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IDA/R2019-0208/1

June 12, 2019

Closing Date: Monday, July 1, 2019
at 6:00 p.m.

FROM: Vice President and Corporate Secretary

Somalia - Water for Agro-Pastoral Productivity and Resilience Project
(The "Biyoole" Project)

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed grant from the IDA Pre-arrears Clearance Grant (PACG) resources to Somalia for a Water for Agro-Pastoral Productivity and Resilience Project (IDA