently cause, a major adverse economic and/or social impact with food security consequences. An “Emergency Response Operational Manual” (EROM) will be prepared as part of the POM. Triggers for the CERC will be clearly outlined in the EROM acceptable to the World Bank. Disbursements will be made against an approved list of goods, works, and services required to support crisis mitigation, response and recovery. All expenditures under this activity will be appraised, reviewed, and found to be acceptable to the World Bank before any disbursement is made.

28. Integration of COVID-19 Response. As with all countries, Djibouti faces alarming threats of the COVID-19 global pandemic. The severity of the situation is concerning since Djibouti is a small state with very weak health systems and high illiteracy levels. It is, therefore, compulsory to integrate preventive activities in spreading awareness on the severity of the virus to rural households. The project will utilize the project’s resources such as the field consultants to integrate these activities in the trainings and awareness of beneficiaries which will follow precautionary measures on workshop/training protocols, as well as enforce and maintain adequate distancing during control, distribution, training, payment and other project activities. This will include working with local communities, consultants and beneficiaries to reach the largest numbers of households with awareness and hygiene materials.

D. Project Beneficiaries

29. The primary beneficiaries of the project are farmers and pastoralists affected by the locust upsurge and staff of line Ministries and regional council members who will benefit from the capacity building programs under the project**.** Estimated 30,000 farmers and pastoralists are affected in five regions of the

country: Arta, Dikhil, Ali-Sabieh, Tadjourah and Obock. It is expected that around 5,000 households will benefit from the direct support from the project, including 2,000 from the social safety nets and 3,000 from receiving productive assets. The number of staff of line Ministries and regional council members benefitting from the project activities are estimated at 100. The intervention would contribute to the national economy by preventing damages caused to crops and pastures and resulting in retained food security levels and productivity in the crop and animal production sectors. The key public institutions involved in Desert Locust management will also benefit from the project interventions, such as strengthening their overall capacity for locust prevention and control. The appropriate and timely control measures will also benefit other neighboring countries, resulting in minimized migration of swarms to other countries. The project will be financed through IPF instrument in the amount of US$6.0 million equivalent IDA credit resources under the framework of the EDLP, Phase 1 of the MPA. The project will be implemented over a three-year period.

E. Project Costs

29. Detailed project costs by component and financing are in the Table 1.2 below:

Table 1.2 - Project Costs by Component and Financing

Project Components	Project cost (US$ million)	IDA Credit (US$ million)	% Financing
1. Surveillance and Control Measures	2.27	2.27	100.0
2. Livelihoods Protection and Rehabilitation	2.00	2.00	100.0
3. Coordination and Early Warning Preparedness	1.10	1.10	100.0
4. Project Management	0.63	0.63	100.0
5. Contingent Emergency Response Component (CERC)	0.00	0.00	
Total Project Costs	**6.0**	**6.0**	

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

30. On behalf of the GoD, the Ministry of Agriculture, Water, Livestock, and Halieutic Resources (MoA) will assume responsibility for the implementation of all project activities. The MSAS will appoint a focal person within the Project Management Unit (PMU). The MoA will work through the existing PMU for the Rural Community Development and Water Mobilization Project (PRODERMO - P117355), which has close proximity to potential beneficiaries across the country and has extensive experience in implementing World Bank-funded projects. The PMU will report to the general secretary of the MoA and will be

responsible for the implementation support, FM, contracting environmental and social safeguards, M&E and communications.

31. The Directorate of Agriculture and Forestry (DAF), which is in charge of locust control measures, and the Directorate of Livestock and Veterinary Services (DLVS) of the MoA will ensure technical leadership for the Component 1 and Sub-component 3.1, supported by the FAO. Two tripartite agreements will be signed: one between the DAF the Secretary General of the MoA, and the PMU, and the other between DLVS, the Secretary General of the MoA, and the PMU, specifying the obligations and responsibilities of each of the parties, including in terms of the human and material resources to be made available, the designation of focal persons from the two Directorates, and the preparation and validation by the concerned parties of action plans to ensure good coordination and implementation of the project activities. The DAF and DLVS will work with FAO to build their capacity. The DAF, the DESV and the PMU will hire additional staff and receive project-funded equipment, as necessary and within the available budget, to ensure the successful implementation of the project activities.

32. For the procurement of the agriculture spraying aircraft, the PMU will procure the services of a specialized expert or entity to advise on the aircraft technical specifications, procurement, selection and contractual arrangements with the suppliers. The contract with the service company will have several parts: (i) set-up and provision of crop dusting operations under their Air Operator Certificate and with their aircraft; (ii) procurement of an aircraft; (iii) preparation of operational manuals (Flight Operations Manual, corporate/operational manuals etc.); (iv) certification preparation with the CAA of Djibouti; and (v) after certification, handover of newly established operations to the MoA or other appropriate agency. Before the procurement can be effected, there will be two disbursement conditions: (i) the O&M guidelines and procedures of the aircraft use should be detailed as part of the POM and be acceptable to the World Bank; and (ii) the Government carries out satisfactory procurement and execution of a service contract with an acceptable entity.

33. The other entities involved in project implementation include the MSAS, the State Secretariat for Decentralization, FAO, IGAD, Prefectures, Regional Committees, beneficiary communities and other community groups. The MoA will closely collaborate with the MSAS, which will be in charge of implementation of the Sub-component 2.1, as well as the Local Government (Regional Councils) which will help ensure successful implementation of the project activities in their respective regions. A MOU will be signed between the MoA and MSAS regarding the implementation of the Sub-component 2.1. The FAO will be the lead technical partner to the MoA, assisting with the implementation of Component 1 and Sub-component 3.1. An agreement will be signed between the MoA and FAO to that effect. Close collaboration of the MoA with IGAD will ensure that the project is well placed within the regional coordination and harmonization activities of IGAD. The project will also coordinate and collaborate with the other regional organizations such as DLCO-EA and CRC-Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES).

34. POM and staff training. A detailed POM will be prepared for all project components within one months of effectiveness. A separate POM on CTs will be due before disbursements can start under the Sub-component 2.1. The two POMs will be a subject to the World Bank's no objection. All staff of the IAs

and the PMU working on their respective components will be trained on the component implementation mechanisms, demarcation of roles and responsibilities, monitoring, verification/cross-verification and reporting mechanisms to ensure that the project achieves its objectives in a clear and transparent manner.

B. Monitoring and Evaluation

35. Results Monitoring. The objectives of the M&E system are to measure input, output and outcome indicators to provide project staff and stakeholders with regular information on the project implementation and outputs; identify potential problems; and determine the extent to which the project is achieving its development objectives. The M&E methodology will be aligned with the definitions and collection methodologies of the Program, to enable data aggregation and consolidation at the Program level. As an integral part of project implementation, the M&E system will be designed to provide timely and reliable results for management to facilitate informed decision-making. In addition to representing an important management tool, the M&E system will be a valuable source of learning and a knowledge management mechanism.

36. The PMU will be responsible for the M&E of the project, including analysis of the M&E data and the finalization of the project progress reports**.** To this end, it will work in close collaboration with the relevant unit and staff of the MoA with M&E responsibilities. M&E will be based on the collection and reporting of the PDO and intermediate indicators (see paragraph 8 for the list of these indicators). The results will be presented to the World Bank in semi-annual progress reports, and Mid-Term Review (MTR) and final Implementation Completion Report (ICR). A baseline survey, i.e. needs assessment, will be conducted during the first three months of the project, and additional surveys will be held at MTR stage and project completion. The PMU has already a well-functioning GIS, which will be used to integrate the M&E database to allow better spatial monitoring of project activities.

37. The M&E system will also draw the information from DLERS, which will be accessible to all stakeholders**.** It is expected that this platform would be connected to other regional platforms related to Desert Locust prevention and other transboundary pests and diseases. This platform will disseminate summary reports produced by the DLERS. The materials prepared under this output will supply the communication needs, including awarness raising campains in the country and other Desert Locust-affected countries in the region. A widely-disseminated project-end publication is also expected, summarizing the project outcomes and results, as well as lessons learned.

38. Evaluation. An independent consultant will be recruited to carry out the baseline study within three months of the project effectiveness. Such baseline survey, including assessment of the needs of the affected population, will be completed for the project areas. Similarly, the PMU will also contract independent consultants to prepare the end-of-project evaluations, including updated surveys of the socioeconomic conditions of the beneficiaries in the project areas. The end-of-project evaluation will focus particularly on project outcomes and results at the local, regional, and national level. The end-of-project evaluation will also provide recommendations in terms of M&E and replication of best practices.

C. Fiduciary

(i) Financial Management

39. The World Bank reviewed the FM arrangements at MoA. The MoA will have the overall responsibility for the project implementation, through DAF. The PRODERMO PMU hosted in the MoA facilities will assist the MoA with the project implementation and ensure implementation support, FM, procurement services, and communication. Based on the results of the assessment and considering the residual risks after taking into account mitigation measures, the FM risk, as a component of the fiduciary risk, is rated as **Substantial**. With the proposed mitigating measures, the MoA through the PMU will have acceptable FM arrangements as per the requirements of the World Bank's Policy and Directive on IPF.

40. The following measures have been agreed upon in order to reduce the FM risk level and have an adequate FM system in place: (i) the PMU will include a financial officer that will handle all aspects related to FM; (ii) the PMU will acquire an accounting software to record the daily transactions and produce the Un-Audited IFRs. The format of the IFRs will be agreed upon with the World Bank. The IFRs will be submitted to the World Bank no later than 30 days after the end of each quarter; (iii) for the purpose of the project, the PMU will develop an operational manual which will contain a FM chapter describing in detail the FM procedures, including internal controls; (iv) MoA will utilizes the services of a UN Agency to implement part of the project given the urgency of the situation and the need for timely availability of funds and the experience of international organizations in this domain and; (v) the PMU will get into a contract with an independent external auditor using a Terms of Reference (ToRs) acceptable to the World Bank to audit the Project Financial Statements (PFS). The auditor will prepare an audit report and management letter. The project will submit the annual audit report and management letter to the World Bank no later than six (6) months after the end of each fiscal year.

(ii) Financial Management and Disbursement Arrangements

41. Staffing. The MoA will be responsible for project implementation. The PMU, DAF and DESV will hire additional staff, as needed and within the available budget, e.g. a project coordinator, a financial officer, a procurement officer and an assistant, etc. The financial officer will be handling the FM aspects of the project. The World Bank will provide the necessary support to the Financial Officer regarding the World Bank FM procedures.

42. Budgeting. for the purpose of the project, the PMU will be preparing a separate annual budget and disbursement plan, based on proposals from DAF and DESV. The budget will be prepared on an annual basis and submitted to the World Bank in November/December of each year covering the subsequent year.

43. Project accounting system. MoA through the PMU will acquire an accounting software for the purpose of the project. The software will be utilized to record daily transactions and produce the Un-Audited IFRs for all categories. The project Financial Officer will be responsible for preparing the IFRs before their transmission to the Project Coordinator for approval. The general accounting principles for the project are as follows: (i) project accounting will cover all sources and uses of project funds, including payments made and expenses incurred; (ii) the International Public-Sector Accounting Standards (IPSAS) cash basis will be followed; and (iii) all transactions related to the project will be entered into the accounting system.

44. Internal control. For the purpose of this project, MoA through the PMU will prepare a POM, which will define the roles, functions and responsibilities for the implementing agency. The POM will contain a separate FM chapter detailing the FM and accounting procedures and will also include internal controls procedures. The POM will be finalized no later than within 1 month of the effectiveness date.

45. Flow of funds. Withdrawal Requests shall require three signatures: The General Secretary of MoA, the Director of the External Financing Department at the Ministry of Finance (MoF) and the Director of the Public Debt Department at the MoB. The funds will be channeled from the World Bank through the single segregated Designated Account (DA) in US$ opened at a commercial bank in Djibouti acceptable to the World Bank. A sub-account in the Djibouti Francs (FDJ) will be opened to make local payments. Advances from the IDA account will be disbursed to the designed account and used for project expenditures.

(iii) United Nations Agency

46. The project will utilize the services of the FAO to implement Component 1 and Sub-component 3.1. A Standard Agreement will be signed between the GoD and FAO for that purpose. The Standard Agreement will describe the roles and responsibilities of both parties and will include financial and reporting provisions.

47. Category 2 of the Project. The project will be financing unconditional CTs for US$0.9 million. The CTs will target the most poor and vulnerable households. MoA in coordination with the MSAS will distribute cash utilizing the local treasury of the MoB. An MOU will be established between MoA and MSAS to regulate the roles and responsibilities of both parties. The funds will be transferred from the DA of the MoA to MSAS who will then transfer the funds to the regional treasuries bank account (of the MoB) and then distributed to the beneficiaries. The technical auditor will ensure that the funds have reached their intended beneficiaries. The details of the activities and controls will be elaborated in the POM.

48. Audit of the project financial statements. An annual external audit of the project financial statements will cover the financial transactions of all categories, internal controls and FM systems. It will also include a comprehensive review of SOEs. An external auditor will be appointed according to ToRs acceptable to the World Bank. A technical audit will be carried out to verify that all goods purchased and works/services rendered under the project are conducted in line with the relevant ToRs and World Bank procedures. The ToRs for the external auditor will be expanded to include the technical audit. The technical audit will be required on a yearly basis and will be submitted six (6) months after the closure of the fiscal year.

(iv) Disbursements

49. The IDA funds will be disbursed according to the World Bank guidelines and should be used to finance project activities. The project will have the following disbursements methods: advance, reimbursement, direct payments and special commitments. Funds will be channeled from the World Bank to a single segregated DA to be opened at a commercial bank acceptable to the Association. The Ceiling of the DA will be US$0.50 million. SoEs will be used as supporting documents for withdrawal applications.

The disbursement methods and procedures and regulations will be set out in the project Disbursement and Financial Information Letter (DFIL).

Table 1.3 - Allocation of the Credit Proceeds

Category	Amount of the Credit Allocated expressed in US$ equivalent	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, operating costs, training, non-consulting services, and consulting services for the Project, except Part 1.B (ii) and 2.A (i)	3,900,000	100%
(2) CTs under Part 2.A (i)	900,000	100%
(3) Goods, training, non-consulting services, and consulting services for Part 1.B (ii) of the Project	1,200,000	100%
(4) Emergency expenditures under Part 5 of the project.	0	100%
TOTAL AMOUNT	6,000,000	

Exchange Rate on March 31, 2020: US$1 for SDR 0.73270809

50. Retroactive Financing will be permitted for an amount not exceeding SDR 730,000 for eligible expenditures incurred 12 months prior to the signature of the financing agreement but on or after February 1, 2020.

51. To activate the CERC, MoA must share with the World Bank a list of emergency activities and must prepare a procedures manual for the execution of this category. The manual must be approved by the World Bank. An amount will be reallocated to this category following the Government's request.

D. Procurement

52. Procurement for the Project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 and revised in November 2017 and August 2018. The Project will be subject to the World Bank's Guidelines on Preventing and Combatting Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006, revised in January 2011 and July 1, 2016. The Project will use the STEP to plan, record and track procurement transactions.

53. The procurement procedures for Situations in Urgent Need of Assistance or Capacity Constraints described under paragraph 12 of Section III of the World Bank Policy on IPF will be applicable to fast track the procurements which include: (a) use of Borrower's national procurement arrangements provided the arrangements are consistent with the World Bank's Core Procurement Principles; (b) Advance Procurement, using procedures consistent with Sections I, II & III of the Procurement Regulations for Borrowers; (c) Direct Selection, as appropriate; (d) increased thresholds for Requests For Quotations and national procurement; (e) streamlined competitive procedures with shorter bidding time; (f) use of framework agreements including pre-existing ones; (g) procurement from UN Agencies, i.e., contracting FAO for its involvement in implementation of part of Component 1 and Sub-component 3.1 using Standard Form of Contract; and (h) no standstill period. If requested by the Borrower, the World Bank may provide procurement HEIS to help expedite all stages of procurement, such as, helping to draft technical requirements and specifications, drafting procurement documents, providing advice on evaluation procedures and, participating as observers during contract negotiations to clarify any matters regarding World Bank Procurement Regulations. Retroactive financing may be applied to the contracts procured in advance for the purpose of achieving the project's objectives using national procurement procedures that are consistent with Sections I, II and III of the World Bank's Procurement Regulations and the Financing Agreement for this Project.

54. Main procurements under the project include: the procurement of chemicals and pesticides, ground and aerial spraying equipment, motor-vehicles and related mounted spraying equipment, small crop-spraying aircraft, GPS equipment, PPEs, equipment of a laboratory for pesticide residues and quality control, camping kits, software and hard ware, construction of warehouses for pesticides, office rehabilitation works, non-consulting services for distribution of pesticides, and needs assessment consulting services, and the implementation, tracking and monitoring. Community-level interventions of livelihood protection and restoration that include minor civil and public works, pasture restoration, livestock restocking, etc. Finalization of the streamlined Project Procurement Strategy for Development (PPSD) has been deferred to implementation. An initial Procurement Plan (PP) for the first three months of implementation was agreed with the Borrower during contract negotiations and will be updated during implementation.

55. Procurement implementation will be undertaken by the MoA leveraging on its unit implementing projects financed by different partners. This unit has successfully implemented the Rural Community and Water Mobilization Project (P117355, closed on December 31, 2019), although the project was not an emergency operation and used procurement and consultants' guidelines. The implementing agency will be encouraged to obtain delegation for increased thresholds for contracts requiring oversight by the central procurement body to accommodate the emergency nature of the project.

56. Community-level interventions. Apart from CTs which are not procurement related, these interventions will include livelihoods protection and restoration activities aimed at helping and protecting the poor and vulnerable in locust-affected areas from human capital and asset loss, enhance their access to food and restore livelihoods that have been destroyed by locust populations. Procurement will be carried out by MoA through simplified procurement procedures and distributed to affected households through the community-driven development (CDD) programs and structures established under the MoA.

57. Record keeping and asset management: The MoA will be responsible for maintaining (i) procurement documents for the entire procurement processing and contract execution, and (ii) detailed records of assets and inventory to ensure assets purchased are safeguarded.

58. The major risks identified at this stage of project implementation are: delay in procurement processing due to low threshold of oversight (US$0.028 million) by the national procurement body and contract award requiring many signatures while implementing emergency project, lack of competition or unsuccessful bidding due to COVID-19 movement restrictions imposed by many countries worldwide; proper monitoring of community level procurement due to limited movement of the implementing agency personnel in a context of risk of contamination by COVID-19, delay in preparation of technical specifications and market analysis for the procurement of crop-spraying aircraft as well as for operation and maintenance. To mitigate these risks, the following measures are envisioned: seek from the central procurement body the full delegation of procurement processing to the MoA or significantly increase oversight thresholds; contracting FAO based on their main expertise in services and equipment providing for locust upsurge response; MoA to put in place a remote supervision mechanism relying on community members or other public services; MoA to hire an expert or entity specialized in crop-spraying aircrafts for assistance on procurement as well as on operation and maintenance of that asset. If requested, the World Bank team may provide technical advice as part of its normal support to project implementation.

59. The residual risk after the implementation of the mitigation measures proposed above would remain "**Substantial**", given also the worldwide disruption and uncertainty caused by COVID-19 operating environment.

60. The World Bank's oversight of procurement will be done through increased implementation support, and increased procurement post review based on a 20 percent sample. The prior review thresholds will be significantly increased.

E. Environment and Social Risks

61. The environmental risk is considered Substantial given that the use and application of synthetic pesticides and biopesticides will cover large areas in five (5) regions of the country: Arta, Dikhil, Ali-Sabieh, Tadjourah and Obock, may be used in large amounts and potentially impact local populations of farmers and pastoralists dependent on natural resources for their livelihoods such as pasture and crop fields. It may also impact ecologically sensitive areas such as water bodies, wetlands, national parks, and reserves. There are also potential adverse effects on the health on control teams and on local communities where both ground and aerial spraying will take place.

62. Social risks are considered Moderate and include: (i) elite capture and the lack of transparency in selecting the beneficiaries of the financial and technical assistance; (ii) the exclusion of certain groups and individuals from project benefits, and in particular vulnerable groups; (iii) occupational health and safety of the labor force including their exposure to pesticide or to the SARS2 virus; (iv) the health and safety of neighboring communities, especially to pesticide exposure as well as COVID-19; (v) aspects associated with GBV and SEA mostly associated with the CT activities and to a more limited extent with other activities that involve non-local workers. The project will benefit from the experience of the Social Safety

Net Project (P166220) financed by the Bank and implemented by the MSAS, which recently provided CTs successfully to the most vulnerable in December 2019.

63. Based on the above, the combined environmental and social risk rating for this project is Substantial. The instruments needed to manage the environmental and social risk and impacts of the proposed locust control activities will include: (i) an ESCP and a SEP (prepared and disclosed on the implementing agencies' websites (MoA and MSAS) on April 19 and April 22, 2020, respectively, and on the World Bank's website on April 29); (ii) an ESMF; (iii) a LMP; (iv) a PMP. The ESMF will include a robust GRM composed of different channels according to the activities.

64. The project will build on the environmental and social instruments developed for the existing Towards Zero Stunting in Djibouti Project (P164164) with similar activities that were included under an emergency component (CERC) on locust prevention and control**.** An ESMF and PMP were prepared in March 2020 under the old safeguard policies. These instruments are currently being reviewed by the World Bank Operations Policy and Country Services (OPCS) and could be used for this stand-alone operation as well.

IV. RISKS

65. The overall project risk rating is High. Risks in three of the nine categories are rated High. These are political and governance risks, macroeconomic risks and fiduciary risks. Institutional capacity for implementation and sustainability risks and environmental and social risks are rated Substantial. Regarding the latter, there is a risk related to the expansion of the COVID-19, which could delay the ground control and support to the affected communities. There is also a reputational risk related to the crop-sprayer aircraft, e.g., crash because of human error, misuse of the craft or lack of resources for the O&M, among others. Risks related to sector strategies and policies, technical design and stakeholder risks are all rated Moderate. The project is a bold response to the Desert Locust upsurge, involving communities in fragile areas and marked by high poverty rates as well as limited public-sector capacity. While a considerable degree of risk is inherent in a project of this scale, scope, and ambition, important mitigation measures have been integrated into its design.

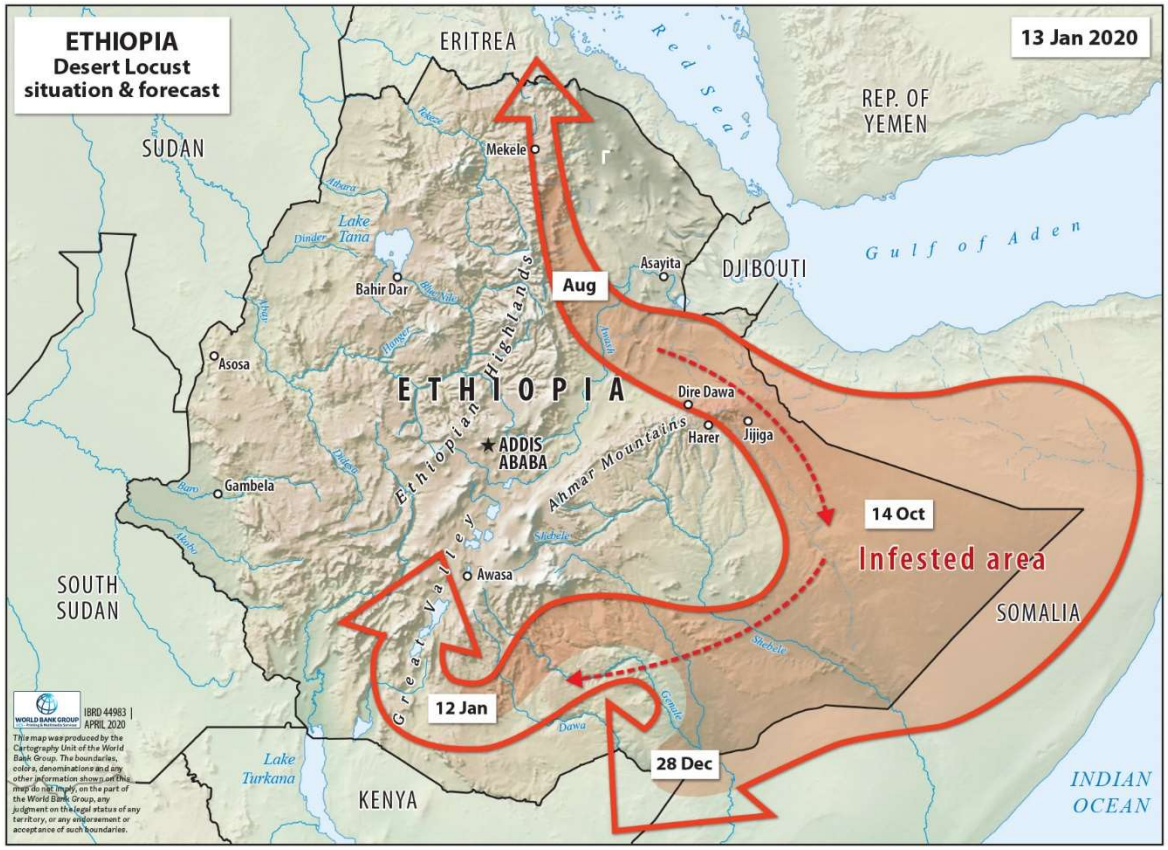
ANNEX 2: DESERT LOCUST RESPONSE PROJECT FOR THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

I. STRATEGIC CONTEXT

A. Country Context

1. **Ethiopia was among the first countries affected by the locust upsurge.** Between June 2019 to January 2020, despite country-level measures including ground and aerial control operations, the arrival of summer breeding swarms into Ethiopia led to rapid infestation. An area of about 87,048 hectares across 6 Regional States (Afar, Somali, Southern Tigrai, Eastern Amhara, South-Eastern Oromiya, and southern districts of SNNPR) and the Dire Dawa City Administration was affected (Figure 2.1). Swarms now threaten to expand into additional regions. In total, Desert Locusts have invaded 153 woredas (districts). According to the FAO, the situation remains alarming, as widespread breeding is in progress and new swarms are expected to form during the next cropping season. Due to Ethiopia's location and forecasts on wind direction, the country will also be impacted by back-flow swarms returning from Kenya as they head to Sudan, Djibouti and Eritrea.

Figure 2.1 – Extent of Desert Locust Infestation, January 2020



Source: Adapted from FAO 2020

2. The locust crisis threatens to overturn development gains over the last two decades. An estimated 6.7 million people are characterized as being chronically food insecure in Ethiopia to which the locust upsurge could add another 3.6 million many of whom are pastoralists with fragile livelihood systems. In addition, Ethiopia is host to a large refugee and internally displaced population. While various measures have been implemented to strengthen livelihoods of fragile/food insecure communities in Ethiopia, many of these communities reside in the areas affected by the Desert Locust infestations and the continuing locust crisis could reverse the achievements of programs such as Productive Safety Nets Program (PSNP I-IV)[34], the Ethiopia Food Security Project (FSP – P050383)), the Pastoral Community Development Projects (PCDP I-III)[35] and the Lowland Livelihoods Resilience Project (LLRP – P164336). Crop and fodder/grazing losses amplify food insecurity and fragility because the country is already experiencing conflicts over limited resources within the semi-arid lowlands.

3. The Government of Ethiopia (GoE) has mobilized urgent control campaigns to combat the locust upsurge despite limited capacity and resources. In collaboration with its Development Partners (DPs) and by mobilizing local communities, the GoE has made significant efforts to control the locust upsurge and minimize damages. Intensive surveillance, monitoring and ground and aerial control operations have been carried out in different parts of the country. Communities have been mobilized to disperse the locusts using traditional practices. In some locations, the swarms were brought under control without causing serious damage, but such efforts did not prevent new swarms from forming and moving to the summer breeding areas. Sustaining such efforts was also not possible due to constrained capacities, lack of necessary equipment and financial resources. As a result, the GoE and the regional trans-boundary locust control institution, the Desert Locust Control Organization for Easter Africa (DLCO-EA), have not been able to keep pace with the rapidly changing situations with increased rates of invading swarms. Current forecasts show that most lowland areas of Ethiopia will continue to experience extensive and heavy infestations of Desert Locust unless adequate surveillance and control measures are implemented.

A. Sectoral and Institutional Context

4. The Federal MoA and Regional Bureaus of Agriculture (RBoAs) through the Plant Protection Directorate and in collaboration with development partners, particularly the FAO, have initiated a response campaign to address the outbreak. Between June 2019 and February 2020, over 220,615 hectares of land have been surveyed, aerial spray operations were carried out on 106,153 hectares (84,491 ha, and ground operations were conducted over 21,638 ha. In total, 84,151 litres of pesticides were sprayed during these operations. In addition, local communities have made efforts to control the pest using traditional practices. Through well-coordinated ground and aerial control operations, in most cases the swarms were brought under control without causing serious damage however these efforts could not entirely prevent new swarms from forming.

5. Agricultural livelihoods and development efforts remain at risk. There is still high risk that the situation will escalate further in different parts of Ethiopia and neighboring countries. The swarms are expected to breed further and become a major threat during the months of February

[34] PSNP I (P087707); PSNP II (P098093); PSNP III (P113220); PSNP IV (P146883).
[35] PCDP I (P075917); PCDP II (P108932); PCDP IIII (P130276).

– June 2020; i.e., during the two major cropping seasons of the country. Weather forecasts show favorable conditions including rainfall, green vegetation and soil moisture for locusts to keep laying eggs in lowland sandy areas and for successive new generation swarms to emerge and migrate into agricultural areas. Furthermore, it is expected that swarms will migrate back from Kenya to southern Ethiopia. Various parts of the country are expected to be at high risk during the upcoming agricultural (*belg* and *meher*) seasons. These include: the Somali Regional State, eastern and south-eastern parts of the Oromiya Region, Dire Dawa City Administration, the Afar Regional State, eastern parts of the Amhara Region, the eastern and southern lowlands of the Tigrai Regional State, and the lowland of SNNPR.

B. Relevance to higher level objectives

6. The proposed emergency project aligns with the "Building Resilience and Inclusiveness" pillar of the World Bank CPF approved in 2017 for the period FY18–FY22 and it also strongly contributes to the "Promoting Structural and Economic Transformation through Increased Productivity" pillar. The project will directly address the WBG's twin goals of alleviating poverty and boosting shared prosperity, and it will contribute to several CPF results framework targets: enhanced resilience and inclusiveness, increase in agricultural yield, job creation, natural resource management, and climate co-benefits. The project is fully aligned with the MoA's Locust Control Strategy. While this project was not included in the CPF for Ethiopia, the emergency has increased the priority of locust control and response to protect vulnerable pastoral, agro-pastoral, and farming community in Ethiopia and remains aligned with the CPF's.

II. PROJECT DESCRIPTION

A. Project Development Objectives

7. The objectives of the project are to prevent and respond to the threat to livelihoods posed by the desert locust outbreak, and to strengthen the Recipient's national and regional systems for preparedness.

B. Project Results Indicators

8. Progress towards the achievement of the PDO would be measured by the following output, intermediate and outcome indicators. Indicators to track citizen engagement track include awareness raising communication campaigns conducted and grievances registered and resolved by the program.

Table 2.1 – Results Indicators for Ethiopia

	Baseline	End Target
PDO Indicators		
Land area (ha) sprayed for locust control (Hectare (Ha))	196,812	834,000
Land area (ha) of affected pasture/rangeland restored to productivity (Hectare (Ha))	0.0	118,115
Intermediate Indicators		
Component 1. Surveillance and Control Measures		
Locust surveillance plans (number) in place, and implemented	0.00	One national, seven

	Baseline	End Target
(Number)		regional plans
Pesticide inventory stored in accordance with appropriate international safety standards (Yes/No)	No	Yes
Locust monitoring system operational (Yes/No)	No	Yes
Component 2. Livelihoods Protection and Rehabilitation		
Affected farmers (number) receiving input packets (Number)	0.0	156,000
Affected livestock holding households (number) receiving emergency fodder (Number)	0.0	113,208
Component 3. Coordination and Early Warning Preparedness		
Awareness raising communications campaigns conducted (Yes/No)	No	Yes
Component 4: Project Management		
Program funds (US$) disbursed within six months after program effectiveness	0.00	50 percent

C. Project Components

9. **In Ethiopia, the Program objectives would be achieved by supporting investments across three pillars as per the regional approach to the Desert Locust upsurge response:** (a) monitoring and controlling locust population growth and curbing the spread of swarms while mitigating the risks associated with control measures; (b) protecting livelihoods of locust-affected households to prevent asset loss, and return them to productivity; and (c) preventing future locust upsurges by strengthening capacity for ex ante surveillance and control operations to facilitate early warning and early response. The proposed project for Ethiopia includes three components across afore mentioned pillars along with a country-specific component on project management. The total funding will be US$63.0 million equivalent evenly distributed between IDA grant and credit resources. The resources needed for the locust response is much greater than the current budget allocated for Ethiopia in the MPA. The GoE might request additional resources under IDA19 / Phase II of the MPA. The component description for Ethiopia project is as follows:

10. **Component 1: Surveillance and Control Measures (US$ 43.10 million equivalent).** The Ethiopia project will adopt a two pronged approach for locust monitoring and control under this component: (i) direct support to improving surveillance and assessment of locusts' situation, habitat conditions and geographic exposure as well as targeted aerial and ground spraying; and: (ii) capacity building for relevant national institutions and communities prone to climate change-induced locust breeding and infestation. Efforts will focus on determining the likely impacts of climate change on pest establishment, development, phenology, behavior, interactions with host and natural enemies, etc. in specific agricultural settings. In accordance with the MPA, there are three sub-components:

11. *Sub-component 1.1: Continuous Surveillance* to inform effective control operations and identification of affected and at-risk communities for assistance under Component 2. Under the sub-component, the project will finance procurement of equipment and operational costs to deploy expert teams and drones for the collection of data at strategic locations, reporting occurrences and possible occurrences of

outbreaks, and assessing geographic exposure to locusts. Activities will focus on the role of climate change and weather variability on the distribution, incidence and intensity of locusts to enable informed and climate-responsive locust management decision-making. Satellite images and the associated geospatial technologies can provide timely data to assess the risk of impending locust outbreaks. This information could be used for targeted preventative management actions in the locust breeding areas under changing climatic conditions. Habitat mapping will apply climate, soil and other variables to map susceptibility of land areas in space and time to locust outbreak or land areas that are already proliferated by locusts (locust impact map). Support to community-based monitoring and forecasting that integrates climate change consideration in both pastoralist and farming communities prone to locust breeding and invasion will also be provided including training of scouts and sensitization campaigns for community/village leaders.

12. *Sub-component 1.2: Control measures* to reduce locust populations and prevent their spread to new areas through targeted ground and aerial control operations. Activities will focus on effective climate-smart locust management practices and include procurement and/or rental of equipment (sprayers, vehicles, drones, aircrafts) and support to field operations (aerial and ground operations). The MoA, through other donor support, especially FAO, might procure the following insecticides: 1) Malathion 50 percent EC (100,000 liters) to control hopper bands from May-July 2020; 2) Chlorpyrifos 24 percent ULV (100,000 liters) for the coming summer and winter breeding seasons; and 3) Malathion 95 percent ULV (300,000 liters) to cover future forecast periods. The amount of pesticides to be procured through other parallel initiatives is planned based on the forecast, current infested area coverage and the stock inventory. FAO has been technically supporting the MoA with pesticides identification and application and with procurement for some pesticides. The Government may in the future, if more pesticides are required, use the World Bank financing to procure pesticides by following the relevant World Bank guidelines and updating the relevant safeguard documents. To avoid any stockpiling of chemicals that are intended for future use, actual on-the-ground assessments, before the procurement, will determine the actual volume of pesticides required. In addition, awareness raising and training for farmers, scouts, experts and officials at different levels (including training on pesticide management and control) will be provided. Community engagement is critical for the project. In this component, community engagement is achieved through community sensitization for locust control. Control measures are undertaken at three levels (backpack spraying; vehicle mounted spraying and aerial spraying) and community engagement and awareness is key to safe and successful control measures at all levels.

13. *Sub-component 1.3: Risk reduction and management* to monitor and assess environmental and human health risks associated with locust control and implement health, environmental and safety measures to reduce risks to an acceptable minimum. A detailed PMP will be developed and closely monitored as part of the Project Implementation Manual (PIM) to mitigate any environmental impacts of chemical and pesticide use. Activities would include: i) testing of human health and soil and water for contamination from use of insecticides; ii) optimizing the selection of control strategies, protection measures, and insecticides based on situational and environmental assessments; and iii) providing safety and awareness training for spraying teams and other locust control personnel as well as public awareness campaigns on possible environmental and health effects of insecticides, before, during and after locust control operations.

14. Component 2: Livelihoods Protection and Rehabilitation (US$18.0 million equivalent). It is estimated that 531,000 households will be directly affected by the locust crisis in Ethiopia, facing near-complete loss of crop production and some loss to livestock. The project will provide a seed/fertilizer package to selected farmers to ensure planting in the upcoming cropping season and, in pastoralist areas, fodder to pastoralists to guard against further livestock losses and thus loss of their main productive assets. Additionally, the project will provide fodder seed to affected communities to rehabilitate communal pastures in rangeland areas depleted by the Desert Locust invasion. The subcomponent will promote the adoption of climate-smart crop and livestock practices for reduced GHG emissions, enhanced resilience, and the implementation of livelihood support/diversification initiatives. Support will be provided for agroecosystem management approaches that enhance resilience of farm and landscape to changes in climate and pest. This would be achieved through delivering: (i) climate-smart farmer packets to get food and fodder production re-started as soon as possible after the impact of locust swarms; and (ii) pasture restoration or temporary forage/feed provision and climate-resilient grazing management in pastoralist areas impacted by the locust outbreak. Legumes and grasses adapted to the local environment will be promoted to increase biodiversity and landscape resilience. Leguminous species are also beneficial for climate mitigation, fixing atmospheric nitrogen and improving soil fertility.

15. The project will not reach all affected communities, but it is expected that similar parallel interventions by the FAO will allow a broader coverage. The GoE will also trigger emergency food security mechanisms such as the emergency food assistance and contingency funding under PSNP IV that will complement the project's livelihood support initiatives with extending CTs to cover emergency food needs and to protect against distress sales of assets. The project will focus on short term measures and longer-term rangeland rehabilitation and pasture improvement; complementary efforts are already under way through the World Bank-IFAD financed LLRP. There are two sub-components of the present work in Ethiopia, although both these sub-components fall into Sub-component 2.2: Restoring and Rehabilitating Agricultural and Pastoral Livelihoods of the MPA Program.

16. *Sub-component 2.1: Livelihoods Support.* This component would be achieved through delivering: (i) farmer packages to get food and fodder production re-started as soon as possible after the impact of locust populations has been assessed and the scope of the damage is determined; and (ii) provision of forage to the affected pastoral households. The project will use the existing PSNP beneficiaries targeting guidelines to meet the project objective and climate change vulnerabilities. Based on the locust loss assessment data, farmers/pastoralist will be identified and prioritized. Identification of area and damage level will be assessed both by MoA and FAO, with details by location (regions, zones, woreda), crop type, pasture, damage level both for crops and pasture that will be confirmed by regional officials. At the woreda level, one targeting committee will be responsible for targeting the households affected by Desert Locusts. The households will be selected through a community-based targeting process and a community food security taskforce for PSNP woreda and DRM-ATF. Other woredas will identify and prioritize the list of beneficiaries that have lost their expected yield and pasture area at community, kebele and woreda level. A detailed beneficiary targeting mechanism will be clearly indicated in the PIM and a separate targeting manual will be developed by adopting the PSNP targeting manual. A total of 269,000 households, who suffered damages from locust infestations, will be targeted under this sub-component.

Majority of these households will not be PSNP beneficiaries while some of them might be existing PSNP beneficiaries.

17. *Sub-component 2.2: Pasture rehabilitation* will cover an estimated area of 118,115 hectares. This will include: i) rehabilitating pastureland through the procurement and distribution of climate-resilient fodder seed (depending on the local grass/forage varieties) in different agro-ecological conditions; and ii) bailing support for pastoralist to improve forage availability from pastures. This intervention will be executed in close collaboration with the traditional pasture community structures (all managed by communities but varies as per the geography) and will be highlighted in the PIM.

18. The procurement of inputs, such as crop and fodder seed will be carried out by RBoAs (or Pastoral Community Development Offices) from existing seed sources, including Government Seed Enterprise, Community Seed Producing Groups, Agricultural Cooperative Unions and/or Private Seed Producing Enterprises. Bulk procurement method at regional levels will enable to ensure that the right type and amount of inputs are purchased for each agro-ecological zone. This procurement approach would also lead to savings for the project. Inputs provision to farmer packets would aim to diversify production and introduce improved varieties that provide for higher yields and are resistant to pest/disease and other threats. Pasture restoration would be done in most areas by establishing nurseries throughout the affected area to re-establish pasture flora. The GoE has been implementing projects such as Regional Pastoral Livelihood Resilience Project (RPLRP - P129408), which has successfully demonstrated community led pastoral restoration activities. The recently launched Lowlands Livelihood Resilience Project (LPRP - P164336) aims to take such community driven approaches to broader rangelands development and rehabilitation. Both crop and pasture restoration would need to support plantings that would promote the restoration of pollinator populations in the affected area.

19. Component 3: Coordination and Early Warning Preparedness (US$1.3 million equivalent). There are two sub-components under Component 3.

20. *Sub-component 3.1 Strengthening early warning systems:* Under this sub-component, the project would assist the Ethiopia MoA for strengthening an integrated system for locust detection, occurrence projection, early warning and systematic data analysis and comprehension. Early warning systems will be developed and implemented to support prevention and rapid response to new and existing climate change induced locust infestation, thereby limiting in-country and cross-border spread and intensification. Emphasis will be placed on building capacity to enable rapid and targeted short-term responses and long-term adaptation planning. This will help improve the geospatial targeting and precision of locust spraying interventions to be undertaken under component 1. Activities include:

- Acquisition of state-of-the-art data collection and dissemination tools and improving data collection methods.
- Building analytical capacity for understanding data.
- Assessment of current strengths and weaknesses in locust occurrence projection and early warning systems and development of a roadmap on how best to develop the systems based on international best practice.

- Capacity building for federal and regional experts using both national and international experts.
- Technical assistance through appointing senior plant protection experts to work with regional Desert Locust control units.

21. *Sub-component 3.2 Improving institutional coordination and community engagement* through improved communication systems. The project will build capacity to monitor the relationships between weather trends and Desert Locust territories and identify the conditions for an outbreak and early population increases. Activities include:

- Assessing gaps to determine communication priorities and developing actions
- Enhancing stakeholder coordination and engagement
- Building communication capacity
- Awareness creation and risk communication for farmers, scouts, experts and officials at different levels (including training on pesticide management and control)

22. Component 4: Project Management (US$0.6 million equivalent). Under this component, financing will be provided for project management activities including: (a) the hiring of a pest management expert; (b) operating costs for monitoring (particularly related to FM and safeguards) and technical backstopping at different levels; and (c) communication and information exchange. Regarding the latter, a concerted effort will be made to enhance communications about Desert Locusts and their negative impact on affected communities as well as to disseminate information generated by the early warning systems. Details of communication activities are provided in the PIM.

23. Coordination and Collaboration. In Ethiopia, the World Bank financing will be complemented by parallel intervention by FAO, through their own funding, as follows:

- FAO will procure relevant inputs/materials and hand this over to the MoA for the implementation of the locust control operations. World Bank financing under the proposed project will complement FAO support covering equipment and operational costs.
- On the livelihood support, FAO will implement the support package—similar to the proposed project, with non-governmental organizations (NGO) support, in selected woredas. The MoA will ensure coordination of activities to avoid geographic overlap in the livelihood support activities.

B. Project Beneficiaries

24. The project will be focused on the communities, largely residing in the Ethiopian lowlands and midlands, which have been affected, or could potentially be affected, by Desert Locust upsurge and have experienced negative associated impacts. However, the beneficiaries of the project investments will be both affected and non-affected communities. The direct and indirect impact of the locust could be quite significant for the local communities and economy at large. The households and communities that are not directly affected by the locust infestation will benefit from the locust control measures by reducing the overall damage and overall negative effect on the local and regional economy. The project will directly benefit 269,000 beneficiary households, primarily comprising of pastoral and agro-pastoral households.

The principal target beneficiaries of the project are the poor and vulnerable households, including pastoralist, agro-pastoralist, youth, widows/widowers, female-headed households.

C. Project Costing

Table 2.2 – Project Costing by Component

Component Name	Amount in US$ Millions
Component 1 Surveillance and Control Measures	43.1
Component 2 Livelihoods Protection and Rehabilitation	18.0
Component 3 Coordination and Early Warning Preparedness	1.3
Component 4 Project Management	0.6
Total	**63.0**

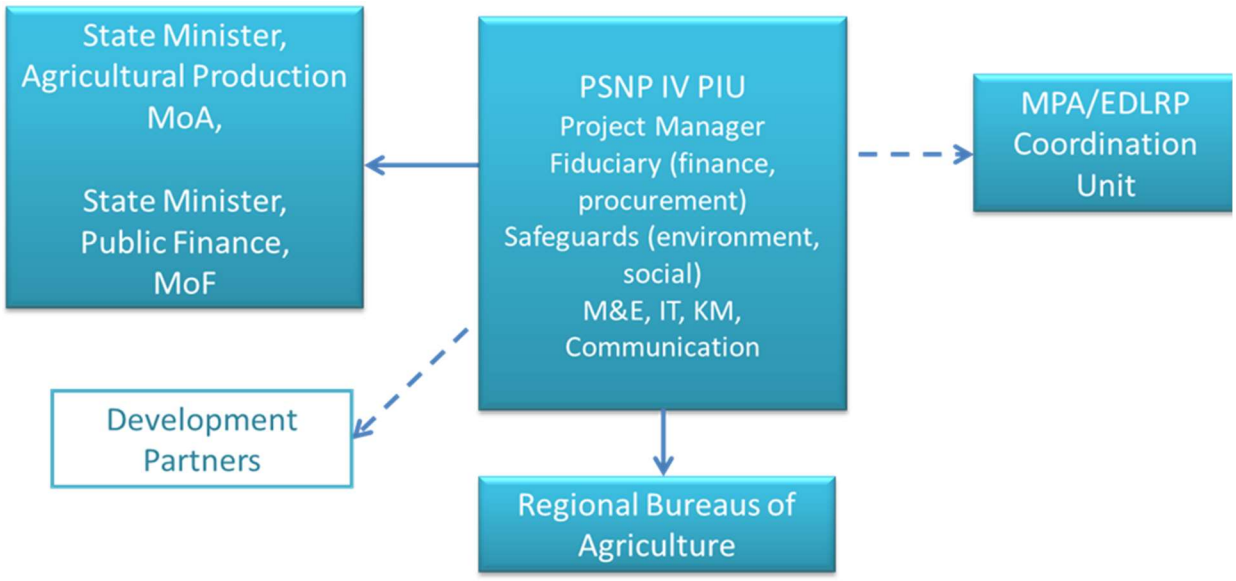
III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

25. In Ethiopia, MoA will be the implementing agency for the project and MoF will be responsible for FM. The State Minister for Agriculture Development, who oversees Plant and Animal Protection, will provide overall oversight for the project. He/she, together with RBoA heads and in consultation with the World Bank Task Team, will make all necessary decisions. The PIU for PSNP IV will be responsible for the coordination of project activities, which will be implemented by relevant directorates at the Ministry and Regional levels. A dedicated project manager has been appointed within the PSNP IV PIU for implementation of the Ethiopia project under the MPA-EDRLP. With a few exceptions (some training and delivery of livelihood support package) most funds and procurement will be managed by the PIU. The MoF will be responsible for the overall FM aspects of the project, which involves the opening of DAs, transferring resources to MoA and regional/woreda level implementers, producing of reports and financial audits of the project. Additionally, a steering committee co-chaired by MoA and MoF will have ultimate oversight responsibility of project implementation and FM. The steering committee will further define its working modality including reporting structure, meeting content and frequency. Additionally, a steering committee co-chaired by MoA and MoF will have ultimate oversight responsibility of project implementation and FM. The steering committee will further define its working modality including reporting structure, meeting content and frequency.

26. Although the project will be coordinated by PSNP PIU, on-the-ground implementation might involve working on Non-PSNP woredas and also working in Non-PSNP regions (Gambella and Benishangul-Gumuz), depending on locust infestations and damage. Under that context, the MoA will use the existing Government structures on the ground to deliver the project activities when PSNP structures are not present.

Figure 2.2 - Ethiopia PIU Working Relationships



27. Additional implementation and technical experts will be recruited as necessary to support the PIU. These may include: (i) a pest management expert; (ii) social and environment safeguards officers; (iii) a M&E officer; (iv) an information technology officer; (v) communications and knowledge management officer; and vi) FM expert at the MoF. In addition to the staff recruitment at the federal PIU level, additional staff may also be recruited at the regional/district level to support project implementation. The project manager will report to State Minister for Agriculture Development and, in addition to managing the PIU, will also be responsible to coordinate with DPs and other stakeholders in Ethiopia as well as to provide regular reports and information to the MPA level PCU. Figure 2.2 shows the structure of the Ethiopia project with direct and indirect linkages between MPA-PCU, Ethiopia PIU, RBoAs and DPs.

B. Monitoring and Evaluation

28. The results framework for Ethiopia project under ELRP is provided in Table 2.1. PSNP will be the delivery channel for this project. PSNP has an existing and robust M&E system which is designed to assess progress toward higher-level objectives while responding to the realities of collecting regular monitoring data through Government systems. The existing M&E system will be adapted, since this project also target non-PSNP beneficiary in non-PSNP Woredas, to suit the project needs. The key elements of the M&E system for this project would include: (a) regular program monitoring based on a combination of progress, which includes core administrative data and financial reporting; (b) periodic process assessments of key aspects of the program (such as six annual livelihoods reviews and review of the grievance and redress mechanisms); and (c) periodic survey and assessments to monitor the progress toward achieving its stated outcome.

C. Financial Management

29. The MoF, through its Channel One Program's Coordinating Directorate (COPCD), will be responsible for the overall FM of the project whereas MoA will be responsible for project implementation. The program will follow the government's Channel One fund flow mechanism whereby resources will directly flow from IDA to the MoF and from there to the regional finance bureaus, woreda finance offices, and federal level implementers (MoA). This FM arrangement assessment was made in line with the World Bank's Policy and Directives on IPF requirements. The proposed project will use the World Bank-financed Rural Productive Safety Net (RPSNP - P113270) project system for implementation, including technical, FM, procurement and safeguard management. This is one of the many projects under COPCD and implemented by MoA. Hence, the World Bank has existing knowledge of the Channel One FM arrangements and the experience from ongoing projects at the MoA will also benefit the proposed project. Regular biannual FM supervisions are being conducted for all World Bank-financed projects under COPCD and the MoA. The FM arrangement performance of these projects is rated Moderately Satisfactory (MS).

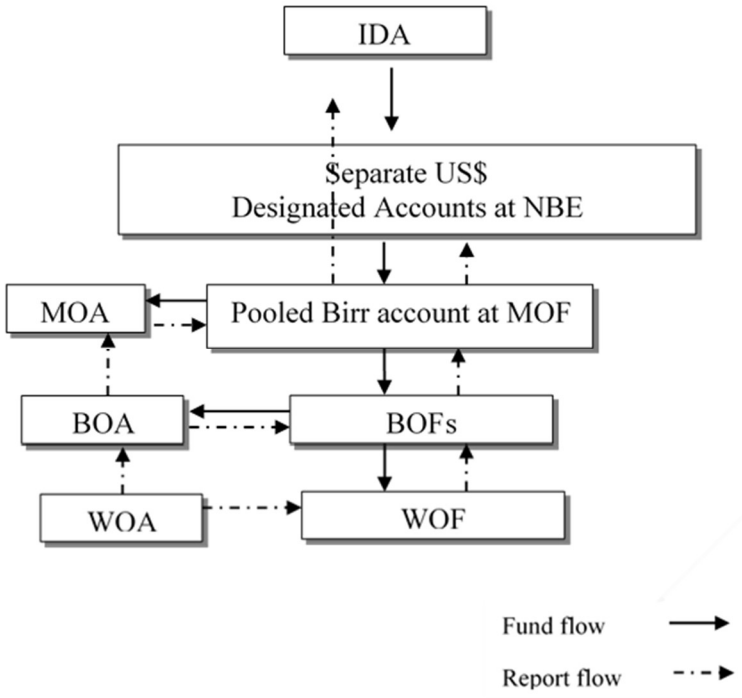
30. FM Risks Assessment. Taking into account the nature and context of the proposed project and based on the findings from recent FM supervisions as indicated above, key risks identified include: i) decentralized implementation involving multiple implementing entities that will be working with limited capacity due to the concurrent COVID 19 pandemic; ii) feed and seed distribution to beneficiaries across multiple regions and households; and iii) weaknesses in internal audit functions across all levels. Given the above risk factors, the nature of activities involved in this specific emergency operation, and the context in which they might be implemented, the FM risk is rated as ***High***, after taking into account mitigation measures. The FM Risk Assessment will be discussed in the FM section of the PIM. FM risk mitigation measures include: (i) closely supporting the COPCD and the PIU finance officers, regular follow-up and communication (via phone and email) with lower level implementers; (ii) preparation of guidelines laying out the procedures to be followed for the distribution of feed and seed (i.e., responsibilities at all levels, distribution templates, verification procedures, analyzing and addressing gaps that may occur in distribution chains due to the COVID-19 pandemic, etc.); and (iii) incorporating a special opinion clause in the external audit ToRs for verification of the distribution made to beneficiaries. The detailed risk mitigation measures will also be outlined in the PIM.

31. Subject to the successful completion of the actions recommended to address the risks identified, the proposed FM arrangements can be considered acceptable to the World Bank. An action plan is developed in this regard and will be included in the FM section of the PIM. The report was submitted to the World Bank prior to project negotiations. To facilitate for the timely release of resources and commence the implementation, the project will open the DAs and take any other necessary action to start implementation without delay. IFR formats and updated audit ToRs have been agreed to during negotiations. Furthermore, the World Bank will continue to provide its implementation support and supervision missions and update the risk and mitigating measures regularly. As the RPSNP is not currently implemented in Gambella and B/Gumuz regions, the MoF can recruit/appoint accountants at BoFs whenever required.

32. Budgeting, Reporting and Audit Arrangements: MoA will be responsible for preparing and consolidating the project's budget. The government's budget procedures will be followed, and the budget will be proclaimed under the MoA. The implementing entities will apply modified cash basis of accounting. Although the government's accounting manual will be used, project specific arrangements will be included in the FM section of the PIM. The standalone Government's accounting software will be used to record the transactions of the project. At COPCD, a finance officer will be assigned/recruited whereas the RPSNP accountants at MoA, regional finance Bureaus, and woreda finance offices will be handling this project. As the RPSNP is not currently implemented in Gambella and B/Gumuz regions, the MoF can recruit/appoint accountants at BoFs whenever required.

33. Most financial controls within the internal control system of the government function work well, although gaps are noted within internal audit functions. In recognition of the fact that internal audit coverage is limited given capacity gaps and staffing constraints, the internal audit units at all implementing entities should review the project given the risks associated with the emergency nature of the operation and the involvement of resource transfer to beneficiaries. Clear procedures will be laid out for distribution of feed and seed. This will be reviewed and cleared by the World Bank before being used. COPCD will prepare quarterly consolidated IFRs and submit to the World Bank within 60 days of the end of the reporting quarter. MoF will open a separate US$ DA and a local currency account with financial institutions acceptable to the World Bank. The other implementing entities will also open separate local currency accounts. All disbursement methods will be allowed and disbursements to the DA will be based on a cash forecast as per the instructions laid out in the DFIL. As this is an emergency project, the direct payment method will be used for procurement related payments. As the project may use UN agencies for procurement of certain contracts, advances to UN agencies will be allowed as one method of disbursement and the contract agreement to be signed with the agencies will lay out the interim reports to be obtained from the UN agency and auditing arrangements. External audit should be conducted by the Office of the Federal Auditor General (OFAG) or by an auditor nominated by OFAG which is acceptable to the World Bank. The Audit report should be submitted within six months of the end of the fiscal year. The audit ToRs will include a section which will require the external auditors to particularly review the seed and feed transfer to final beneficiaries and provide assurance that the distributions were made according to agreed up on procedures. For the section of the audit of the seed/feed distribution, the MoA will take the lead in facilitating the audit through RBOAs and will also be responsible to take timely action on any audit findings that relate to the distribution procedures.

Figure 2.3 - Funds Flow



D. Procurement

34. Procurable items under the proposed project include equipment such as motorized sprayers, vehicle-mounted sprayers with vehicles, PPE, field vehicles, and drones. The items also include rental of aircraft for aerial spray operations and consulting services for environmental and health impact assessment, project financial audit and limited project staff employment as appropriate.

35. Procurement will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers: Procurement in IPF, Goods, Works, Non-Consulting, and Consulting Services', dated July 1, 2016 revised November 2017 and August 2018; and 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', revised as of July 1, 2016; and the provisions stipulated in the Legal Agreement. The project will use STEP.

36. The proposed procurement approach prioritizes fast track emergency procurement for the required goods, consulting and non-consulting services. While procurement methods that include National Approach, Open International Approach, RFQ and Direct Contracting can be used, key measures to fast track procurement include the use of methods that will ensure expedited delivery. These include direct contracting of UN Agencies, direct contracting of firms as appropriate, Request for Quotations (RfQ) with no threshold limit for this method as appropriate. The National Approach can be used for up to US$2.0 million for goods.

37. Standard Procurement Documents issued by the World Bank to be used by the recipient for IPF-financed projects which include the General Procurement Notice, Specific Procurement Notice, Request for

Expression of Interest, Request for Proposals, and Request for Bids documents, will be used for goods, consulting, and non-consulting services to be procured through international open competitive bids and for consultancy contracts. In addition, the IAs will use Standard Bid Evaluation Forms for procurement of goods, and non-consulting contracts, and the Sample Form of Evaluation Report for Selection of Consultants.

38. Bid Securing Declaration may be used instead of the bid security. Advance payment may be increased to 40 percent while secured with the advance payment guarantee. The time for submission of bids/proposal can be shortened to 15 days in competitive national and international procedures, and to 3-5 days for RfQs depending on the value and complexity of the requested scope of bid.

39. Procurement implementation shall be carried out by the Federal MoA as most of the procurable items are strategic goods and services and to be executed at central level. The procurement of seeds and feed shall also be carried out at central level. However, if seeds and feed are available at sub-national level then procurement of such items shall be carried out by the Agricultural Bureaus of the Regions which are to be covered under this project.

40. A procurement capacity assessment of the MoA was carried out. Recent assessments made in the RBOAs in four Regions was also considered. The MoA has over 30 procurement staff whereas in the RBOAs 4-6 procurement staff are available. The assessment has generally indicated that procurement planning and processing at MoA can be considered adequate. Main risks identified include: (i) inadequate capacity in the regions; (ii) inadequacy and delays in some aspects of the planning and processing as well as documentation of procurement activities; and (iii) lack of experience and qualified staff in contract management. For the identified risks, the main recommendations are: (i) deploy qualified procurement staff at MoA and regional levels for the emergency operations; (ii) establish a Contract Management System and employ dedicated contract management staff; and (iii) strengthen the capacity of staff through targeted training.

41. Procurement Risk. The COVID19 disease and the disruption it has caused in the production and distribution of goods and services is a major procurement risk to be reckoned with under this emergency response program. High level global and regional demand for sprayers which is one of the major equipment under this project might affect supply of such equipment to the project. Engaging UN agencies well experienced in such operations and acquisition of critical equipment is a possible remedial measure. Given the risk assessment, the procurement risk is rated as ***High***.

42. Procurement Plan. The MoA has prepared the PPSD, which forms the basis for a PP for the first 18 months of the project and which also provides the basis for the procurement methods. The PPSD has been shared and agreed between the borrower and the project team and will be available at the MoA and posted to the project website.

43. Procurement Oversight. Bank oversight of procurement will be done through increased implementation support and procurement post review based on a twenty percent sample. Because this is an emergency project, prior review by the Bank will not apply.

E. Environment and Social

44. Environmental risks and impacts. The Ethiopia Locust Response Project as part of the MPA will utilize the World Bank's ESF, which provides a holistic tool for identifying and managing environmental and social risks and opportunities in the design and assessment of the project. The main potential environmental risks and impacts associated with these activities are related to the Desert Locust control activities that include: (i) procurement, transport, handling, storage of the pesticides, dosage during treatment and disposal of used pesticide containers; (ii) risk of polluting ecologically sensitive habitats such as wetlands, national parks and water bodies; (iii) risks that pasture, local water sources and agronomically sensitive areas may be contaminated; and (iv) Potential contamination and poisoning of the pesticides control teams.

45. Environmental Risk Classification. The environmental risk is considered High given that the use and application of synthetic pesticides and biopesticides will cover large areas, be used in large-scale, potentially impact local populations dependent on natural resources for their livelihoods such as pasture and crop fields, and potentially impact ecologically sensitive areas such as water bodies, wetlands, national parks, and reserves. There are also potential adverse effects on the health on control teams and on local communities where both ground and aerial spraying will take place. The locust control operation environmental and social risks and impacts will be managed during implementation by IPMPs and the ESMF. As required, ESMPs will be prepared for specific sub-projects. Preparation of the instruments will be dependent on each IPF proposed activities and the risk assessment.

46. Risks and Impacts Management Measures. The following measures will be taken into consideration to minimize these potential negative risks and impacts on communities, ecologically and agronomically sensitive areas and for pesticide control teams: (i) A PMP will be prepared and implemented for each IPF project in the MPA series; (ii) the respective IAs will adopt and comply with FAO technical guidelines on safety and environmental precautions for the use of pesticides and use of WBG EHS Guidelines; (iii) strict compliance regarding use of the current FAO list of recommended pesticides products with minimal environmental impacts on the control teams, communities and environment; (iv) carry out inventory of ecologically and agronomically sensitive areas; (v) provide appropriate and adequate PPE and training for the field control teams; (vi) conduct regular analysis and monitoring of levels of cholinesterase for the field control teams involved in pesticide applications including health check for control teams; (vii) carry out awareness-raising and provide relevant information to local communities on pesticide treatment schedules and potential impacts; (viii) prepare and operationalize emergency strategy and procedures; and (ix) carry out regular environmental monitoring of field pesticide treatment activities.

47. Social risk. These risks relate to: (i) human health risks, agricultural crop damage; (ii) unintentional overuse/misuse (beyond buffer zone damages) of pesticides during spraying on livestock, crop, fodder and humans; (iii) inadequate prior information for communities in target areas about the project, potential benefits and impacts of pesticide use for locust infestation management; (iv) lack of framework /methods for assessing and mitigating[36] out of control damages (beyond buffer zone damages) on livestock, crops, fodder or humans; (v) potential exacerbation of vulnerable livelihoods of IDPs in project areas, (v) inadequate mis/communication about the targeting for livelihoods support; (vi) pesticide

[36] [36] To mitigate this risk: a) MoA will develop a framework and mechanism for assessing damage from unintended spraying and support for mitigating the impact; and b) MoA will assign resources to cover support for such damages in their next Year Budget for approval by the MoF.

residual impact on humans, crops, livestock (including from grazing area), human and livestock water points (wells).

48. **Social risk management actions are assessed based on the scope of the proposed project components and commensurate with potential risks and impacts.** The social risk management approach will divulge on: (i) strategic stakeholder and community engagement and functioning grievance redress accessible for all affected communities; (ii) social development plan informed by the enhanced social assessment for people meeting the requirements of ESS-7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) especially in Afar, Somali, Gambella, Benishangul-Gumuz and pastoral and agro pastoral areas of SNNPR and Oromia; (iii) IDP and refugee areas social tensions and conflict, (iv) gender dimensions including GBV; (v) defining compensation mechanism for unintended overuse/misuse (beyond buffer zone damages) of pesticides, and (vi) unintended labor aspects including worker safety**.**

49. **Stakeholder and Community Engagement will be tailored to the various project components, cultural, livelihood and linguistic context.** The project will adopt a pre, during and post insecticide sprayer consultation and engagement. These platforms will be used to create awareness about the potential environmental and social risks and impacts through meaningful consultations including the avenue for feedback and complains mechanism resolution process. For component one activities, pre spraying information, including the delimitation of the spraying area, restriction of entry, reentry period, possible precautionary measures. These outreach mechanisms and related operational steps are defined as part of the SEP based on the local context, language, preferred media, cultural values. However, after defining the culturally and linguistically appropriate media, the message could cover techniques (aircraft, vehicle mounted, handheld) and timing of spraying (morning, late afternoon), the type of insecticide, its potential impacts on human health, agricultural crops and livestock, and risk mitigation measures. The guideline will define: (a) the disaggregate audiences at different levels; (b) preferred media; (c) instruction language; (d) receive feedback from the communities; (e) mechanisms to reach historically underserved people and vulnerable groups; and (f) approaches for IDP and refugee outreach. The SEP was prepared and disclosed in country on April 16, 2020, and on the World Bank external website on 21 April 2020. Further, the messaging, cultural and linguistic diversities will be extracted from the project social assessment. The SEP will be updated to also take into consideration potential impacts by COVID19 and respective mitigation measures.

50. **Indigenous peoples/Sub-Saharan African historically underserved traditional local communities:** the people in Afar, Somali, Gambella, Benishnagul Gumuz, pastoral and agropastoral parts of Oromia and SNNPR meet the requirements of ESS-7. The locust upsurge will have disproportionate impacts on agricultural crops, pasture and subsequently on livestock. The design of the project has included mitigation measures through control of locust, and provision of seed and feed for affected communities. Since the resource allocated for component two is limited vis-à-vis the scope of impact, the targeting criteria and complementary resources will ensure broad coverage and equitable response. The enhanced social assessment will identify the potential risks and impacts on these people and groups and the social development plan will be prepared to address issues that are not covered by the project component.

51. Conflict tensions, IDP and refugee settlements. Project implementors need to be aware of the potential to ignite conflict due to dwindling resources for livestock and humans resulting from the locust upsurge. Further, the project will be operating in areas where there are internally displaced and refugee hosting areas. Thus, the project implementation will need to be cognizant to these dynamics and ensure no further escalation of such tensions. Communities have both the positive and negative experience of locust infestation response in early and late 2019. The new migration route identified by the MoA surveillance team covers conflict affected areas, with active IDP camps. The Project should consider the livelihoods and political vulnerability in this areas and craft communication messages in accordance with the local context. The SEP as complemented by the FAO Desert Locust Guidelines, Section 6. Safety and environmental Precautions issued 2003 will be used in designing the message and identification of potential impacts and risks. The MoA and the PIU should alert the World Bank any incidents related to security, conflict and potential sensitivities towards conflict in the project areas.

52. The locust upsurge may exacerbate the existing GBV/SEA situation. The low status of women, preexisting high prevalence of GBV, acceptability of GBV (e.g. early/forced marriage, intimate partner violence) and high levels of poverty, are likely to heighten the community's vulnerability to SEA/GBV. Although the number of external workers who will be deployed to the local level is small, the overall workforce deployed to the locust response is significant. The plant protection workers at different levels are government civil servants, scouts are and will be recruited locally based on the local context women and girls may face SEA.

53. Labor Field officers who are directly involved in spraying operations tend to be the most exposed to insecticides, and thus also run the highest risk of being poisoned. Other field staff including scouts, flag men/women can also be exposed insecticides and poisoning. Necessary PPE will be provided to all field officers directly involved in spraying. All control staff, and other persons who may encounter insecticides, should undergo a medical examination to monitor their AChE blood levels before, during, and after the campaign. In addition to OHS aspects, staff will also sign a code of conduct in relevant languages and receive training on the same. The project has prepared a LMP, which will be implemented which defined the potential Project workers and the potential issues.

54. Environmental and Social Risk Management Capacity Assessments. The MoA has experience in implementing different projects supported by the World Bank financing which used the Environmental and Social Operational Policies, Agricultural Growth Project (P148591), Resilient Land and Livelihoods Management (P163383, P172462), Rural Productive Safety Nets Project (P163438), Livestock and Fisheries Sector Development Project (P159382), Development Response to Displacement Impacts Project (P152822), and others. The capacity of the MoA as a principal implementing entity including the RPSNP to manage potential environmental and social risks should be enhanced as necessary at different levels of the project implementation since this is a new intervention. The capacity of the environmental, social and health staff should be strengthened with training focusing on adaptive environmental and social risk management.

55. Environment and Social Risk Management Approach. The GoE adopted the EHS risk management processes and guidelines developed by FAO and DLCO-EA for managing the environmental and social risks. The social dimension of these guidelines is inadequate. The MoA will prepare or update the existing

stakeholder community outreach and communication guideline. The project will rely on an ESMF, IPMPs, Social Assessment and a Stakeholder and Community Outreach Guideline. An ESCP, a SEP and LMP have been prepared and disclosed in country on 16 April 2020, and on the World Bank external website 21 April 2020.

56. The Ethiopia Locust Response Project will use the PSNP IV ESMF. The ESMF will be updated to include an IPMP and ESMP as required in the annex. Since, the project works in IDP and refugee areas, a conflict sensitivity assessment checklist will be included in the ESMF, not to exacerbate conflict in these areas. The RPSNP social assessment will be updated through an enhanced consultation to capture the features of the proposed project area people value, social and cultural characteristics. The Social Assessment (SA) will pay attention to IDP and refugee areas to understand the dynamics and its implication for the locust response project. The SA will have a social development plan to address the challenges faced by historically underserved peoples and disadvantaged groups and include appropriate enhancement and mitigation measures to address their needs.

57. Institutional Arrangements. The MoA Plant Protection Directorate will use the PSNP IV PIU for environmental and social risk management. In areas where the PSNP IV is operating, the project will use the staff and working procedure of PSNP. Where PSNP is not operating the MoA Plant Protection Directorate will assign or recruit staff to implement the project environmental/social risk management requirements and agreed instruments within one month after project effectiveness. In addition, technical directorates at the Ethiopia MoA, the regional agriculture bureaus, and regional pastoral development bureaus will be involved in the project activities. The MoA will closely coordinate with other development partners such as the FAO, DLCO-EA, WFP, who might be implementing their own parallel activities and supporting the MoA for locust response in Ethiopia. While the MoA will ensure coordination and use of the agreed environmental and social tools including the FAO Desert Locust Control guidelines, the MoA will define: (i) the area and activity to avoid overlaps for component two and three; and (ii) coordination mechanism with these development partners. The PIU may also recruit specialized technical staff as needed, and some activities may be outsourced to third parties (aircraft rental for spraying) through contract agreements acceptable to the World Bank.

58. Grievance Redress Mechanism. The objective of a GRM is to establish a system for project stakeholders, including communities, to address grievances (including to request information and provide feedback on project implementation) in an amicable way. A GRM is oriented toward providing solutions and incorporates the principles of transparency, accessibility, due diligence, and responsiveness. The locust response project will use the RPSNP project grievance mechanism and in areas where RPSNP is not available, the project will use the public grievance hearing mechanism. The project will recognize customary and/or traditional conflict resolution mechanisms. The project will provide resources to ensure the functioning of the GRM system. Grievance information will be recorded and reported in the regular implementation progress reports. The project will equally ensure that grievances related to GBV are recognized and referred to respective service providers based on a survivor-centered approach (that is, always based on the demands of survivors and ensuring confidentiality, as outlined previously). Such grievances shall not be handled according to standard GRM procedures but by the Woreda Women and Children Affairs Office or female GBV focal points to be selected and trained to provide basic referrals. GRM procedures will be outlined in the ESMF, SA and Stakeholder and Community Engagement Guideline

will form part of the training provided to grievance committees. The community consultations and trainings for workers will include information regarding the grievance mechanism

59. **World Bank Grievance Redress Service.** Communities and individuals who believe that they are adversely affected by a World Bank–supported project may submit complaints to project-level GRMs or the World Bank Grievance Redress Service. The Grievance Redress Service ensures that complaints received are promptly reviewed to address project-related concerns. Project-affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank corporate Grievance Redress Service, visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, visit *www.inspectionpanel.org*.

IV. RISKS

60. **The overall project risk rating is High.** Risks in four of the nine categories are rated High. These include political and governance risks, macroeconomic risks, fiduciary risks, and environment and social risks. Institutional capacity for implementation and sustainability risk is rated substantial. Risks related to sector strategies and policies, technical design and stakeholder risks are all rated **Moderate**. The project is a bold, response to the Desert Locust upsurge, involving communities in fragile areas prone to conflicts and marked by high poverty rates as well as limited public-sector capacity. While a considerable degree of risk is inherent in a project of this scale, scope, and ambition, important mitigation measures have been integrated into its design.

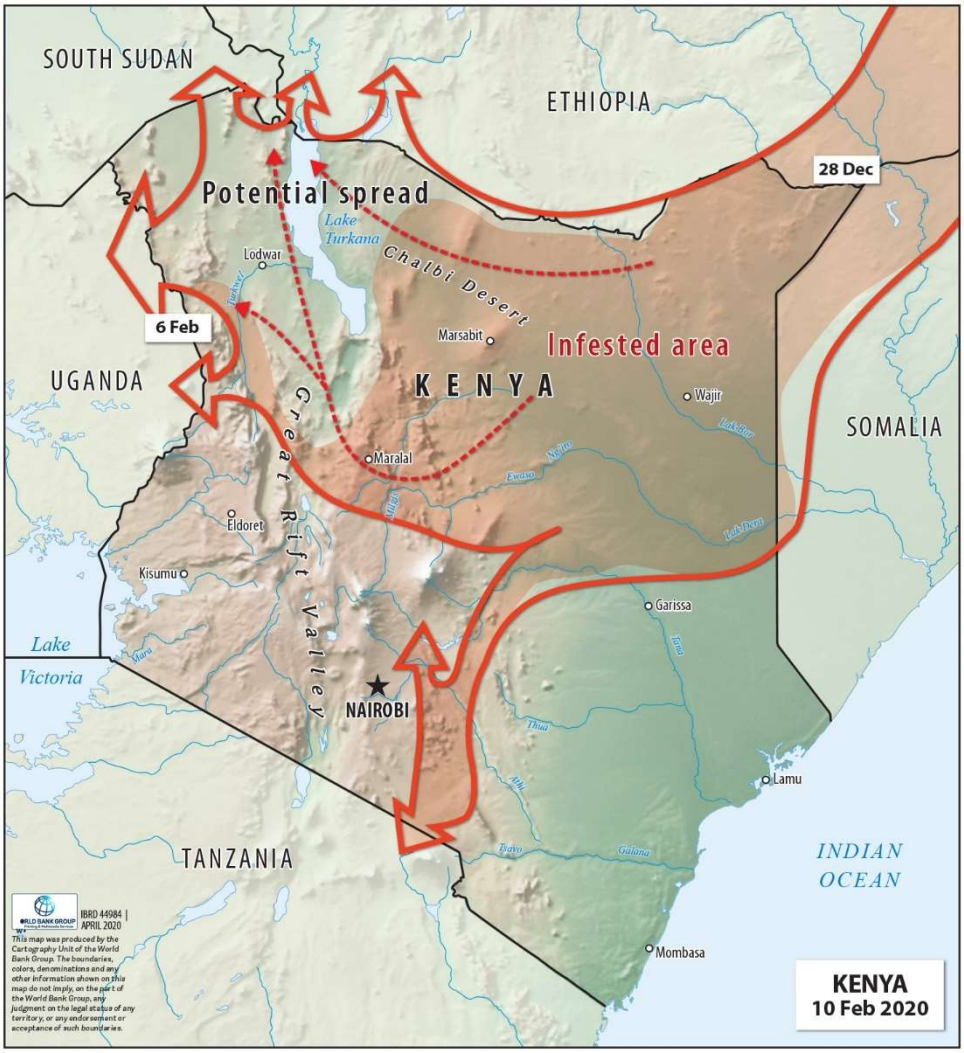
ANNEX 3: DESERT LOCUST RESPONSE PROJECT FOR THE REPUBLIC OF KENYA

I. STRATEGIC CONTEXT

A. Country and Sectoral Context

1. Kenya's Desert Locust upsurge—the worst in 70 years—has mainly affected the northern region of the country and already poses a severe food security threat to about 3 million people. Swarms started crossing the border into Kenya from Ethiopia and Somalia on 28 December 2019 and have since spread to twenty-eight counties. The infestation poses a risk to food security, undermining economic growth. The next generation started forming swarms in April 2020, which coincides with the start of the next seasonal rains and the main planting season for East Africa.

Figure 3.1 – Extent of Desert Locust Upsurge in Kenya, February 2020



Source: FAO 2020.

2. Demographic characteristics, low levels of human capital, and limited access to basic services constraint poor households. Kenya has a Human Capital Index of 0.52[37] and is ranked 94th globally. The share of population living below the national poverty line fell from 46.8 percent in FY05/06 to 36.1 percent in FY15/16. Despite the poverty decline, many Kenyans are at a risk of falling into poverty in the short term. Over a third of Kenyans are classified as vulnerable; most of these households rely on agriculture and have low levels of education attainment. The heads of poor households are on average older and more likely to have no education, compared to the heads of wealthier households. Poor households also tend to be larger and have higher dependency ratios than wealthier households, and these demographic factors are known to hinder poverty reduction. Compared to wealthier households, poor households are less likely to have access to safe drinking water (65.6 vs 80.4 percent) and improved sanitation (47.8 vs. 72.2 percent) as well as other basic services.

3. The food security of nearly 3 million vulnerable households is at risk. The greatest impacts will be felt by households that depend on livestock and cropping activities and who are already facing acute food insecurity due to their existing high vulnerability and the effects of expected fodder and crop losses. For these households, locust impacts could lead to a deterioration in food security towards the end of 2020 with a peak during the first half of 2021 (during the height of the lean season) and possible rise in food prices. However, if the locusts cause below-average 2020 national harvests and major pasture losses in arid and semi-arid regions, the food security situation could be much worse: below-average food stocks and pasture conditions, atypical livestock movements, reduced incomes, and rising food prices would likely drive widespread food insecurity across the counties, with the most significant deteriorations starting from mid-2020.

B. Institutional Context

4. In response to the locust upsurge, the GoK in collaboration with county governments and other development partners has been undertaking control operations. The Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MoALFC) has been working closely with the FAO to take up aerial and ground locust control in the affected regions. The actual activities carried out include: (i) establish 6 control bases in Wajir, Isiolo, Turkana, Marsabit, Masinga, and Garissa to coordinate control interventions in the affected areas; and (ii) deploy spraying and surveillance aircrafts to the affected areas and ground control equipment like vehicle-mounted sprayers, motorized and manual knapsack sprayers, hand-held sprayers. They have also been trying to build the capacity of the county support staff and have deployed more than 500 National Youth Service (NYS) personnel for ground spraying. The primary strategy has been to target breeding sites and control hopper bands (i.e. while locusts are still at the nymph stage before they can fly). Identification of the breeding sites continues. At the request of the GoK, the World Bank triggered an emergency response component (US$13.8 million) under the ongoing Kenya Climate Smart Agriculture Project (KCSAP - P154784) to provide resources for early control operations.

5. There is clear and continued need for capacity and resource support to the Government on controlling the locusts and restore livelihoods. Given the above context, it is clear that the GoK would

[37] A child born in Kenya today will be 52 percent as productive when she grows up as she could be if she enjoyed complete education and full health.

need enhanced support towards the locust control activities. Concurrently, there is a need to support the Government to restore and enhance the livelihoods of the affected households. The Government has also expressed its keenness to access support towards enhancing their capacity to prepare better and respond early and effectively to future locust outbreaks and upsurges.

C. Relevance to Higher Level Objectives

6. The GoK's Third Medium Term Plan (MTPIII) outlines the main priorities, legal and institutional reforms to be implemented between 2018 and 2022. The MTP-III prioritizes implementation of the "Big Four" agenda—(1) raise the share of manufacturing sector to 15 per cent of GDP; (2) ensure that all citizens enjoy food security and improved nutrition by 2022; (3) achieve universal health coverage; and (4) deliver at least 500,000 affordable housing units . Managing the current locust crisis that Kenya faces will be a key part of achieving the vision of 100 percent Food and Nutrition security as outlined in the Big Four agenda.

II. Project Description

A. Project Development Objective

7. The **PDO** is to prevent and respond to the threat to livelihoods posed by the Desert Locust outbreak and to strengthen Kenya's system for preparedness. Citizen engagement will be monitored by tracking awareness raising communication campaigns conducted and grievances registered and resolved by the program.

B. Project Results Indicators

Table 3.1 – Results Indicators for Kenya

Indicator	Baseline	Project-end Target
PDO-level indicators		
Land area (ha) sprayed for locust control (Hectare(Ha))	75,000	110,000
Land area (ha) of affected pasture/rangeland restored to productivity (Hectare(Ha))	0	70,000
Land area (ha) of affected agricultural land restored to productivity (Hectare(Ha))	0	20,000
Component 1: Surveillance and Control Measures		
Locust monitoring system operational (Yes/No) (Yes/No)	No	Yes
Control teams (Number) trained in safe use of pesticides (Number)	0	50

Indicator	Baseline	Project-end Target
Component 2: Livelihoods Protection and Rehabilitation		
Affected farmers (number) receiving input packets (Number)	0	20,000
Affected livestock holding households (number) receiving emergency fodder and fodder seeds (Number)	0	70,000
Affected livestock holding households (number) receiving replacement livestock (Number)	0	10,000
Component 3: Coordination and Early Warning Preparedness		
Awareness raising communications campaigns conducted (Yes/No)	No	Yes
Locust Control Unit fully established at the National Level	No	Yes
Number of Counties that have established Desert Locust Control Units at the County Level	0	12

C. Project Components

8. The following summarizes the type of interventions that could be financed under the proposed program.

9. Component 1: Surveillance and Control Measures (US$7.0 million equivalent). The objective of activities under this component is to limit the growth of existing climate-change-induced Desert Locust populations and curb their spread, while mitigating the risks associated with control measures and their impacts on human health and the environment. Activities to be supported would be continuous surveillance and monitoring, spraying of hopper bands and adult swarms, and delivery of training and capacity building to field teams to ensure that operations are carried out in a safe and effective manner. Specifically, field teams will receive training on prevention of gender-based violence, sexual harassment and sexual exploitation & abuse including multisectoral response and link to services. Appropriate reporting protocols will also be put in place and awareness-raising on the same. The following activities will be further scaled up through this operation.

10. Sub-component 1.1: Continuous Surveillance. This sub-component will finance the surveillance activities including both aerial and ground surveillance. The surveillance activities will be anchored at the national level and will be undertaken through already established ground control stations that cumulatively cover all the impacted counties.[38] Continuous surveillance will be designed to enable

[38] Provision has been made for 2 additional ground control stations which the government is considering with a view to ensuring effective coverage of all affected areas.

informed and climate-responsive locust management decision-making. Satellite images and the associated geospatial technologies can provide timely data to assess the risk of impending locust outbreaks. This information could be used for targeted preventative management actions in the locust breeding areas under changing climatic conditions. Habitat mapping will apply climate, soil and other variables to map susceptibility of land areas in space and time to locust outbreak or land areas that are already affected by locusts. The surveillance activities will cover the following broad areas: (i) monitoring the presence of and movements of adult swarms, breeding and egg-laying areas and the movement of developing nymphs and hopper bands, all to support improved forecasting of breeding and migration and decision making on areas to be treated and appropriate and optimal control methods to break the cycle of the next generation; (ii) evaluating the effectiveness of locust control operations; (iii) aerial and ground assessments of damage caused by the locust upsurge to crop and pasturelands to guide targeting of livelihood protection and restoration activities to be supported under Component 2; and (iv) continuous monitoring and assessment of environmental and human health risks associated with locust control. Innovative approaches to surveillance such as the use of satellite maps, drones, eLocust3, GPS enabled cameras and meta-data analysis and climate information for locust risk mapping will be used, building on work already going on related to big data and disruptive agricultural technologies under the KCSAP.

11. Sub-component 1.2: Control measures will reduce locust populations and prevent their spread to new areas. This would be achieved via a range of targeted ground and aerial control operations and would emphasize, whenever possible, neutralizing hopper bands before they develop into adult swarms, which leads to another cycle of infestation and expansion and requires more costly and logistically challenging aerial spraying. The use of biopesticides will reduce GHG emissions compared to conventional pesticides. Depending on the size of hopper bands and of the related infested areas, their control can be handled either by ground control teams or aircraft spraying either with insect growth regulators, bio-pesticides or conventional chemical pesticides. The control activities will be anchored at six ground control stations. They would be on the ground monitoring the control operations and provide regular updates to the national unit. These ground stations given their proximity will also be coordinating with the county governments and clearly communicating to them the ongoing operations. The primary strategy to be employed in the control of the Desert Locust will be to target the breeding sites and control the hoppers, i.e. while locusts are still at the nymph stage before they can fly. The adult locust swarms shall be controlled mainly through aerial sprays. A thorough PMP has already been developed under the management of the World Bank's environmental specialists. This sub-component would finance the spraying equipment, protective gear, approved pesticides, and safety and awareness training for spraying teams and other locust control personnel. Public awareness campaigns will keep the public informed about possible environmental and health effects of insecticides, before, during and after locust control operations. The project will also implement health, environmental and safety measures to reduce risks to an acceptable minimum.

12. Component 2: Livelihoods Protection and Rehabilitation (US$20.0 million equivalent). Beyond the immediate control measures deployed to curtail the proliferation and spread of the locusts, the next priority and the objective of Component 2 would be to help protect the poor and vulnerable in locust-affected areas from human capital and asset loss, enhance their access to food, and restore livelihoods that have been damaged or destroyed by swarms. The objective of this component is to support affected

farmers and livestock holding households restore their productive assets for enhanced adaptation and resilience. The component will promote the adoption of climate-smart crop and livestock practices for reduced GHG emissions, enhanced resilience, and the implementation of livelihood support/diversification initiatives. Livelihood diversification will emphasize alternative livelihood activities that are less dependent on changes in weather and climate variability. Support will also be provided for agroecosystem management approaches that enhance resilience of farm and landscape to changes in climate and pest. Estimates from the FAO and Ministry show that by April 4, 2020 the Desert Locust invasion in Kenya had devastated slightly over 175,000[39] hectares of crop and pastureland across 12 counties[40] and specific wards within these counties most affected by the upsurge, and significantly disrupting the livelihoods of 164,000 households with nearly a million people. The majority (80 percent) of those affected are pastoralists depended on pastures and browsing vegetation largely in communal lands and the remaining 20 percent are agro-pastoralists who depend on annual and perennial crops as well as grazing and browsing livestock mainly on individual household land. While the direct impact of the locusts was destruction of crops and pastures, there are also significant impacts resulting from overgrazing of the little remaining pastures, which has led to significant land degradation after the onset of the unusually high rainfall across the region in the Feb – March period. There have also been reported livestock deaths resulting from the poor pasture conditions in the affected areas. Livelihoods restoration will therefore require support to households to rebuild their crop and livestock assets at the individual level but also restoration of communally owned assets, including degraded pasturelands and water sources which may have been lost due to the degradation.

13. This would be achieved by undertaking the following interventions: (i) Providing grants for input support through the existing mechanism of micro projects (as implemented under the ongoing KCSAP and NARIGP projects) to get crop and livestock production restored as soon as possible after the impact. The input support would typically include: (i) provision of climate-smart crop seeds/seedlings, fodder seeds/seedlings; (ii) provision of crop nutrition and protection inputs, animal health inputs, and in some cases, climate-smart animal breeds for restocking; (iii) providing grants for strengthening of farmer producer organizations (as implemented under the ongoing KCSAP and NARIGP projects) to facilitate access to inputs, services and output markets for sustainable restoration of their livelihoods; and (iv) community and multi-community investments through the existing mechanism of sub projects (as implemented under the ongoing KCSAP and National Agriculture and Rural Inclusive Growth Project (NARIGP – P153349) projects for restoration of degraded pasturelands and water sources. The targeting process and the implementation modalities for support through micro projects, sub projects and farmer producer organizations are detailed further below.

14. Nearly 70,000 livestock holding households and 20,000 farmers will be targeted under this component. Households to be targeted will be identified through a comprehensive participatory identification process[41] to be undertaken at the county level. The target households are farmers and livestock rearers that have been impacted by the locust upsurge. The participatory identification process

[39] Based on preliminary assessment undertaken by the MoALF.
[40] Out of the 47 counties in Kenya, 27 have been affected by the locust invasion. It is however in only 12 counties and specific wards within these counties where the impact on livelihoods has been highest.
[41] The participatory identification process to be undertaken at the county level will be clearly laid out in the Project Implementation Manual.

will use targeting and prioritization criteria that shall be developed and clearly laid out in the Project Implementation Manual (PIM). Technical resource persons having the requisite experience of carrying out such participatory identification processes at the county level will be identified and rigorously trained as per the processes laid out in the PIM to undertake this activity at the county level. As described above, the identified farmers and pastoralists will be mobilized into groups of 15 to 20 farmers called the Community Investment Group (CIGs) or the Vulnerable and Marginalized Group (VMGs) and facilitated to prepare Micro projects for accessing the support. These grants will be provided to the CIGs and VMGs as per the procedures laid out in the PIM.

15. In addition, the farmers mobilized under CIGs and VMGs and other impacted farmers / livestock rearers will also be linked to Farmer Producer Organizations (typically consisting of 500 to 2000 farmer or higher) with the objective of enhancing resilience by providing support along the entire value chain including linkages to markets in specific identified commodities. Support to the FPOs will also be provided to the counties as per the procedures laid out in the PIM.

16. County teams will also identify pasturelands and agriculture lands that would need restoration and based on the damage assessments, prepare sub projects that are multi community investments detailing the works and activities to be undertaken to restore these lands. These sub projects will be appraised and approved based on procedures laid out in the PIM and funds provided to the county teams towards implementation. Pasture restoration would be done in most areas by establishing nurseries throughout the affected area to re-establish pasture flora. Both crop and pasture restoration would need to support plantings that would promote the restoration of pollinator populations in the affected area. To restore bee pollinator populations that may be affected by the pesticides in control of locusts, the project will support apiculture development in all targeted communities..[42]

17. Lastly, it was agreed that the project will not directly finance activities related to safeguarding food security and protecting human capital but will closely collaborate with other Bank-funded projects under the Hunger Safety Net Program (HSNP) and the National Safety Net Program (NSNP – P131305) to ensure that affected households are covered by the programs.

18. Component 3: Coordination and Early Warning Preparedness (US$12.0 million equivalent). Interventions under this component would include establishing and strengthening a Locust Control Unit (LCU) within the Plant Protection Services Division (PPSD) of MoALFC at the national level to prevent future outbreaks from spiraling out of control. Early warning systems will be developed and implemented to support prevention and rapid response to new and existing climate change-induced locust infestation, thereby limiting in-country and cross-border spread and intensification. Emphasis will be placed on building capacity to enable rapid and targeted short-term responses and long-term adaptation planning. Activities under the component will include: (i) bringing in specialized personnel in the areas of Entomology, GIS, Climate Change and Climate Resilience within the LCU and undertake capacity building related to locust management activities at the national and county levels; (ii) working with the impacted counties and advocating for the establishment of similar locust control units at the county level; (iii)

[42] Targeted investments will include: (i) planting of crop and pasture/browse varieties conducive to building bee populations (such as canola, sunflower) and (ii) uptake of improved bee-keeping technologies and practices such as colony splitting/multiplication, adoption of modern beehives and honey harvesting practices that have minimal colony disturbance

monitoring weather trends and normal Desert Locust territories to identify the conditions for an outbreak and early population increases; (iv) establishing communication/notification systems and protocols through international, regional, and national bodies so that warnings are not missed and that recipients of warnings understand the importance of the information (e.g., translating dense scientific material into comprehensible messages); (v) establishing linkages with international and regional bodies and developing standard operating procedures for a Desert Locust response; and (vi) supporting existing manufacturers to build the capacity to produce sufficient quantities of quality biopesticide for use during future outbreaks.

19. Component 4: Project Management (US$4 million, equivalent). This would finance the associated costs such as FM, procurement, environmental and social management, and communications. The communications component, in particular, apart from external and internal communication activities can promote increased community awareness about locust response and what they need to do when their area has been treated with pesticides (e.g., do not eat the locusts or feed them to livestock, do not dump in water bodies, etc.), as well as coordination among responsible entities (international, regional, national, and subnational) to better respond to outbreaks. A rapid information campaign will be designed and disseminated in a timely manner and in accordance with local context and requirements, preferably through local radio in relevant languages, on the techniques and timing of spraying, the chemicals used, its impacts on human health, crops and livestock, as well as risk mitigation instructions. This will be coupled with targeted consultations with key community representatives (for instance, elders and traditional leaders in the case of indigenous peoples/pastoralists) to: (i) receive feedback to adapt the actions to local needs, with special attention to vulnerable groups such as the elderly and people with disabilities, who will be supported in sheltering from the impacts of the spraying; and (ii) targeting and implementation of appropriate livelihood interventions.

D. Project Beneficiaries

20. The Project is expected to benefit all the farmers in the impacted counties in Kenya. The component 1, 3 and 4 will be implemented in all the counties that have experienced locust infestations. However, component 2 will be implemented in specific wards that are most impacted in the 12 of the most severely impacted counties in the country. The primary project beneficiaries will be affected farmers, pastoralists and households that have been affected by the locust upsurge and are food insecure. Vulnerable and marginalized households and female headed households will be prioritized in the targeting process.

E. Project Costing

Table 3.2 - Project Costs by Component

Component Name	Amount in US$ million
Component 1 (Surveillance and Control)	**7.0**
Component 2 (Food Security and Livelihood Rehabilitation)	**20.0**
Component 3 (Early Warning and Preparedness)	**12.0**

Component Name	Amount in US$ million
Component 4 (Project Management)	**4.0**
Total	**43.0**

III. IMPLEMENTATION ARRANGEMENT

A. Implementation and Institutional Arrangement

21. The project will be implemented by the MoALFC. Within the MoALFC the project will be embedded in the existing National Project Coordination Unit (PCU) of the World Bank-funded KCSAP, which will be expanded to bring in ten (10) additional officers responsible for day-to-day implementation of activities under the leadership of the National Project Coordinator (NPC).[43] For smooth integration of project operations with other ongoing efforts on this matter, the project will operate within the structures established by the MoALFC specifically to deal with the locust crisis in the country. These include the Multi-Institutional Technical Team (MITT) and the Locust Command Centre (LCC) under the Plant Protection Services (PPS) Division.

22. The MITT on Desert Locusts is the main policy and technical advisory body that supports the Ministry to proactively address the locust crisis facing Kenya. Members of the MITT are drawn from the following institutions: Ministry of Agriculture- Plant Protection services, Kenya Agricultural Research Organization (KALRO), Kenya Plant Health Inspectorate Service (KEPHIS), Pest Control products Board (PCPB), DLCO-EA, FAO, University of Nairobi (UoN), International Centre for Insect Physiology and Ecology (Icipe), Centre for Agricultural and Biosciences International (CABI), Joint Agriculture Secretariat (JAS) and Council of Governors (CoG). The Role of MITT is to: (i) harness technical expertise on Desert Locust management; (ii) provide technical guidance to the ministry, counties and any other stakeholders on Desert Locust management; (iii) collect and collate technical information on integrated Desert Locust management; (iv) provide guidance on capacity building of all stakeholders, especially agricultural extension providers; and (v) and propose appropriate interventions/strategies for sustainable management of Desert Locust in the country. Under the project this committee will be expanded to include other stakeholders critical in the oversight and coordination of the project such as: the Ministry of Devolution and ASALs; the Ministry of Labor and Social Protection; and the Ministry of Environment, Water and Natural Resources.

23. The LCC is a dedicated crack team within the PPS Division of MoALFC which consists of entomology and plant protection scientists who manage the day to day emergency operations related to surveillance and control of the Desert Locust upsurge. Under the project, the LCC in PPS Division will remain in charge of all activities related to Component 1 and will coordinate with the KCSAP PCU for fund flows and procurements. It will work with the control stations on the ground and the county governments

[43] The additional officers will include: Deputy National Project Coordinator responsible direct coordination and management of the project; Component 1 lead; 3 officers for Component 2; Component 3 Lead; M&E Specialist, Environmental Safeguards Specialist; Social Safeguards Specialist; Procurement Specialist.

to manage the control operations and respond accordingly on an hourly basis; track and monitor the progress daily; and effectively partner with other development partners to leverage additional resources and expertise. To avoid duplication, the head of the PPS Division will also be the Component 1 lead under the project.

24. At the county level, the project will operate under the implementation structures established under KSCAP and NARIGP for the respective counties covered under each.[44] As per the need these county teams will also be expanded to include additional human resources to support the initiatives that use this locust response project. The county agriculture teams and the county project coordinating units will work closely with the ground stations to be set up for day to day operations and monitoring.

B. Monitoring and Evaluation

25. The project will be underpinned by a solid monitoring, learning, and evaluation system that supports evidence-based decision-making. A web-based M&E and Management Information Systems (MIS) will monitor activities, processes, inputs, and outputs to track achievements against targets, emphasizing real-time monitoring. The indicators in the results framework under the project will be systematically tracked. In addition, the M&E system will specifically contribute to the MPA Learning Agenda on cost and effectiveness of control, protection and preparedness interventions. Digital applications will be leveraged fully, and appropriate dashboards will be available at the national and county level so that progress can be tracked, and mid-course changes can be made to the emergency response strategy as per the need. A detailed M&E plan will be described in the PIM. The existing M&E team at the KSCAP PCU will be strengthened further to ensure good quality implementation of the M&E.

C. Financial Management

26. FM. The overall project FM risk is assessed "substantial". Table 3.1 shows the constituent elements of the risk and their respective mitigation measures. The substantial risk is largely attributable to: i) Delays in funds flows from the national to county levels of government likely to impact on Component 2; ii) Accountability mechanisms for Component 1 and 3 to be managed by PPS Division (a relatively new structure with in the implementation of World Bank projects) within MoALFC; and iii) Disbursement of resources under Component 2 to be disbursed and managed by the counties in light of the limited access in the wake of COVID-19 travel restrictions.

27. The implementation of the mitigation measures will be reviewed, and the FM risk will be reassessed as part of the continuous project implementation support. The disbursement of funds to the PPS Division will be advanced from the Project Account at the National level to the dedicated account managed by the PPS Division in tandem with Authority to Incur Expenditures (AIE) on SoE – accountability - replenishment modality. All the original supporting documentation for the expenditures incurred at the PPS Division will be provided as part of the SoE supporting documentation and submitted alongside the SoE to the National PIU for safe custody. The disbursement of funds under component 2 (counties) will be budgeted in the National Budget/ County Allocation Revenue Act (CARA) and will be disbursed directly to the Project

[44] Out of the 12 counties to be targeted under Component 2, Eight (8) are covered by KCSAP and 4 by NARIGP.

Accounts (SPA) in commercial banks through the County Revenue Fund (CRF) and Special Purpose Account (SPA) in line with World Bank emergency response procedures. The counties will be expected to account for all resources under the component to the national PIU on a periodic basis (at least quarterly). The original documents for Component 2 will be retained at the county PIU in line with the procedures stipulated in the PIM. The PIM will be updated to reflect the emergency disbursement and accountability procedures and requirements for the components under the project.

28. FM arrangements. The design of the proposed FM is in line with World Bank's Policy and Directives on IPF. The FM functions of the project will be managed by MoALFC, the PCU and the respective county PCUs currently implementing the KCSAP. The entities have appropriate FM capacities and requisite experience required to implement the project. The KCSAP PIM will be updated during project implementation to reflect the additional FM requirements unique to the project. The day-to-day FM aspects of the project for Components 1 and 3 will be led by the PPS Division in close consultation with the PCU at the national level and PCUs within the respective counties (for Component 2). The PCU will be the lead interlocutor between the PPS Division and county PCUs on matters of the project FM. The National and county PCUs have adequate FM capacities and staffing FM and internal audit capacity to effectively manage the project, with the current FM rating rated Moderately Satisfactory.

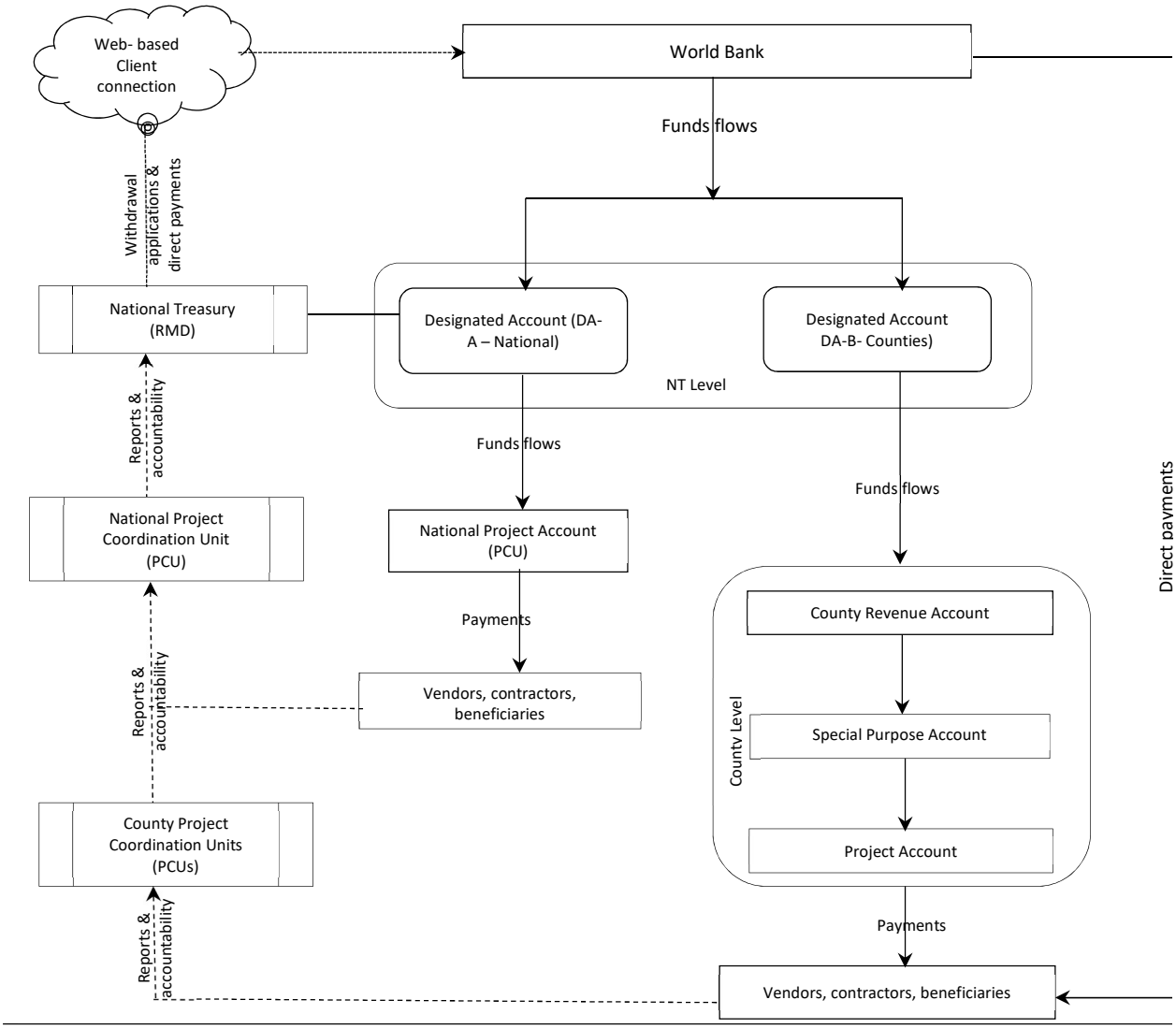
29. Mitigation measures. Appropriate fiduciary risk mitigation measures have been proposed to ensure: (i) financial resources reach the implementing and executing agencies and ultimate project beneficiaries in the shortest time possible; (ii) resources are used to finance the intended activities with efficiency and economy; (iii) resources are properly accounted for and project results and outcomes are achieved; and (iv) acceptable auditing arrangements are in place. To mitigate the envisaged risks: a) funds earmarked for county-level activities will be disbursed from the National Treasury to the respective Project Accounts (SPA) at the national and county levels in line with the Government's established emergency precedences; b) disbursements and attendant accountability mechanisms for funds disbursed to the counties and other national project implementing structures will be detailed in the PIM and the counties participating agreements, and effectively monitored during project implementation; c) close FM desk reviews will be prepared including periodic reviews of cash forecasts, withdrawal application/ SoEs and unaudited IFRs, complemented by virtual meetings with various implementation teams; d) elevated use of the internal audit function at the national and county levels to undertake risk-based system expenditure reviews through face-to-face approaches as the situation permits, and use of appropriate technologies such as WebEx, telephone calls, emails; e) leveraging technology, particularly the use of GEMS to monitor decentralized activities including locations, key contacts, community works and coverage; f) exploring options in extending the social accountability and citizen engagement activities piloted in joint collaboration with the office of the audit general; g) strengthening the complaints reporting mechanism including direct reporting to the World Bank in line with the World Bank Anticorruption Guidelines with specific FM training for the key staff (Auditor General, Internal Audit, FM staff at NPCU and CPCUs), including virtual trainings in view of limitation movements due to Covid-1; h) expanding the ToRs for the internal and external auditors to include verification of outputs as well as preliminary periodic reviews (6 monthly) to inform the final audit.

30. Budgeting. In line with the set-out Government procedures and the provisions of the financing

agreement, the project will prepare annual work plans supported by appropriate PPs, cash projections for each of the component in the desired level of details. The cash projections will delineate activities to be implemented at the national and the county levels. The work plans, PPs and cash projections will be submitted by the PPSD and the CPCUs as applicable and subsequently submitted to the National PCU for consolidation. The FM staff at the National PCU and respective counties will support the budget and cash projections plans.

31. Disbursements. The project will adopt the SoE method of disbursement. The flow of funds will consist of two DA (DA-A and DA-B), both held in the Central Bank of Kenya (CBK) for all the activities and will take advantage of direct payment arrangements as shall be specified in the disbursement letter. DA-A will be dedicated for activities implemented at the National Level while DA-B will be designated for activities implemented in the counties. For the activities implemented at the national level, funds will be disbursed from the DA-A to the Project Account managed by the National PCU in consultation with the MoALFC. For the activities to be implemented in the counties, funds shall be disbursed directly from the DA-B to County Project Accounts through the County Revenue Fund (CRF) and SPA based on the provisions of counties' participating agreements. Disbursements of funds from the National PCU-managed account to PPS Division shall be based on approved work plans and cash projections and accounted on a SoE basis, as shall be detailed in the PIM. In case UN agencies are used, the Financial Management Framework Agreement (FMFA) shall apply.

Figure 3.2 – Project Funds Flow Arrangement



32. The project will submit quarterly IFR within 45 days after the calendar quarter and annual audited financial statements within 6 months after the end of the financial year. The format of the IFR is similar to those of KCSAP and shall further be detailed in the PIM.

Table 3.1 - FM Risks and Mitigation Measures

Risks	Mitigation measures
Potential dilution of internal controls with limited access to implementation structure in view of Covid-19 travel restrictions.	• MoALFC internal audits to provide compensatory controls through post reviews within little time lag. • The normal payment processes of invoicing, goods / services receipts, and payments to be reviewed, both at

Risks	Mitigation measures
	the implementing line ministry and the National Treasury (especially for direct payments), to explore how best to use the time frame allowed by creditors in making payments. • Agree on service standards within which to release funds as mentioned in the main text above. • Use of technology to contact virtual meetings and trainings as well as monitoring project implementation GEMS as the decentralized levels
Inefficient cash management & delays in funds flow in the wake of Covid- 19 limited capacities and flexibility in movement.	• To effectively ensure projects have adequate working capital, undertake targeted periodic desk reviews of the project cash flow forecasts, withdrawal applications/ statements of expenditures and IFRs. • Direct disbursement of the funds from the National Treasury to the counties Projects Accounts based on established emergency procedures with appropriate accountabilities provided at the national and counties in line with the PFM legal requirements.
Incomplete records or supporting documentation on payments made. Overdue unacquitted cash advances, incomplete documentation, and use of cash for ineligible expenditure.	• MoALFC and National PIU will be responsible for keeping detailed records in the management of any cash advances to the beneficiaries and compliance with PFM regulations.

D. Procurement

33. Procurement: Procurement for the Project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 and revised in November 2017 and August 2018. The Project will be subject to the World Bank's Anti-Corruption Guidelines, dated October 15, 2006, revised in January 2011 and July 1, 2016. The Project will use STEP to plan, record and track procurement transactions.

34. The proposed procurement approach prioritizes fast track emergency procurement for the required goods, works and services to utilize the flexibility provided by the World Bank's Procurement Framework for fast track emergency procurement. Key measures to fast track procurement in order of priority include: (i) use of simplified and fast procurement and selection methods fit for emergency situation including direct Selection / Procurement, as appropriate; (ii) streamlined competitive procedures with shorter bidding time; (iii) extension of existing contracts where they include the required goods, works and services; (iv) use of framework agreements including pre-existing ones; (v) procurement from UN Agencies through direct selection using existing Standard Agreements; (vi) use of procurement agents;

(vii) force account, as needed; and (viii) increased thresholds for RfQ and national procurement, consultants qualifications-based selection, among others. If requested by the Borrower, the World Bank will provide procurement HEIS to help expedite all stages of procurement, such as, helping to draft technical requirements and specifications, drafting procurement documents, providing advice on evaluation procedures and, participating as observers during negotiations to clarify any matters regarding World Bank Procurement Regulations. Further, Bid Securing Declaration may be sought instead of bid security. Advance payment may be increased to 40 percent and accompanied by an advance payment guarantee. The time for submission of bids/proposal following national and international market approaches could be shortened to between 7-15 days, and to three days for those using the RfQ. However, if bidders request for an extension of the period for preparation and submission of bids/quotations, this should be considered. Retroactive financing may be applied to the contracts procured in advance for the purpose of achieving the project's objectives using procurement procedures that are consistent with Sections I, II and III of the World Bank's Procurement Regulations and the Financing Agreement for this project.

35. Procurement Profile for the Project include the procurement of chemicals and pesticides, ground and aerial spraying equipment, motor-vehicles and related mounted spraying equipment, aircraft leasing, GPS equipment, VHF radios, PPEs, blood testing kits, camping and drum crusher equipment, non-consulting services for distribution of pesticides, and livelihood impact assessment consulting services, and the implementation, tracking and monitoring. Community level interventions comprises of livelihood protection and restoration that includes, minor civil and public works, pasture restoration, livestock restocking, etc. Finalization of the streamlined PPSD has been deferred to implementation and will be submitted two weeks after project effectiveness. An initial PP for the first three months of implementation has been agreed with the Borrower and will be updated during implementation.

36. Procurement and distribution of supplies and equipment and related services may be affected by the impact of the COVID-19 pandemic and the disruptions it has caused globally in the production and distribution of goods and services. Engaging UN Agencies, such as FAO in the sourcing, procurement and distribution of these equipment would mitigate the risk. FAO, the lead agency in monitoring and management of Desert Locusts, has extensive experience working with governments and other development partners to fight the Desert Locust upsurge in the region, providing technical advice and assistance with procurement of supplies and equipment for aerial and ground operations

37. Procurement implementation under the Project will be undertaken by the National PCU of the ongoing World Bank-financed KCSAP under MoALFC, which will be expanded to include ten additional project implementation support personnel, among them, a procurement officer. For the day-to-day implementation of the project, MoALFC will integrate and streamline the National PCU's activities with the established structures for dealing with the locust crisis in the country which mainly include the LCC under PPS Division. Although KCSAP is not an emergency operation, the PCU's hands-on experience and knowledge in the implementation of World Bank-financed operations will minimize likely procurement implementation risks. MoALFC will prepare and include in the PIM internal emergency approval processes and delivery timelines acceptable to the World Bank to ensure that procurement processing is appropriately modified to accommodate the emergency nature of the project.

38. Procurement in community-level interventions. These include livelihoods protection and restoration activities aimed at helping and protecting the poor and vulnerable in locust-affected areas from human capital and asset loss, enhance their access to food and restore livelihoods that have been destroyed by locust populations. Procurement activities include fodder supply and distribution, construction of quality grain and seed storage facilities, water-pans and earth dams, pasture restoration, animal restocking etc., These will be procured through simplified procurement procedures and the CDD programs and structures established under the KCSAP. The community driven development committees (CDDCs) already mobilized at the ward level will be further strengthened and customized training provided to them to undertake community level procurement activities.

39. Record keeping and asset management. MoALFC procurement will be responsible for maintaining detailed records of assets and inventory dispatched to the counties to ensure assets purchased are safeguarded. MoALFC will also monitor and ensure oversight over the assets specifically to ensure that the goods (assets & inventory) at the health facilities including at county level are used for the intended purpose. MoALFC will, in coordination with counties, issue guidance to emphasize the role the beneficiaries play in ensuring assets dispatched to them are used for the intended purpose.

40. The key risks and preliminary risk mitigation action plan is indicated in Table 3.2 below. Procurement risk for the project is rated as "High". The residual risks after the implementation of the mitigation measures proposed is "Substantial".

Table 3.2 - Procurement Risks and Mitigation Measures

No.	Risk	Mitigation Measure	Responsible Agency
a	Slow procurement processing and decision making with potential implementation delays particularly in preparation of Procurement Professional opinion;	Put in place mechanisms for regular follow up and monitoring of procurement processes to ensure expedited review and approval.	MoALFC
b	Weak procurement and contract management capacity for large value contracts with potential time and cost overruns.	• Seek assistance from the department of Public Procurement at the National Treasury to second to the NPCU qualified and experienced procurement officer with hands-on experience in World Bank-financed operations. • Prepare Contract Management Plans (CMP) with Key Performance Indicators (KPIs) for critical, high value and complex contracts	MoALFC
c	Delays due to inadequate releases from Treasury to support procurement processing.	Obtain commitment of National Treasury to prioritize the implementation of this emergency project in release of funds.	MoALFC; NT
d	Lack of familiarity in dealing	Use of staff previously engaged in cross-border	MoALFC

No.	Risk	Mitigation Measure	Responsible Agency
	with migratory pests and need for flexibility in procurement processing	Desert Locust control to benefit from experience and expertise and lessons learned	
e	Due to the Global nature of the COVID-19 outbreak, supply chains for chemicals and pesticides may be disrupted resulting in shortages of supplies and necessary services leading to price volatility and in bidders only providing short validity periods.	The Project will use rapid disbursement procedures and simplified procurement processes in accordance with emergency operations norms. MoALFC has committed to put in place emergency procurement approval mechanisms and dedicated teams to ensure evaluation and contract awards are concluded in 3-5 days after receipt of bids; UN agencies may be used, and other direct procurement methods as suggested by WB global procurement team.	MoALFC, NT, WB
f	Limited competition as a few competent bidders may refrain from submitting bids due to COVID-19 pandemic;	MoALFC will closely monitor market trends, promptly propose more efficient procurement approaches and methods as need arises and update PP accordingly with support from the World Bank; With support from the World Bank MoALFC to prepare KPIs to monitor procurement process and contract management issues	MoALFC; WB

41. The World Bank's oversight of procurement will be done through increased implementation support, and increased procurement post review based on a 20 percent sample while the World Bank's prior review will not apply.

E. Environment and Social

42. Environmental risks and impacts: The MPA will utilize the World Bank's ESF, which provides a holistic tool for identifying and managing environmental and social risks and opportunities in the design and assessment of the project. On Component 1, the main potential environmental risks and impacts associated with these activities related to the Desert Locust control treatment activities that include: (i) transport, handling, storage of the pesticides, dosage (i.e. proper calibration of the spraying equipment to get the right dose of active ingredient per hectare) during treatment and disposal of used pesticide containers; (ii) risk of polluting ecologically sensitive habitats such as wetlands, national parks and water bodies; (iii) risks that pasture, local water sources and agronomically sensitive areas may be contaminated; and (iv) Potential contamination and poisoning of the pesticides control teams. On Component 2, the potential environmental risks and impacts associated with these activities include: (i) potential soil erosion and pollution; (ii) dust emissions; (iii) generation of solid waste; (iv) occupational health and safety risks related to minor construction works for the proposed construction of grain and seed storage facilities; (v) potential disease outbreak for proposed re-stocking of livestock; (vi) potential degradation of the rangelands; and (vii) potential contamination and poisoning by farmers handling farming pesticides.

43. Environmental risk classification: The project risks are considered Substantial as the application of the pesticides will cover large swathes of areas in Kenya impacted by the Desert Locust infestations. The Project will finance the use of two pesticides for the Desert Locust control activities, this include a chemical pesticide (Fenitrothion 96 percent ULV) which is a WHO class II, formulated as ULV, the Biopesticide Metarhizium and equipment. The biopesticide risks to the environment and applicators are minimal as it is formulated with a fungus that is specific to locusts and grasshoppers but safe to other insect species, animals and humans. The pesticide applications will cover large swathes of the country, approximately 18 counties impacted by the Desert Locust infestations. The use of the pesticides will potentially impact local populations dependent on natural resources for their livelihoods such as pasture, vegetation and crop fields. The project will identify and map out ecologically sensitive and agronomically sensitive areas such as water bodies, national parks, reserves and crop fields. The project will establish and operationalize SOPs for spraying activities and will use biopesticides in the area identified as sensitive ecological agronomical to minimize and mitigate any potential negative impacts. Also, the use and application of the pesticides could result in potential adverse effects on the health of the control teams and on local communities where both ground and aerial spraying may take place. Mitigation measures will be put in place through provision of adequate and appropriate PPE, induction and training of the field control teams, conducting regular tests of cholinesterase for the operators and field locust control teams and undertake rotation of operators involved in Organophosphate pesticide applications to avoid overexposure to pesticides. Thus, given that proven proposed mitigation measures that will be put in place, SOPs, training of field control teams and operators, and the technical support to be provided by FAO.

44. Environmental and social risk management instruments. The project has prepared an ESCP, ESRS and SEP, which include guidance on outreach activities prior to undertaking Desert Locust control activities.[45] The following instruments will need to be prepared for the various components. **Component 1,** the environmental and social risks and impacts associated with surveillance and control activities of the Desert Locust will be managed by the preparation of an ESMF, which will include detailed annexes on IPMPs, waste management, a GBV Action Plan and LMP. Environmental monitoring of the Desert Locust control activities will be conducted with particular focus on environmental impacts, occupational health and safety and pesticides residue. ToRs will be prepared to involve a multi-disciplinary technical teams of lead agencies such as Wildlife, Water, Environment and Health and Safety. These instruments will be prepared and disclosed before disbursement of funds for this Component. Environmental and social risks associated with **Component 2** covering livelihood protection and rehabilitation activities, will be managed for unconditional CTs by preparing an ESMF covering social risks, environmental risks including the use of money to purchase additional pesticides and security risks. A LMP will also be applied. The instruments will be prepared and disclosed before disbursement of funds for this Component. ESMPs will be prepared for site specific sub-projects. **Component 3** on early warning and response planning will ensure that the requirements of the ESF are considered in the preparation of any plans and documents. Preparation of the instruments will be dependent on each proposed activity and the risk assessment and to the extent

[45] The SEP and the ESCP were disclosed on the Government website on 17 April and 29 April 2020, respectively. The ESCP, ESRS and SEP were disclosed on the World Bank's website on April 29, 2020.

appropriate will rely on existing instruments already in use on associated projects, where possible.

45. Risks and impacts management measures. The following measures will be taken into consideration to minimize these potential negative risks and impacts on communities, ecologically and agronomically sensitive areas and for pesticide control teams: (i) the MoALFC will adopt and comply with FAO technical guidelines on safety and environmental precautions for the use of pesticides, use of WBG EHS Guidelines and applicable national laws and regulations; (ii) strict compliance regarding use of the current FAO list of recommended pesticides products with minimal environmental impacts on the control teams, communities and environment; (iii) carry out inventory of ecologically and agronomically sensitive areas; (iv) provide appropriate and adequate PPE and training and inductions for the operators, medical teams, transporters, store keepers and field control teams; (v) conduct regular analysis and monitoring of levels of cholinesterase for the operators and field control teams involved in pesticide applications; (vi) carry out awareness-raising and provide relevant, timely information to local communities on pesticide treatment schedules and potential negative impacts; (vii) prepare and operationalize emergency preparedness and response procedures; (viii) carry out regular in-depth environmental monitoring of selected organisms, soil and water for pesticides residues during and after the treatment activities, with the support and involvement of multi-disciplinary lead agencies on wildlife, water, environment, health and safety etc.; and (ix) proper management and disposal of obsolete pesticides.

46. Environment Safeguards Capacity Assessments: The locust control activities at the national level will be implemented by the MoALFC. The safeguards support for the project will be provided by the KCSAP PIU. With the increase of project portfolio, the PIU's safeguards capacity needs strengthening. Thus, the PIU will hire an additional Environmental Specialist to complement the existing resources at post. The PIU currently does not have an experienced social safeguards specialist on staff. The Ministry will be seconding one of their qualified social safeguards specialist to focus especially on this emergency operation. It has also commenced the procurement of a dedicated GBV expert consultant to develop and carry out the GBV action plan.

47. The **social risk** is considered **High**. These risks include the following:

48. (i) Stakeholder consultation and engagement activities will be fit for purpose to ensure timely and meaningful consultations to meet project and stakeholder needs. Robust community engagements will be conducted before commencement of project activities as well as sensitization on the availability of a project GRM to support the systematic uptake, processing and resolution of project related complaints and grievances. Specifically, for spraying activities, a rapid information dissemination campaign will be designed and disseminated in a timely manner and in accordance with local context and requirements, preferably through local radios in relevant languages, on the techniques and timing of spraying, the chemicals used, its impacts on human health, crops and livestock, as well as risk mitigation instructions. This will be coupled with targeted consultations with key community representatives (for instance, elders and traditional leaders in the case of indigenous peoples/pastoralists) to: (a) receive feedback to adapt the actions to local needs, with special attention to vulnerable groups such as the elderly and people with disabilities, who will be supported in sheltering from the impacts of the spraying; and (b) targeting and implementation of appropriate livelihood interventions. As mentioned above, a SEP has been prepared

and disclosed.

49. (ii) Indigenous peoples/Sub-Saharan African historically underserved traditional local communities (ESS7), especially pastoralists, will be especially hard hit as their livelihoods are inextricably linked to land and pasture, which is being damaged by swarms. Pastoralists' options would be limited to: (a) migrating to find pasture, which could lead to conflict with other pastoralist groups; or (b) searching for alternative livelihood if they are permanently decapitalized due to the loss of fodder for their animal. Stakeholder consultations therefore need to be culturally appropriate to suit local needs, cultural practices and relevant languages. This could be further aggravated by the risk of transmission of COVID-19 in Kenya across populations that might not otherwise have encountered each other. A rapid social assessment and an Indigenous Peoples Plan (IPP), or equivalent, will be prepared during project implementation.

50. (iii) Most of the project activities will be implemented in rural and remote areas, of which many have been prone to social tensions and communal and political conflict, inhabited by different social groups, as well as IDPs and refugees. Project activities will need to be cognizant to these dynamics and be implemented in a way to ensure no further escalation of such tensions. Equally, security concerns for workers need to be taken into consideration. Furthermore, there is a risk that local community dynamics may result in attempts to capture the benefits of the project for a particular group. These challenges shall be included in the social assessment to be prepared during implementation.

51. (iv) The locust upsurge in affected counties, compounded by the current COVID-19 crisis, may further expose women/girls to insecurity as they may be forced to walk long distances to access food and search for pasture. This including the low status of women, preexisting high prevalence of Gender Based Violence, acceptability of Gender Based Violence (e.g. early/forced marriage, intimate partner violence) and high levels of poverty, are likely to heighten the community's vulnerability to sexual exploitation and abuse (SEA)/Gender Based Violence. With the possible deployment of external personnel -including agricultural extension workers, contracted workers and specialists, paramilitary cadets- to conduct ground spraying in these areas, women and girls may face growing levels of SEA, also as a negative coping strategy. Moreover, gender-based violence could also result from intrahousehold conflict over the receipt of unconditional CTs and/or SEA of community members who are extorted for sexual favors in exchange for registration or release of CTs. Therefore, a Gender Based Violence Action Plan (with costs integrated into the project budget) will be prepared before project approval and implemented before interventions begin. Risks associated with the use of the NYS under Component 1 will need to be assessed and addressed as part of the Gender Based Violence Action Plan and SEP. Mitigation will be developed as required including training on gender issues and ensuring communities access to GRMs.

52. (v) Labor Field officers who are directly involved in spraying operations tend to be the most exposed to insecticides, and thus also run the highest risk of being poisoned. Other field staff can also be exposed. Necessary PPE will be provided to all field officers directly involved in spraying. In addition to OHS aspects, staff will also sign a code of conduct in relevant languages and receive training on the same. Each project will prepare a LMP before the commencement of project activities. It will apply to all Project workers whether full-time, part-time, temporary or seasonal.

IV. RISKS

53. The overall project risk rating is high. The overall risk is high because the risk rating for both Environment and Social is HIGH. The reasons for the high-risk rating are described in the above section and include: (i) low procurement capacity at the national and county levels; and (ii) macroeconomic risks associated with the COVID crises. The project will mitigate the risks by: (i) ensuring constant technical support to the implementation teams at the National and county levels from the World Bank task team, and the strong involvement and ownership of the county leadership, namely the Governors and the County Executive Committee members for Agriculture; (ii) strengthening the capacity of the National PCU through the placement of additional dedicated Social Safeguard Specialists, Environment Safeguard Specialists, Procurement Specialist and other technical specialists for this project apart from the specialists that are already in place under KCSAP; and (iii) ensuring that the implementation of the risk mitigation measures proposed under the environment and social safeguard sections are monitored regularly and regular feedback on the quality of implementation of these measures are provided to the client.

ANNEX 4: DESERT LOCUST RESPONSE PROJECT FOR THE REPUBLIC OF UGANDA

A. Country Context

1. Swarms of Desert Locust originating from Yemen have been infesting farmland and rangeland of the Horn of Africa and East African countries since the beginning of July 2019. The locusts invaded the North Eastern Kenyan County of Mandera in December 2019 originating from Ethiopia and Somalia. Due to the security situation in Somalia and North Eastern Kenya (Mandera and Garissa Counties), there were inadequate measures in place to limit the spread which resulted in large swarms spreading further into Kenya from adjacent Somalia and Ethiopia. The swarms continued to move further westwards into Turkana county and entered North Eastern Uganda on February 9, 2020.

2. The timing of the Locust crisis is expected to coincide with the start of the main cropping season affecting staple food crop production with devastating consequences on food access and availability, and loss of livelihoods. Since the first sightings of the locusts in North Eastern Uganda, multiple new swarms have entered the country. Infestations have been sighted in 24 districts in the regions of Karamoja, Teso, Acholi, Lango and Busigu, including some of the most affected areas of Nakapiripirit, Abim, Amudat, Kaabong, Moroto and Napak. The swarms have invaded some of the most economically and socially fragile regions of the country (Karamoja and Teso). FAO has predicted that the Desert Locust lifecycle is likely to coincide with the regeneration of rangelands and the start of the planting activities in Karamoja and Teso, which will likely affect the main staple crop production. This will have devastating consequences for food access and availability, especially if control measures in place are not fully effective. The potential impact of this crisis is one dimension of a much broader economic predicament brought on by COVID19.

3. Real GDP growth is projected to fall from 6.5 percent in FY19 to 4.0 percent in FY20, and to 3.5 percent in FY21 as COVID-19 related domestic and external supply and demand shocks hit the country, aggravated further by the locust upsurge. COVID-19 related shocks also build on a sizable slowdown in real output growth in early FY20 due to heavy rains and flooding, and a locust upsurge whose major impact is expected in April-June of 2020. Further, FAO assessments indicate that in addition to 291,000 people already considered severely food insecure in Karamoja and Teso Regions (IPC Phase 3 and above), the Desert Locust crisis poses a significant threat to the food security of another 1.32 million people (IPC Phase 2).

B. Sectoral and Institutional Context

4. The Government of Uganda (GoU) responded with an emergency plan through a series of budgetary support and were largely successful in combating the first wave of infestations. However, it was also recognized that response efforts did not go far enough. The emergency nature of the response meant that teams needed to be mobilized, trained and operational in the quickest time possible and community awareness raised within a similar timeframe. However, additional resources were needed for a more comprehensive response. The problem was further compounded by an uncoordinated response at the

regional level that left some countries like Uganda ill-equipped to effectively conduct surveillance and monitoring of breeding grounds and control of locust populations, which led to their migration and spread to other areas.

5. The GoU has implemented several initiatives in the affected area, whose interventions can be leveraged and scaled up. For example, operations such as the Third Northern Uganda Social Action Fund (NUSAF 3 – P149965) and the Development Response to Displacement Impacts Project (DRDIP – P164101) have provided effective livelihood support interventions in Northern Uganda, and in districts hosting refugees, respectively. The CDD methodologies used in these projects will provide important lessons, provide capacity through experienced staff and make use of existing community infrastructure to quickly respond to the locust upsurge and address medium term effects. Projects such as the Regional Pastoral Livelihoods Resilience Project (RPLRP – P129408) and Agriculture Cluster Development Project (ACDP – P145037) all have important lessons to contribute in terms of enhancing early warning systems, rangeland management and targeted access to agro-inputs among others. Investments in GoU's capacity to anticipate, coordinate and effectively respond to such crisis will go a long way in sustaining any short-term and medium-term measures that would be implemented.

C. Relevance to Higher Level Objectives

6. The Proposed Project is well aligned with the World Bank CPF for Uganda FY16 – 21. The CPF is aimed at supporting Uganda in addressing its national priorities with a focus on ending extreme poverty and promoting shared prosperity in a sustainable manner. Strengthening governance, accountability and service delivery, and raising incomes in rural areas are two strategic focus areas that the proposal lends itself to. Specifically, the project is well aligned with two key objectives of the CPF: (i) improved service delivery, and (ii) enhanced resilience of the poor and vulnerable. The project aims to strengthen country systems to effectively respond to emergencies and/or disasters by building capacity from national levels cascading through to community level structures. Through provision of appropriate resources to all the key structures layered with strategic communications approach, the project will aim to ensure that timely actions are taken in line with issues raised at different levels. The project's focus to support vulnerable households to preserve, protect and rebuild their livelihoods will go a long way in enhancing resilience of the poor and vulnerable. Further, by mitigating potential risks to food and nutrition security, the project addresses a key priority of the Government's National Development Plan (NDP II) to support human capital development. While the project was not envisioned as part of the country's CPF, it well aligned with both Government and World Bank strategic priorities.

II. PROJECT DESCRIPTION

A. Project Development Objective

7. The **Project Development Objective** is to respond to the threat posed by the locust outbreak and to strengthen Uganda's systems for preparedness. Indicators to track citizen engagement include awareness raising communication campaigns conducted and grievances registered and resolved by the program.

B. PDO Level Indicators

The following key indicators will be used to track progress towards the PDO:

(i) Number of districts and sub counties covered by the project
(ii) Land Area sprayed (breeding and Roosting) through aerial and ground control operations as part of the project intervention
(iii) Beneficiaries of Livelihoods Protection and Restoration reporting that their livelihoods have been restored or improved (disaggregated by type of intervention and gender)
(iv) Districts with strengthened capacity surveille, monitor and control locust and other migratory pests

C. Project Results Indicators

Table 4.1 – Results Indicators for Uganda

Indicator	Baseline	End-Target
PDO level		
Number of districts and sub counties covered by the program	0	216
Land Area sprayed (breeding and Roosting) through aerial and ground control operations as part of the project intervention	0	30,000ha
Beneficiaries of Livelihoods Protection and Restoration reporting that their livelihoods have been restored or improved (disaggregated by type of intervention and gender)	0	502,600
Districts with strengthened capacity surveille, monitor and control locust and other migratory pests	0	24
Comp 1: Locust Surveillance and Control Measures		
Locust and migratory pest monitoring system operationalized (Yes/No)	No	Yes
Number of early warning committees or institutions formed or strengthened to support surveillance and response operations to Desert Locust and another transboundary pest	0	1296
Number of aerial and ground control operations undertaken or supported by the project	0	240
Number of Desert Locust swarms entering Uganda (by size and Age)	0	
Quantity of pesticides used during the operations by type of pesticides (litres)	0	90,000 Litres (60,000ULV) and 30000 EC pesticides)
Number of breeding and roosting grounds identified.	0	120
Average land area (ha) for the breeding and roosting ground	0	120
Supported districts with locust control plans	0	24
Component 2: Livelihood protection and rehabilitation		
Number of savings and investment groups supported	0	2400
Number of Village Revolving Funds formed, supported	0	1640
Number of beneficiaries of Livelihood Restoration Support activities disaggregated by gender	0	260,000
The percentage of beneficiaries' groups formed, supported and functional one year after formation	0	90
The percentage of land area (ha) of crop and range lands whose productivity has been restored	0	80
Percentage of affected livestock holding households (number) receiving	0	25

Indicator	Baseline	End-Target
replacement livestock (%)		
Land area under forestry as a result of the project intervention Hectare (Ha))	0	3,200
Number of community infrastructure established as a result of the project intervention by type of infrastructure	0	400
Number of beneficiaries of cash for work activities	0	240,000
Person workdays (number) generated by emergency cash-for-work schemes as a result of the project intervention	0	1,200,000
Person Workdays generated by women in emergency cash-for-work schemes (Number) as a result of the project intervention	0	800,000
Share of beneficiary households self-reporting improved food security status (Percentage)	0	75
Number of participating parishes with functional community monitoring groups	0	1296
Percentage of participating parishes in which social accountability is implemented using a community score card	0	100%
Land area(ha) of affected agricultural and pastureland restored to productivity	0	12,000
Component 3: Coordination and Preparedness		
National locusts and migratory pest outbreak emergency risk communication plan developed and tested	No	Yes
Number of training workshops conducted by the project at the national, district, subcounty and community level	0	200
Knowledge sharing and learning workshop organized by Regional Secretariat	0	20
Awareness raising communications campaigns conducted (Yes/No)	No	Yes
MAAIF early warning unit team established and capacitated to monitor migratory pest	No	Yes
Number of research articles on biological control, efficacy of the pesticides, timing of application, locust mapping and impacts published in the world bank working paper series and in the international journals	0	4
Project Management		
The amount of program funds (amount, US$) disbursed within six months after program effectiveness (Amount (US$))	0	6,500,000
Percentage of grievances registered and resolved (%)	0	95

D. Project Beneficiaries

8. The project will be focused on the communities in the areas affected by Desert Locust upsurge and have experienced negative related impacts. However, the beneficiaries of the project investments will be both affected and non-affected communities. The project is expected to benefit a total of 950,000 direct[46] beneficiaries and about 1,200,000 indirect beneficiaries. The principal target beneficiaries of the project are the poor and vulnerable households, including women, youth, widows/widowers, female-headed households, and Persons with Disability, Persons Living with HIV/AIDS, orphans, disarmed

[46] The number of direct beneficiaries will include beneficiaries of livelihood support and those in locust invaded areas sprayed in given district. To avoid double counting, the beneficiaries of livelihood should not be counted twice.

Karamojong youth, child-headed households and existing savings and business groups with majority poor households (at least 90 percent). Priority will be given to women and youth with at least 50 percent of household representatives expected to be women. The project will also address social and cultural barriers that constraint women participation in livelihoods restoration support and LIPW through gender analysis to inform interventions and promote women empowerment and agency. In addition, the project will include measures to mitigate risks of violence against women and children associated with project interventions.

E. Project Components

9. Component 1: Surveillance and Control Measures (US$20 million equivalent). The objective is to limit the growth of existing climate-induced Desert Locust populations and to curb their spread, while mitigating the risks associated with control measures and their impacts on human health and the environment. It has four sub-components. This component will support pest surveillance for informed decision making; mounting and conduct of control activities; early warning systems and risk reduction and management investments.

10. ***Sub-component 1.1: Pest surveillance***. In order to improve locust and other pests surveillance, MAAIF together with the District LGs will mobilize communities and establish a locust surveillance system based at three levels: (i) community; (ii) district; and (iii) national to undertake continuous surveillance, mapping monitoring and reporting on the spread of locusts in infested and locust prone districts through utilization of the existing structures in MAAIF and Local Governments. Surveillance activities will include monitoring weather trends and Desert Locust territory to identify the conditions for an outbreak and early population increases. The current NUSAF 3 structures will be adopted at community level.

11. The activities will include but not limited to: (i) monitoring observed breeding and egg-laying areas to inform early action; (conducting ground surveys and other data collection to assess the locust situation and habitat conditions; and (iii) collection and analyzing data to inform planning and ensure appropriate control methods are applied. Innovative approaches to surveillance such as the use of satellite imagery and maps, drones, eLocust3, GPS enabled cameras and other disruptive technologies, as well as deployment of the communities for ground truthing would be financed. Key investments will include: (i) establishment of structures for detection, surveillance, monitoring and reporting at all levels; (ii) supporting mini diagnostic labs at the district with equipment and building the capacity of the officers to use them to enhance the capacity of the districts to make accurate differential identification of the Desert Locust from other locust species and grasshoppers at nymph instars; (iii) procurement of necessary equipment for migratory pest detection, surveillance including heavy duty drones, GIS/Remote sensing consultancy services, vehicles to support field surveillance, reporting and mapping Desert Locust spread, and provision of regular technical support to district;(iv) procurement of necessary soft-wares to support migratory pest detection, surveillance, and monitoring such as Arc GIS desktop 10.8 license, Image processing software (ENVI), and eLocust3 system; (v) the customization of the eLocust3 systems to support MAAIF monitoring and surveillance of locusts and migratory insects; and (iv) training and capacity building at all levels.

12. ***Sub-component 1.2: Control measures.*** Appropriate control measures will be undertaken to reduce locust populations and prevent their spread to new areas. Locust control measures will be undertaken mainly through targeted ground and aerial control operations. Whenever possible and facilitated by effecting surveillance and reporting, these would be aimed at neutralizing hopper bands on the ground before they develop into adult swarms, to minimize the need for aerial spraying requiring conventional chemical pesticides. While the focus would be on ground sprays, these would be supplemented by aerial spray operations. Working closely with FAO and other entities, the use of technology including growth regulators and bio-pesticides will be included in the ground and aerial spraying. A PMP will be developed under the support and guidance of the WB's environmental specialists.

13. As a rapid control measure, the GoU deployed the Uganda People's Defense Forces (UPDF) to undertake ground spraying when the locusts first crossed into Uganda. The UPDF were trained and equipped to manage control operations. They will therefore be used as an initial measure to continue providing control support in the current operation. However, the NUSAF operation has, over the years, established robust LIPW groups at the community level, the capacity of these groups will be enhanced to ensure that in the mid and long term, they are equipped and trained in pest control measures. Where available, interested youth will be selected from the LIPW beneficiaries to support control measures. This will ensure that: (i) there is a local cadre of individuals who are familiar with control measures and can sustain these activities over the medium to long term; and (ii) provide temporary employment and direct income support to the beneficiaries for taking part in these tasks. Regular and intense training on the use of control measures and related SOPs, including health and occupational safety considerations, will be provided to the youth taking part in this exercise. Given that rigorous adherence to the SOPs is critical, refresher training, every quarter, will be provided periodically to the individuals engaged in this task. The range of activities they are engaged in will be informed by emerging knowledge on best practices in locust and pest control.

14. Key activities and investment will include: (i) decentralizing ground control activities to the locust control regions and districts supported by communities; and equipping ground control teams with rapid response capability; (ii) procurement of pesticides, approved by the Pesticide Resource Group (PRG), and spray equipment including manual and motorized pumps, vehicle mounted spray equipment; adapted spray vehicles, hire and leasing of required aircrafts to supplement aircraft to be accessed through a revamped DLCO-EA, and personal protective gear; and (iii) training and capacity building of response teams.

15. ***Sub-component 1.3: Early warning systems.*** The proposed project will support the establishment and operation of early warning systems and will entail investment in the following areas: (i) strengthening of the capacity of the early warning unit of MAAIF; and (ii) development of Early Warning MIS. The proposed project will support the capacity enhancement of MAAIF's early warning unit to undertake tasks envisioned in the early warning systems by facilitating acquisitions of needed equipment, software, human resources, and capacity training of the core technical staff in the early warning unit of the MAAIF. Early warning systems will be developed and implemented to support prevention and rapid response to new and existing climate change induced locust infestation, thereby limiting in-country and cross-border spread and intensification. Emphasis will be placed on building capacity to enable rapid and targeted

short-term responses and long-term adaptation planning. Specifically, the project will support investments in: (a) the development of a pest monitoring android tools for monitoring locusts and migratory insects; (b) subscription to identified data source especially climates and satellite data sources such as NASA and Planet; (c) access to regional and global materials and services from organizations like NASA Earth Observatory, Planet Lab, and DLCO-EA; and (d) short-term and long-term training from specialized organizations such as NASA to strengthen capacities in the use of modern technologies including remote sensing and drones.

16. ***Sub-component 1.4: Risk reduction and management.*** Monitoring and assessing environmental and human health risks associated with locust control will be undertaken to inform implementation of health, environmental and safety measures to reduce risks to an acceptable minimum. Monitoring of control operations is necessary to assess whether adverse effects occur and under what circumstances so that they can be mitigated. Monitoring will also help increase outreach on reliable climate-smart pest management knowledge in the communities. Activities will include: i) testing of human health and soil and water for contamination from use of insecticides; ii) estimating the cost and the effects of the locust control on crops, pastures and livestock production; iii) optimizing the selection of control strategies, protection measures, and insecticides based on situational and environmental assessments; and providing safety and awareness training for spraying teams and other locust control personnel. Public awareness campaigns and a robust communication strategy will keep the public informed about possible environmental and health effects of insecticides, before, during and after locust control operations. Budget resources will be provided for appropriate mitigation measures to ensure that potential negative impacts arising from the use of pesticides are minimized to the extent possible.

17. Component 2: Livelihoods Protection and Restoration (US$19 million equivalent). This component will strengthen the coping mechanisms and livelihoods support for affected communities and vulnerable households; and, develop coping mechanisms to increase production and productivity to mitigate reduction of incomes and revenues in agriculture for enhanced adaptation and resilience. The overall objective of this component is to protect lives and human capital and to restore livelihoods of affected households, communities (including small holder, agro-pastoral and pastoral farmers) and vulnerable groups (including women and youth). The activities under this component will be limited to communities that have been negatively impacted by the locust invasions.

18. ***Sub-Component 2.1: Safeguarding Food Security and protecting Human Capital.*** This will involve LIPW. This sub-component will involve provision of seasonal income transfers to poor and vulnerable households in return for their participation in labor-based works purposely to avail cash and smoothen their consumption during the lean period. The activity also results in the creation of physical assets of value to the local communities. The LIPW implementation and the LRS complement each other. The LIPW will provide temporary employment to the most vulnerable households for a period of 54 days with daily wages of UGX: 5,500. Key areas of interventions will be in physical water and soil conservation activities, agro-forestry technologies and practices, agribusiness technologies that help build resilience through value chain development and shift to higher value crop production, and to a smaller extent access and market infrastructure. A 10 percent direct transfer shall be provided for poor and vulnerable households and groups such as women and youth without labor to participate in public works and when they do not

have enough and reliable support in the village. The beneficiary households will be required to form smaller savings groups at village to utilize their savings as revolving capital as well as to qualify to benefit from the Village Revolving Fund (VRF).

19. ***Sub-Component 2.2: Livelihoods Restoration Support (LRS).*** Through this sub-component, Government will: 1) implement the VRF that involves strengthening existing savings and investment groups at village level by provision of grants to boost their capital base. Under the VRF, a total of US$0.010 million will be availed to support initial cluster of four groups (each with average of 30 members) per village; 2) Implement the Household Income Support Project (HISP) that involves providing grants to invest in livelihood activities for household income earnings in targeted communities. This includes boosting commercial production such as in crops, livestock, beekeeping and fisheries. Under the HISP, the active poor are targeted through the Participatory Rural Appraisal methodology and are organized to work in groups. Each group is supported with a grant of US$5,000 to US$10,000 to invest in selected market-driven enterprises. The VRF will explore opportunities to prioritize the adoption of: (i) climate-smart crop and livestock practices for reduced GHG, enhanced resilience, and the implementation of livelihood support/diversification initiatives; (ii) agroecosystem management approaches that enhance resilience of farm and landscape to changes in climate and pests; and (iii) climate-resilient grazing, including legumes and grasses adapted to the local environment that increase biodiversity and landscape resilience. Leguminous species are also beneficial for climate mitigation, fixing atmospheric nitrogen and improving soil fertility.

20. Livelihoods Targeting. The targeting under the Livelihoods component shall follow a two-step process beginning with geographical targeting to identify and demarcate “watershed/catchment” upon which the component’s planning model hinges. A typical watershed boundary may fall within a sub-county (one or more parishes) or even across boundaries to adjacent sub-counties. The selection of watersheds will be based on five critical requirements that include: (i) severity of impact of locusts upsurge; (ii) levels of environmental degradation; (iii) spatial distribution of population (critical mass); (iv) absence of other players in the watershed management; (v) feasibility of success; (vi) potential for productivity (regeneration and improved agricultural production); and (vii) micro catchment areas for potential investments.

21. The second step shall involve community mobilization and sensitization in the target watershed and Household targeting using Participatory Community/wealth ranking for both Livelihood Restoration Support (LRS) and LIPW sub-components. The community will categorize households into ‘poorest of poor’, ‘poor’ and ‘non-poor’ and use the ranking to select the neediest persons to benefit from the project intervention. The identified persons will represent their households and become LIPW participants or recipients of household grants for HISP sub-components.

22. The VRF on the other hand will target, only in regions affected by the locust invasion, existing savings and investment groups with majority poor households (90 percent of households). The most vulnerable households under LIPW shall be categorized into: a) able-bodied households, i.e.: (a) households with able bodied poor and vulnerable adult men and women who will work in LIPW projects and in turn earn a daily transfer; and b) non-able bodied households (10 percent). Households without

able bodied adults men and women who will earn a transfer without participating in Labor intensive activities and they will include; child-headed households, households of elderly persons too old to qualify for public works, pregnant and lactating mothers, households of Persons with Disabilities (PWDs) among others.

23. ***Enhancing Transparency, Accountability and Anti-corruption*** will cover activities implemented by the IG to improve transparency, accountability, and anti-corruption efforts in the operation. In Uganda, the IG's office has the constitutional mandate for oversight of good governance in the use of public resources, and to ensure the prevention, elimination and/or prosecution of corruption and mismanagement in public projects. In line with its legal mandate, the IG shall independently implement activities aimed at strengthening transparency and accountability within the project. The component therefore aims to ensure that project is executed as planned, wastage of project resources minimized, and project performance and service delivery improved.

24. Component 3: Coordination and Preparedness (US$2.9 million equivalent). The objective of this component is to strengthen national capacities for surveillance, response mechanisms, and ongoing preparedness for preventing future locust infestations by supporting improved coordination strategies for effective surveillance, and prevention. Therefore, this component will finance activities related to the regional and national coordination for surveillance, and prevention measures countering the recurrence of locust crises.

25. ***Subcomponent 3.1: Regional level coordination.*** The regional dimension of the locust problem requires commitment from nations to manage a joint problem. Under this subcomponent, the proposed project will support activities aimed at strengthening the regional coordination capacity, strategies, method, and funding contributions to the regional level surveillance and control of Desert Locust. The main elements and activities of the subcomponent will include: (i) funding and participation in regional initiatives such as coordination of regional monitoring led by specialized organizations; (ii) technical support for regional coordination under FAO and the DLCO-EA; (iii) inter-country knowledge exchanges; (iv) participatory research into and identification of alternative technologies; and (v) support for and participation in regional training on surveillance, conferences, and use of modern technologies.

26. ***Subcomponent 3.2: National Level Coordination.*** Under this sub-component, the proposed project will support activities aimed at building and strengthening the national and sub-national coordination capacity of government agencies to execute locust management activities. At the national level, the proposed project will support: (i) the development and updating of national contingency plans for Desert Locust and migratory pest crises; (ii) the development of country risk management plans; (iii) strengthening national committees that coordinate inputs from development partners and oversee the execution of national campaign against the locust invasion; (iv) development of targeted locust campaigns based on accurate data, prioritized by potential impacts; and (v) establishment of dissemination mechanisms at both district and national level through print media, SMSs and radio/television talk shows, and mass sensitization workshops.

27. ***Sub-component 3.2.1: Stakeholder Engagement and Communications.*** The objective of this sub-component is to enhance communications about the Desert Locust and their debilitating impact on

affected communities, with a special focus on Stakeholder Engagement and Social Accountability. It will support the dissemination of information generated by the early warning systems; aid in the post swarm recovery and promote the resilience of communities as they rebound from the crisis. It will also support community awareness programs about the effects and risks of the locust swarms such as the right types of pesticides to be used and the appropriate mechanisms for their application in a sustainable manner. To ensure counterpart leadership of the communications process, communications capacity will be built within PCU for the effective implementation of a Communications Strategy, impact assessment and sharing of results achieved through this intervention. As part of the broader MPA learning agenda, the component will also contribute to knowledge sharing related to improvement of stakeholder communication approaches.

28. ***Sub-component 3.3: Preparedness to counter the recurrence of locust crisis.*** The successful prevention of Desert Locust plagues relies on regular monitoring, accurate analysis of risks, detection, and prediction. This sub-component will finance activities related to maintaining preparedness, including capacity building and training, and research to improve the knowledge of the Desert Locust insect biology and behavior. The key activities under this subcomponent are: (1) procurement and use of historic satellite imageries and spatial layers (soil, topography, water) to support preventative monitoring, risk analysis, detection and prediction; (2) Training and capacity building in remote sensing application and use of remote sensing data; and research on biological control, efficacy of the pesticides mixing and time; and the research on locust behavioral modeling.

29. Component 4: Project Management (US$5.5 million equivalent). This component will have two sub-components: (i) Project Administration; and (ii) MIS and M&E. The full structure for project coordination including roles and responsibilities will be clearly outlined in a PIM that will be prepared by the project team.

30. ***Sub-component 4.1: Project administration and coordination***. This will include: (i) facilitating the operations of the inter-ministerial technical committee and the national taskforce; (ii) support to field operations by the coordination unit; (iii) technical training and support from DLCO-EA (regional organization responsible for Desert Locust control); (iv) facilitate data collection, information sharing and early warning systems and hiring of Desert Locust control experts to support national efforts; (v) procurement of transport equipment to support national coordination; and (vi) facilitate district political and technical teams to create continuous awareness and information dissemination. The component will meet the operational costs of the PCU.

31. ***Sub-component 4.2: Management information systems.*** The sub-component will support activities related to: (i) monitoring inputs, outputs and processes; (ii) impact assessment of project interventions on target outcomes as well as environmental and social impact assessments; and (iii) generation of learning outcomes. The project will have one management information System based at MAAIF. However, the inspectorate of government and Livelihood Restoration Support will take advantage of the NUSAF 3 Management Information System but will be linked to MAAIF MIS developed under NUSAF 3 through Application Programming Interface (API). The project shall support the integration of the NUSAF 3 and MAAIF MIS systems.

F. Project Cost

Table 4.1 - Project Budget by Component for Uganda

Component	Amount US$	Sub-Component	MAAIF (US $)	OPM (US$)	IGG	UGX
1: Surveillance and Control Measures.	**20,406,676**	1.1: Pest surveillance.	5,245,484			19,408,291,579
		1.2: Control measures.	12,866,053			47,604,394,737
		1.3: Early Warning Systems.	768,863			2,844,793,684
		1.4: Risk reduction and management.	1,526,276			5,647,222,368
2: Livelihoods Protection and Restoration	**19,211,403**	2.1: Livelihoods Restoration Support				-
		VRF		7,000,000		25,900,000,000
		HISP		5,000,000		18,500,000,000
		2.2: Labor-Intensive Public Works and Disaster Risk Financing				-
		LIPW + DRF		6,075,137		22,478,006,900
		2.3 Enhancing Transparency, Accountability and Anti-corruption.			1,136,266	4,204,183,421
3: Coordination and Early Warning Preparedness.	**2,854,079**	3.1 Regional level Coordination.	1,909,868			7,066,513,158
		3.2 National level coordination and Stakeholder Engagement and Communication	515,789			1,908,421,051
		3.3 Preparedness to counter the recurrence of locust crisis	428,421			1,585,157,895
4: Project Management:	**5,527,842**	4.1 Project Administration and Coordination.	1,897,579	2,225,000		15,253,542,105
		4.2 Management information System, Monitoring & Evaluation	1,405,263			5,199,473,102
Total	**48,000,000**		**26,563,597**	**20,300,137**	**1,136,266**	177,600,000,000
	Proportion		**55%**	**42%**	**2%**	

III. IMPLEMENTATION ARRANGEMENTS:

A. Institutional and Implementation Arrangements

32. The Project implementation will involve several institutions at both the national and local governments levels. A PIM will describe institutional relationships at both national and District levels; their roles and responsibilities; the development and approval of Action Plans and annual workplans and budgets (AWP/B). At the national level, several ministries specifically Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Office of the Prime Minister (OPM/NUSAF 3), Ministry of Local Government (MoLG), and IG will be involved in ensuring guidance and oversight of the project. The IG will provide accountability and transparency oversight in the project. A PCU will be established within MAAIF.

33. Overall responsibility for project implementation will lie with MAAIF. A Project Coordination team comprised of senior level officials from the respective technical departments of MAAIF to take on responsibility for day-to-day management of the project. The OPM/NUSAF 3 will be responsible for implementation of the Livelihoods Support and Recovery component with technical support from MAAIF. A National Project Steering Committee (NPSC) will be formed to provide guidance and oversight to implementation at the national level. At the district Local Government (LG) level, the District Production Officers will be responsible for implementation for the project activities. The District Production Officers will also be the main link to the national level coordination. At the lower LG, institutional structures established under OPM/NUSAF3 will be adopted to support surveillance and reporting, and implementation of the Livelihoods Protection and Restoration components.

34. Given that the project will rely heavily on decentralized delivery mechanisms, the local governments (Districts) will have a key role in planning and oversight. To this end, each District will have a District Implementation Support Team (DIST), composed of relevant technical staff at the District, led by the District Production or Agriculture Officer. The DIST will meet regularly to discuss implementation activities, as well as activities generated by the communities. They will also be the focal point to reporting up to the sub regional level and national level. At sub-county level, a similar structure, Sub-county Implementation Support Team (SIST), will be established to ensure closer engagement at the sub-county level.

35. Early Warning and Response (EWR) Committees will be established under the Office of the Chief Administrative Officer (CAO) and will be responsible for surveillance and response to Desert Locust invasion reports from the sub-counties. At the Sub-county level surveillance teams made up of the youth will monitor and report on all Desert Locust sightings in the sub-county through their parish chiefs. A Sub-county Early Warning and Response (EWR) team composed of the Agricultural Officer, Community Development Officer, and Secretary for Production will receive and verify all locusts' sightings (with their GPS coordinates). At the village and parish level, NUSAF 3 has existing community -based structure (Community Project Coordination Committees, and Community Facilitators) who will monitor and provide sighting of locusts, to update the sub county EWR committees. The Community Facilitators, approximately 507 of them, have tablets and can collect GPS information on location and movement of the locusts. The EWR team will report all sightings in sub-county to the district EWR Committee for action.

36. Locust control regions will be created to facilitate decentralized responses to invasion especially in relation to ground control operations. The decentralized response will facilitate faster and shorter

response times by ground spray teams based in strategic locations with a decentralized command structure integrated under the Production Department of the zone host district.

37. During the upsurge, the Government deployed the military to undertake ground spraying (control) operations and has planned for their continued engagement as a rapid response force during possible locust invasions or outbreaks in the immediate future. The military role is envisaged as an integral stop gap measure aimed at complementing the longer-term institutional structures to be strengthened at national, regional, sub-regional and community levels. MAAIF, as the lead implementing agency will procure all the required equipment and materials (including pesticides and PPE) as well as training services for the UPDF to effectively implement locust control activities. There will be no direct procurement undertaken by the military, rather, procurement of goods and services related to control operations carried out by the military will be undertaken by MAAIF.

38. Linkages between the District Local Government and the UPDF will be strengthened through the District Surveillance Platform, whose membership includes the District Agricultural Officer (Chair), the District Entomologist and the Military Entomologist. Key decisions to undertake ground control measures are made on this platform. Information is relayed through the Military Entomologist to the Operations Base where the Military command then deploys a military (UPDF) spray team to undertake ground spraying. This is conducted in close consultation with the District officers and military personnel return to their respective bases upon completion of the operation. Furthermore, a key task that is currently being undertaken by the military through these ground control operations relates to collection of critical data on area sprayed, location of potential eggs etc. This data is consolidated through the District Surveillance Platform and used for decision making. All the District Surveillance Platform members have received training from FAO and have SOPs developed and in use. In the new operation, the IG will provide oversight over all district level project activities, including the UPDF ground spraying activities. Additional measures have been proposed in the ESCP that include undertaking a social risk analysis and development of an action plan to mitigate any potential risks. Based on the information provided through MAAIF, the role of the military operations is limited to “civilian” activities rather than pure security/law enforcement activities. As such, the assessment conducted so far plus future anticipated assessments are commensurate to the risk.

B. Monitoring and evaluation

39. The M&E activities will include regular monitoring of implementation progress and performance, independent process monitoring, including regular assessments of community-level planning and reviews of the effectiveness and quality of capacity-building efforts. In addition, baseline, mid-term and end-of-project as well as annual thematic studies including the assessment of the impact of the Desert Locusts on crops and pastures and on food and nutrition security of the affected populations shall be conducted

jointly between MAAIF and OPM. In addition, the project will also commission studies related to impacts of the COVID 19 on agriculture.

C. Financial Management

40. This project will leverage the existing FM and disbursement arrangements at the implementing entities- MAAIF, Office of the Prime Minister- NUSAF 3 (OPM- NUSAF) and IG. These entities are currently implementing IDA projects (e.g., RPLRP, ACDP, NUSAF 3) and have put in place robust systems that are working from the national, sub-national level to community level. It is these arrangements and systems that this project will be benefiting from.

41. The overall project FM risk is assessed "Substantial". Table 4.3 shows the constituent elements of the risk and their respective mitigation measures. The implementation of the mitigation measures will be reviewed, and the FM risk will be reassessed as part of the continuous implementation support on the project.

42. Planning and Budgeting. For each of the implementing entities, planning and budgeting policies, guidelines and procedures are documented in the FM manuals of the government and were found to be adequate. There is also a planning unit that is responsible for budgeting in the ministries. All other departments are involved in the budgeting process. The capacity of the accounting staff to fulfill budgeting needs of the project is adequate.

43. Accounting Arrangements. The project's transactions will be managed within the existing set-up at each implementing entity. The activities and transactions will be approved and authorized by the accounting officer. All transactions will be processed in accordance with GoU established policies, guidelines and procedures as stated in the Government's Treasury Accounting Instructions 2016 and the Public Finance Management Act 2015. Each of the implementing entities will have to designate a Project Accountant to manage the project funds. At the PCU in MAAIF, there will be a need to recruit a Project Accountant who will be responsible for the overall project FM. The project will use the IFMS software, which is a fully integrated computerized budgeting, accounting and reporting system.

44. Internal Control Arrangements. Under each of the implementing entities, the Project's transactions will be managed within the existing set-up. The activities and transactions will be approved and authorized by the officers. All transactions will be processed in accordance with GoU established policies and procedures— Government's Treasury Accounting Instructions 2016 and the Public Finance Management Act 2015. The procedures used by the ministry to maintain its records will include the requirement for cross references to supporting documentation in the IFRs, supporting schedules in order to facilitate the inspection of these schedules and improve the maintenance of the project's records. The manual describes the accounting system i.e. major transaction cycles of the project; funds flow processes; the accounting records, supporting documents, computer files and specific accounts in the financial statements involved in the processing of transactions; the list of accounting codes used to group transactions (chart of accounts); the accounting processes from the initiation of a transaction to its inclusion in the financial statements; authorization procedures for transactions; the financial reporting process used to prepare the financial statements, including significant accounting estimates and

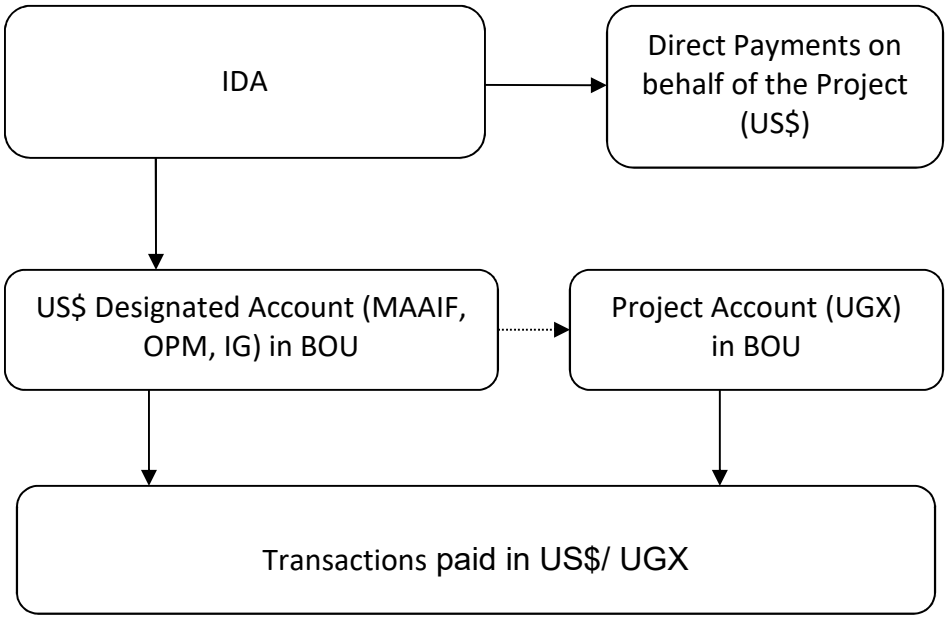
disclosures; financial and accounting policies for the Project; budgeting procedures; financial forecasting procedures; procurement and contract administration monitoring procedures; procedures undertaken for the replenishment of the Special Account; and auditing arrangements.

45. The internal audit units at the implementing entities as well as those at districts will be used to review the implementation of the project. Internal audits will be carried out every quarter given the nature of the operation. Internal audit units will be facilitated s part of the project management costs.

46. Funds Flow Arrangements. DAs will be opened at Bank of Uganda (BoU) for MAAIF, OPM-NUSAF and IG. The DAs will be maintained in US dollars. These designated accounts will receive transfers from IDA. These funds will be used to meet US dollar payments as well as transfer of funds to the local currency project account for meeting local payments in Uganda shillings. Once funds are transferred to the project account, payments will be made following the set government procedures.

47. The implementing entities will bear the fiduciary responsibilities for the funds deposited to their DAs and will fully account for these funds. Should any funds be found to have been used for purpose not intended, the respective implementing entity will have to refund the ineligibly spent funds. The figure below shows the respective funds flow arrangements.

Figure 4.1 – Fund Flow Chart: MAAIF, OPM/NUSAF and IG



48. Disbursement Arrangements. Report based disbursement will be applied. Initially requests for disbursement by MAAIF, OPM/NUSAF and IG will be made based on approved work plans and cash flow projections for eligible expenditures for six months. Subsequently, the World Bank will make advance disbursements from the proceeds of the project into the project DAs, based on cash forecasts of six months as presented by the project. Each of the three implementing entities have established effective

FM and accounting systems, which will facilitate six monthly disbursements. The project will need to: (a) sustain satisfactory FM rating during project supervision; (b) submit IFRs consistent with the agreed form and content within 45 days of the end of each reporting period- calendar quarter.

49. Financial Reporting Arrangements. The project will prepare quarterly Interim Financial Reports (IFRs) at the end of each quarter and submit to the Bank no later than 45 days after the end of each calendar quarter. The format and content of the IFRs will remain the same as the one currently in use by the implementing entities.

50. The annual financial statements will be prepared by each implementing entity in accordance with the relevant accounting standards. The IDA Financing Agreement will require the submission of audited financial statements to the World Bank within six months after the financial year end.

51. External Audit Arrangements. The Auditor General is primarily responsible for the auditing of all government projects. Should need arise, the audit can be subcontracted to a firm of private auditors, with the final report being issued by the Auditor General, based on the tests carried out by the subcontracted firm. The private firms to be sub-contracted should be among those that are acceptable to the World Bank. In case the audit is subcontracted to a firm of private auditors, IDA funding may be used to pay the cost of the audit. The audits are done in accordance with International Standards on Auditing. MAAIF, OPM and IG will submit an audit report to the World Bank within six months after the end of each financial year. The implementing entities have managed IDA projects and none of them has an outstanding audit report. No significant issues were raised in the project audit reports.

D. Procurement

52. The major planned procurement activities include: equipment for migratory pest detection, surveillance, spraying, FAO recommended pesticides, spray equipment, hire and leasing of aircrafts, personal protective gear, computer tablets, soft-wares to support migratory pest detection, surveillance and image processing, training and capacity building at various levels. Finalization of the streamlined PPSD has been deferred to implementation and will be submitted within 3 months of effectiveness with MAAIF taking the lead. An initial PP for the first three months will be agreed with the Borrower before effectiveness and updated during implementation.

53. The proposed procurement approach prioritizes fast track emergency procurement for the required goods, works and services and use will be made of the flexibilities provided by the World Bank's Procurement Framework. Key measures to fast track procurement include: (i) use of simple and fast procurement and selection methods fit for an emergency situation including direct selection / contracting, as appropriate; (ii) streamlined competitive procedures with shorter bidding time; (iii) extension of existing contracts where they include required goods, works and services; (iv) use of framework agreements including existing ones; (v) procurement from FAO and UN Agencies enabled and expedited by World Bank procedures and templates; (vi) increased thresholds for Requests For Quotations and national procurement, Consultants qualifications-based selection, among others. If requested by the Borrower, the World Bank may provide procurement HIES to help expedite all stages of procurement, including helping to draft technical requirements and specifications as requested by the implementing

agency, assisting the implementing agency in drafting procurement documents, providing advice on evaluation procedures, and participating as observers during negotiations by only clarifying matters of the World Bank Procurement Regulations. Advance contracting may be undertaken by MAAIF for critically needed services. To be eligible for World Bank financing the procurement procedures shall be consistent with Sections I, II and III of the Regulations. Advance procurement shall be at MAAIF's risk and any concurrence by the World Bank on the procedures, documentation, or proposal for award of contract, does not commit the World Bank to finance the procurements in question.

54. The project may face significant challenges in the procurement process for critically needed supplies due to significant disruption in the supply chain due to the COVID-19 pandemic. To deal with potential procurement delays the World Bank will support MAAIF in applying streamlined measures where: a) Bid Securing Declaration may be used instead of the bid security; (b) Advance payment may be increased to 40 percent provided it is secured with the advance payment guarantee; (c) The time for submission of bids/proposal can be shortened to 7- 15 days in competitive national and international procedures, and to 3 days for the RfQ. However, if bidders request an extension it should be granted.

55. Procurement implementation will be undertaken by MAAIF, OPM and the IG. The Agencies all have recent experience in implementing World Bank funded projects. In MAAIF, ACDP, the Uganda Multi Sectoral Nutrition Project (UMSNP - P149286) are ongoing, while the Agricultural Technology and Agribusiness Advisory Services (ATAAS - P109224, closed in June 2018). OPM and IG are IAs under the aforementioned NUSAF 3. All the projects are however not emergency operations and implementation follows the World Bank Guidelines. The last locust invasion in Uganda was over 70 years ago and the IAs do not have specific prior procurement experience in this regard. However, some planned procurements in MAAIF like pesticides, spray pumps and protective gear are similar to what the Agency procured while handling the Fall Army Worm. Use has also been made of FAO arrangements to procure mounted sprayers for vehicles. MAAIF staff thus have considerable similar experience. Procurements for OPM and IG will be done at the central government, local government level (Districts) and at community level. The latter will be guided by the procedures in the NUSAF procurement handbook. The Procurement Unit staffing for the three IAs is adequate in terms of numbers, qualifications and experience. All IAs will share with the World Bank the emergency approval processes and timelines to ensure that procurement processing is appropriately modified to accommodate the emergency nature of the project.

56. Procurement for the project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised in November 2017 and August 2018). The project will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, revised in January 2011, and as of July 1, 2016. The Project will use STEP to plan, record and track procurement transactions. The Bank's oversight of procurement will be done through increased implementation support, and increased procurement post review based on a 20 percent sample while the Bank's prior review will not apply.

E. Environment and Social Risk Management

57. Environmental Risk Rating – Substantial. The project will utilize the World Bank's ESF, which provides a holistic tool for identifying and managing environmental and social risks and opportunities in the design and assessment of the project. The project will finance the procurement of both synthetic pesticides and biopesticides and equipment. The application of the pesticides will cover almost a third of the Country impacted by the Desert Locust invasion that will potentially impact local populations dependent on natural resources for their livelihoods such as pasture and crop fields. Given the large area to be covered, the amount of pesticides to be used is large. The use and application of pesticides through ground and aerial spraying is likely to impact sensitive ecological areas such as water bodies, wetlands, national parks and reserves, forests, soils, pasture grasslands, standing crops, etc. This will easily be mitigated by mapping spray areas, establishing strict operational procedures and a judicious choice of pesticides (i.e. Biopesticides could be used in/near potentially sensitive areas). Also, use and application of the pesticides may pose adverse effects on the health of the workers on task teams and on local communities where both ground and aerial spraying may take place. This will be mitigated by providing appropriate PPE, training of workforce and testing and monitoring personnel involved in the locust control campaign for acetylcholinesterase before, during and after the campaign under Component 1.4. The testing helps to monitor exposure to chemicals and put in place a rotation of applicators to avoid/limit overexposure and potential health impacts. The design of locust control activities will adhere to the well-established EHS risk management processes developed by FAO. Technically, given availability of proven mitigation measures, adherence to SOPs, trained personnel, and close involvement of FAO for technical support should lower the potential risks associated risks with chemical pesticide. Thus, the environmental risk for this project is considered **SUBSTANTIAL**.

58. Component 1: Surveillance and Control Measures. The potential negative environmental risks and impacts associated with these Desert Locust control activities include: (i) Potential spillage or leakage of pesticides (considered hazardous materials) during transportation, handling, storage of the pesticides, dosage during treatment and disposal of used pesticide containers/drums; this will likely lead to the contamination of the environment and potential health hazards to the pesticides applicators and communities. MAAIF will manage these risks by adopting and complying with FAO Desert Locust Control Guidelines on safety and environmental precautions and other FAO technical guidelines on Ground Application of Pesticides, Aerial Application of Pesticides, personal protection when handling and applying pesticides, the use of WBG General EHS Guidelines and National legislations and regulation on use of Pest Control Products. Also, the Ministry will prepare and operationalize emergency preparedness and response procedures (as part of PMP) to manage any contamination or poisoning that may occur; (ii) Potential risks of polluting ecologically sensitive habitats such as wetlands, national parks, reserves and water bodies. The Ministry will carry out inventory of ecologically and agronomically sensitive areas and administer alternative treatment such as use biopesticides and undertake awareness-raising and provide relevant information to local communities on pesticide treatment schedules and potential negative impacts on them and their livelihoods. Personnel involved in the Desert Locust operations shall always be provided with adequate and appropriate PPE and be thoroughly trained on safety measures while undertaking respective tasks. The environmental and social risks related to this component will be managed before any environmental or social adverse impacts can arise from activities supported by project. MAAIF will prepare an ESMF for Component 1 activities and it will include detailed annexes of

IPMPs (including waste management measures), Gender Based Violence Action Plan and LMPs as appropriate for the country circumstances. Environmental monitoring of the Desert Locust control activities with environmental impacts, occupational health and safety and pesticides residue will be an important part of the ESMF.

59. Component 2: Livelihoods Protection and Restoration. The potential negative environmental impacts associated with the activities on this component include, potential soil erosion, dust emissions, generation of solid waste, occupational health and safety risks related to minor construction activities for the proposed construction of grain and seed storage facilities. The proposed activities related to supporting pastoralist communities undertake re-stocking of livestock may result to outbreak of animal diseases and potential degradation of the rangelands. OPM shall prepare an ESMF to cover Component 2 Livelihoods Protection and Restoration, and this will provide guidance on management of environmental and social impacts that may arise during project implementation. The ESMFs will be prepared and disclosed before disbursement of funds for Components 1 and 2.

60. Component 3: Coordination and Preparedness: Environmental and social risks associated with **Component 3** on early warning and response planning will ensure that the requirements of the ESF are considered in the preparation of any plans and documents. Other project instruments that have already been prepared and disclosed include the ESRS by the World Bank and SEP, and ESCP, disclosed on April 18, 2020.

61. The Project will be implemented by the MAAIF and OPM (NUSAF Secretariat). Both agencies have extensive experience implementing World Bank financed projects, under Agricultural and Social Protection programs respectively, for over 20 years. MAAIF will be supported by Safeguards Projects Specialists under ACDP and RPLRP, and the Social Protection Component will be implemented with support of Safeguards Specialist under NUSAF 3 and DRDIP. Currently, ACDP has no Environmental Specialist, and it is critical the S/he is recruited before commencement of project activities. The Project is working with FAO on the Desert Locust operations who are providing technical support to GoU through the Multi-Institutional Technical Team on the pesticide selection, applications and management. The Ministry has adopted FAO Desert Locust Guidelines, section 6. Safety and environmental Precautions issued 2003, which are aligned to GIIP in managing the environment, health and safety risks for this operation. The District Local Governments shall also be involved in the operations and will have key participation of their technical officers including District Environment Officers and District Community Development Officers. It is recommended that all Safeguards Staff be taken through Refresher Training on the application and implementation of Safeguards Instruments that are being developed for the project. Specifically, on Desert Locusts control activities, FAO shall provide the required technical training, working closely with the World Bank.

62. Social Risks: The social risk for the project has been rated as high. Given the project emergency context that MAAIF will have to implement the project, doubled with the current COVID – 19 situation, it is very likely this would pose a challenge for the PIU in handling social issues related to; targeting to avoid exclusion, stakeholder engagement due to limited movements, use of the Army heightening Gender Based Violence/SEA issues in the community.

63. Component 1: Surveillance and Control Measures. The already existing high rates of Gender Based Violence in communities is a key social risk that is anticipated to exacerbate exposure of women/girls to new household stresses and forced changes in livelihood strategies given the advent of locusts and COVID-19. As good practice, mitigation measures to deal with such issues need to be put in place to reduce such risk that is likely to be more pronounced with increased activities in the project areas by external contracted workers, mobilized community labor and the presence of military personnel undertaking control measures in the locust affected areas. Other risks associated with surveillance and control measures are: (i) the risks posed to human health by spraying locusts; (ii) risks to livelihoods in particular if the use of pesticides result in damage to crops, pasture and livestock; (iv) low community support due to poor communication and challenges in stakeholder engagement and grievance redress with all affected communities coupled with the COVID -19 restrictions; (v) the emergency nature of the project and the speed at which this component will be implemented might leave little room for effective and efficient consultation and engagement of the marginalize and vulnerable groups who meet the criteria of Sub-Saharan African historically underserved traditional local communities under ESS7. **Mitigation measures:** An ESMF and SEP developed will have an annex detailing measures of engaging with the vulnerable and marginalized group in the project area. Additional trainings including human right issues will be provided to external contracted workers, community youth engaged in ground control measures as well as the military personnel that are engaged in control interventions. In the case of the military, the UPDF chain of command would be used to provide guidance to its personnel directly involved in ground control operations with regard to human rights expectations and codes of conduct while working in locust affected areas. The PCU will recruit a Gender Specialist to deal with any issues of Gender Based Violence/SEA/H that may result from the project intervention and design mitigation measures. A Gender Based Violence Action Plan will be developed as part of ESMF. Continuous training and capacity building of the social safeguards team to ensure effective and efficient mitigation of social risk.

64. Component 2: Livelihoods Protection and Restoration. The primary social considerations under this component are: (i) exclusion of vulnerable or marginalized people and communities through inappropriate targeting of livelihood support or elite capture; (ii) labor management including sexual harassment; (iii) Gender Based Violence/SEA and community health issues from CTs; and (iv) community health and safety during LIPW; and (iii) issues around access to land for some LRS and LIPW activities and associated environmental and social impacts. **Mitigation measures.** The activities selected by the various communities' groups for support as appropriate and as per the procedure outlined in the POM shall be subjected to environmental and social screening following the set criteria in the project ESMF, and where necessary ESMPs developed before commencement of their implementation. The ESMF will include a Gender Based Violence Action Plan, labor management procedures and appropriate targeting measures to ensure equitable sharing of project benefits. The ESMF will also include an annex guiding the engagement of the Vulnerable and Marginalized people within the project scope.

65. In addition, livelihood restoration and protection activities require Gender Based Violence/SEA/H prevention interventions during receipt of CTs. Also, LIPW calls for additional measures to ensure safety of communities at work. The LIPW and early warning component would require screening of identified activities for adverse social impacts such as loss of land and resettlement. The mitigation measures that include labor management procedures, a clear exclusion and inclusion strategy and guideline, an

environmental and social impact screening and management mechanism and Gender Based Violence Action Plan will be incorporated in ESMF. An SEP develop to ensure stakeholder engagement throughout the Project and includes GRM and monitoring mechanism. The project Implementation manual shall detail out the targeting of beneficiaries and inclusion of vulnerable and minorities. As required, the ESMPs will be prepared for site specific sub-projects. Preparation of the instruments will be dependent on each IPF proposed activities and the risk assessment.

66. The social risk management for the project will depend on: (i) adhering to the Gender Based Violence Action Plan developed by MAAIF; (ii) adhering to the requirements of safe pesticide use and management international good practices, national guidelines and World Bank Environment and Social Standard requirements detailed in the IPMP/ESMF; (iii) ensuring a non-discriminatory, decent work environment; including by ensuring that all workers adhere to the professional code of conduct and establish a grievance mechanism within MAAIF developed as part of the LMP; (iv) implementing a SEP that ensures systematic communication and community outreach to create awareness and understand community concerns and resolve them in an effective and efficient manner using the existing GRM related to: (a) the potential benefits and risks; (b) awareness and prior information about pesticide spraying; (c) ensuring a tailored approach for locust infestation management in the communities through acceptable stakeholder engagement processes as spelt out in the SEP; and (d) ensuring participation of vulnerable and marginal communities, per ESF standards.

67. The management of social risks across both components, in particular stakeholder engagement and targeting activities, will be further complicated by restrictions in movement brought on by Covid-19 pandemic restriction in movements. The Social risk for the project is considered **HIGH** as the affected communities already have existing cases of Gender Based Violence/SEA/H and additional emergency interventions involving external contracted labor, community contracted labor as well as military involvement in ground spraying activities require pre-emptive measures to prevent any arising of additional risk**.**

68. A GRM is being tailored to respond to the needs of the project. The GRM will be designed to address concerns and complaints promptly and transparently with no cost or discrimination towards project affected communities. A grievance redress committee should be put in place starting from the community level including a clear tier for escalation of cases to the National level.

70. SEA/H and other forms for gender-based violence. Existing contextual risks may be heightened through key project-related risks, related to the targeting of women and children, disabled populations and other marginalized groups for project interventions. Emergency operations that increase human traffic to affected areas further exposes women and other vulnerable groups to Gender Based Violence/SEA/H: Mitigation: The project implementing teams will develop and implement measures and actions to regularly assess and manage the risks of SEA/H and other forms of Gender Based Violence extending from project activities, including key infrastructure elements as well as the receipt of CfW schemes by women and other vulnerable groups and SEA risks such as sexual favors for registration or release of funds. The PCU will engage a Gender Based Violence specialist dedicated to support oversight and management of these risks. Safety audits will be developed for all relevant activities to ensure

protection and security of affected communities and alignment with global protection standards. Monitoring of the management of Gender Based Violence risks will be an integral part of the project activities. The project will also ensure regular consultation and engagement with women and women's groups throughout the project to ensure equitable inclusion in project activities and to monitor potential risks that may emerge over the life of the project.

71. Security. Communal cross-border clashes amongst pastoral communities over cattle rustling, pasture and water are not unusual in the north eastern part of Uganda, one of the areas where locust control activities are to be carried out. The combination of relative insecurity in the area and anticipated presence of high numbers of people undertaking control operations could potentially raise community health and safety issues as well as general security concerns including the potential for increased social tensions. Mitigation measures under the project**:** To date to manage the potential risks in the deployment of the military in ground spraying operations, the military personnel involved have received training from FAO and follow SOPs developed and in use. These standards include proper use of pesticides and proper disposal of waste materials. The project sets forth a clear limited role of the military in carrying out select activities under Component 1 of the project**.** The project's ESCP contains measures and actions designed to mitigate various social risks (including those mentioned in the preceding paragraphs). The environmental and social risk management plans/ instruments that will be prepared under or pursuant to the ESMF will contain additional risk mitigation measures informed by the project's environmental and social assessment undertaken prior to disbursement of funds for Component 1 of the project. The operational manuals of the project may include other measures such as sensitization of the army and other security officers working in the area; monitoring of the ground spraying activities in the project area by the military through its chain of commands and involvement of local NGOs and CBOs) in sensitization of the community and assessing, reporting and responding to the issues like SEA/H. The IG will provide overall oversight on implementation dealing with complaints related to misappropriation and wrong targeting of beneficiaries**.**

72. Exclusion. In Component 2, on livelihood restoration , exclusion is likely to arise during targeting of the beneficiaries who have been affected by the locust invasion with households that have not been affected and the project being rolled out in the situation of COVID-19 means limited field involvement of project team. Elite capture by those in the community considering the circumstance within limited monitoring and supervision. Mitigation: the project is deliberately designed to ensure the inclusion of vulnerable groups, women and including minorities. Effective targeting and community consultation and a clear guideline of engagement and consultation of Indigenous people are important features of the project. This will include sensitization on the availability of a project grievance redress mechanism (GRM) and a SEP has been developed and disclosed and will be updated as needed.

73. Selection bias and elite capture. There is a risk of project benefits being diverted to ineligible and less-deserving locations and individuals. Mitigation: Full community participation in in the early phase of the project and transparent and inclusive government-led project prioritization exercise. The engagement of high capacity implementation support agencies such as local NGOs and CBOs to support in project monitoring adds another layer of confidence and credibility and to the process. Using sustained

stakeholder and community engagements and continuous monitoring of the GRM, concerns, complaints and grievances will be monitored and addressed appropriately.

IV. RISKS

74. Table 4.3 identifies the key risks that the project management may face in achieving its objectives and provides mitigation measures to address these risks.

Table 4.3: Financial Management Risks and Mitigation Measures

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Risk rating after mitigation
Inherent Risk			
Country Level-The 2016 PEFA report identified a number of weaknesses in the areas of risk management, multi-year budgeting, accumulation of arrears and lack of issuance of treasury memos to complete the accountability cycle. Challenges in enforcement of procurement procedures still exist.	S	A government led PFM Reform Program- FINMAP is under implementation to address issues of FM, procurement and its related enforcement. Increased commitment control in IFMS and E-procurement are being implemented. OAG has rolled out a risk-based approach in reporting audit findings meant to ease the work of scrutiny by Parliament through the Public Accounts Committee (PAC).	M
Entity Level Delay in preparation of management reports leading to delayed submission of IFRs. Delayed submission of financial statements.	S	Development of reporting timelines at various levels of reporting. Reviews and follow up by internal audit.	M
Project Level Risks associated with complex projects such as delayed funds flow, delayed reports, lengthy processes, circumventing of internal control systems/procedures.	S	Hold a fiduciary workshop to take the IAs through their fiduciary responsibilities as per World Bank guidelines. Designate specific staff to handle the project so to ensure that all concerned do understand their undertakings and responsibilities. Close follow up and review by internal audit.	M

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Risk rating after mitigation
Overall Inherent Risk	S		M
Control Risk			
Budgeting: Some project elements may be under coasted due to frequent price escalations. Budget overruns, failure by governments to co-fund the project. Failure by the implementing entities to monitor the budgets.	M	Project budget plans to be prepared in realistic and sufficient detail which will be used as a management tool. Close monitoring of variances between budgeted and actual expenditure. Budget process to involve all departments, units, sections and LGs. Budget revision and approval process to be set and adhered to. Revisions are to be carried out once a year- midyear and approved by top management and designated approving authorities.	L
Accounting: Failure to account for the funds advanced. Failure to maintain proper books of accounts. Inadequate staffing in the finance and accounting department. Transfer of experienced project staff from the project and Ministry. Ineligible expenditures arising from failure to account for funds advanced.	S	More staff designated to the project to be engaged at the ministry. Accountants to monitor the utilization of funds. Proper record and bookkeeping at all levels. There will be sanctions, such as withholding of next advances till reports and accountabilities are received, for delayed reporting. Continuous training and capacity building of project staff.	M
Internal Control: Weak internal control environment. Poor monitoring of the project. Failure by the internal audit function (audit committee and internal audit unit) to carry out its oversight function. Inability to follow up reported internal control weaknesses.	M	Strengthen the Audit Committees- build their capacity, expose them to international practices. Use qualified and experienced internal auditors who will review the internal control environment at all implementation levels. The general internal control environment will also be monitored by individual heads of departments. Link to the local government (LG) internal audit units. LG internal audit to report to central government PAC. Follow up of audit issues to be on the score card of internal audit department.	L

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Risk rating after mitigation
Funds Flow: Delayed release of funds	M	Timely accountabilities and financial reports from the implementing entities to trigger off release of funds. Close monitoring of release of funds by the head offices. Funds to be released on the basis of reports received.	L
Financial Reporting: Financial Information may be late and unreliable for purposes of preparation of required reports given that it will be coming from different levels throughout the country.	S	The participating institutions need to produce formats of unaudited IFRs that will be used for reporting. Realistic reporting timelines will be instituted and adhered to for each level. Introduction and adherence to reporting deadlines.	M
Auditing: Late submission of reports, no implementation of audit recommendations as well as qualified audit reports. No follow up on action taken to address audit findings.	S	The Auditor General is primarily responsible for auditing all government programs and projects. ToRs to be satisfactory to the World Bank. ToRs to include technical audit and detailed internal control review and testing. Early engagement/ appointment of auditors. Submission of action plans for follow up of audit recommendations. Follow up of action taken by internal audit. Capacity building of audit staff at all levels.	M
Overall control Risk	**S**		**M**
Overall Risk Rating	**S**		**M**

H – High S – Substantial M – Moderate L – Low

75. The overall residual risk is expected to be Moderate upon the successful implementation of the mitigating measures in the risk assessment and mitigation table above. These risks will be reviewed and measured (assessed) during each supervision mission and will be recalibrated with a view of getting a revised rating.

76. The key risks and preliminary risk mitigation action plan is indicated in the Table 4.4. The residual risks after the implementation of the mitigation measures proposed in Table 4.4 would be reduced to "Substantial".

Table 4.4 - Procurement Risks and Mitigation Measures

No.	Risk	Mitigation measures	Responsible Entity
a	Implementation delays due to slow procurement processing and decision making	a) Put in place a mechanism for tracking and monitoring of procurement processes to ensure expedited review and approval. b) Contracts Committee decisions to be issued within one day c) Timely initiation of requirements by User Departments d) Complete evaluation processes within five days.	MAAIF OPM IG
b	Non familiarity with use of World Bank Regulations	Seek World Bank guidance as need arises	MAAIF OPM IG
c	Incompleteness documentation uploaded in STEP	a) Mandatory uploading of all post review documentation in STEP b) Share with World Bank bi-weekly procurement progress reports showing performance of PP	MAAIF OPM IG
d	Poor record keeping evidenced in absence of key contractual records such as delivery notes, goods receipt notes, invoices, and payment receipts on procurement files	a) Assign a contract manager/s for each procurement b) Complete procurement files with contract management records within 3 days of completing respective activity c) Put in place a system that aids follow up and quick retrieval of contract management records.	MAAIF OPM IG
e	Global nature of the COVID-19 outbreak may create shortages of supplies and services resulting in price volatility, bidders offering short validity periods.	Put in place emergency procurement approval mechanisms and dedicated teams to ensure evaluation and contract awards are concluded in 3-5 days after receipt of bids; UN agencies may be used and other direct procurement methods as suggested by WB global procurement team.	MAAIF
f	Challenges of bids submission	Close monitoring of market trends to	MAAIF

No.	Risk	Mitigation measures	Responsible Entity
	due to COVID-19 movement restrictions imposed by many countries worldwide.	promptly propose and adopt more efficient procurement approaches and methods as need arises and update PP accordingly	OPM IG
g	Limited competition as a few competent bidders may refrain from submitting bids due to COVID-19 pandemic.		

77. The World Bank's oversight of procurement will be done through increased implementation support, and increased procurement post review based on a 20 percent sample. Prior review by the World Bank will not apply.

Table 4.5 – Uganda Arrangements for Results and Monitoring

Indicator Name	Definition/Description	Frequency	Data source	Methodology for Data Collection	Responsibility for Data Collection
Monitoring & Evaluation Plan: PDO Indicators					
Number of Districts and sub counties covered by the program	The indicate tracks the number of districts and sub counties covered by project or affected by the locusts	Biannually	Operational reports	MIS	PIU
Land Area sprayed (breeding and Roosting) through aerial and ground control operations as part of the project intervention	This captures area sprayed (breeding and roosting grounds) in square kilometers through aerial and ground operations supported by the project	Daily	MIS	MIS	PIU
Beneficiaries of Livelihoods Protection and Restoration reporting that their livelihoods have been restored or improved (disaggregated by type of intervention and gender)	This is captured as the number of households benefiting from the LPRS X the average number of members in a household	Quarterly	Operational reports	MIS	PIU
District with strengthened capacity to surveil, monitor and control locust as well as other migratory pest	Provides information on the number of districts who got the capacity to monitor and control locust as well as other migratory pests.	Annual	Operational reports	MIS	PIU
Monitoring & Evaluation Plan: Intermediate Results Indicators					
Comp 1: Locust Surveillance and Control Measures.					
Locust and migratory pest monitoring system operationalized (Yes/No)	Provides an assessment of the whether the country locust system is operational	Biannually	MAAIF MIS	MAAIF MIS	PIU
Number of early warning committees or institutions formed or strengthened to support surveillance and response operations to Desert Locust and another transboundary pest	This indicator captures functional EW committees that have been strengthened through but not previously existing to support response at different levels of government	Quarterly	Operational reports	MIS	PIU
Number of aerial and ground control operations undertaken or supported by the project	This indicator will collect the number operations undertaken to control the Desert	Daily	Operational reports	MIS	PIU

Table 4.5 – Uganda Arrangements for Results and Monitoring

	locusts- an operation involves planning and execution of spraying				
Number of Desert Locust swarms entering Uganda (by size and Age)	This indicator will capture the Desert Locust swarms entering Uganda based on the size categories large, small, medium	Quarterly	MIS	MIS	PIU
Quantity of pesticides used during the operations by type of pesticides (litres)	This will indicators will describe the total amount of pesticides used during spraying	Daily	MIS	MIS	PIU
Number of breeding and roosting grounds identified.	The indicator captures the number of the breeding and roosting grounds that the control teams have identified during surveillance	Quarterly	MIS	MIS	PIU
Average land area (ha) for the breeding and roosting ground	The indicator captures the average area of the breeding and roosting grounds that the control teams have measured during surveillance	Quarterly	MIS	MIS	PIU
Supported districts with locust control plans	Provides information on number of districts with locust control plans	Biannually	Operational reports	MIS	PIU
Component 2: Livelihood protection and restoration					
Number of savings and investment groups supported	Number of savings and investment groups trained and supported with resources	Quarterly	MIS	MIS	PIU
Number of Village Revolving Funds formed, supported	Number of Village Revolving Funds formed, supported	Quarterly	MIS	MIS	PIU
Number of beneficiaries of Livelihood restoration support activities disaggregated by gender	The indicator tracks the beneficiaries of livelihood restoration support activities (grants and VRF) disaggregated by gender	Quarterly	Operational reports	MIS	PIU
The percentage of beneficiaries' groups formed, supported and functional one year after formation	The is computed as the number of groups in operation/functional after year of support divided by total number of groups formed or supported by the project	Quarterly	MIS	MIS	PIU

Table 4.5 – Uganda Arrangements for Results and Monitoring

The percentage of land area (ha) of crop and range lands whose productivity has been restored	Will be calculated as the total number of crop and range lands whose productivity was restored divided by the total number of crop and rangelands affected by control operatiosnX100	Quarterly	Operational reports	MIS	PIU
Affected livestock holding households (number) receiving replacement livestock (Number)	Number of households who have lost livestock due to Desert Locust evasion and during control operations receiving replacement livestock	Quarterly	MIS	MIS	PIU
Land area under forestry as a result of the project intervention (Hectare (Ha))	this indicator captures Land area under agro-forestry as a result of the project intervention (Hectare (Ha))	Quarterly	MIS	MIS	PIU
Number of community infrastructure established as a result of the project intervention by type of infrastructure	Number of community infrastructure established as a result of the project intervention by type of infrastructure	Quarterly	MIS	MIS	PIU
Number of beneficiaries of cash for work activities	The indicator tracks the number of beneficiaries of cash for activities like the Labor-Intensive Public Works (LIPW)	Quarterly	Operational reports	MIS	PIU
Person workdays (number) generated by emergency cash-for-work schemes as a result of the project intervention	The indicator captures the number of person days generated from cash for work activities	Quarterly	MIS	MIS	PIU
Person workdays (number) generated by emergency cash-for-work schemes of which (percent) benefiting women (Number)	The indicator captures the number of person days generated from cash for work activities for women only	Quarterly	MIS	MIS	PIU
Share (percent) of beneficiary households self-reporting improved food security (Percentage)	This is computed as number of households self-reporting improved food consumption divided the number of beneficiary households X100	Yearly	Surveys	Surveys	PIU
Number of participating parishes with functional community monitoring groups	This indicator captures functional community monitoring groups that IG has supported to monitor project implementation	Quarterly	MIS	MIS	PIU

Table 4.5 – Uganda Arrangements for Results and Monitoring

Percentage of participating parishes in which social accountability is implemented using a community score card	This is computed as number of parishes in which social accountability was implemented divided the number of parishes where the project is being implemented X100	Biannually	MIS	MIS	PIU
Land area(ha) of affected agricultural and pasture land restored to productivity	This indicator tracks the land where crops or pastures had been lost due to locust infestation but were re-planted in awake of locust damage.	Biannually	Operational reports	MIS	PIU
Component 3: Coordination and Preparedness					
National locusts and migratory pest outbreak communication risk plan developed and tested	Assessment of functionality of the locust and migratory pest risk communication plan	Quarterly	MIS	MIS	PIU
Number of training workshops conducted by the project at the national, district, subcounty and community level	Number of training workshops conducted by the project at the national, district, subcounty and community level	Quarterly	MIS	MIS	PIU
Knowledge sharing and learning workshop organized by Regional Secretariat	Number of Knowledge sharing and learning workshop organized by Regional Secretariat	Quarterly	MIS	MIS	PIU
Awareness raising communications campaigns conducted	This number of campaigns and radio talks shows conducted	Biannually	MIS	MIS	PIU
MAAIF early warning unit team established and capacitated to monitor migratory pest (Yes/No)	If the unit teams created, trained in to mapping of Desert Locust and reporting	Biannually	MIS	MIS	PIU
Number of research articles on biological control, efficacy of the pesticides mixing, timing of application, locust mapping and impacts published in the world bank working paper series and in the international journals	Articles drafted, written and published in the world bank working paper series and in the international journals.	Yearly	Communication Reports	Communication Reports	PIU
Component 4: Project Management					

Table 4.5 – Uganda Arrangements for Results and Monitoring

The amount of the program funds (amount US$) disbursed within six months after the program effectiveness	The amount of the disbursed to the client six months after the project effectiveness out of the	Biannually	MIS	MIS	PIU
Number of grievances registered	The indicator captures the number of complaints received from the communities regarding the project implementation	Quarterly	MIS	MIS	PIU
Percentage of grievances registered and resolved (%)	This is computed as the number of grievances resolved divided by total grievances registered X100	Quarterly	MIS	MIS	PIU
The percentage indicators reported (%)	The indicators measure the performance of the project M&E in tracking project performance using the agreed project indicators	Quarterly	MIS	MIS	PIU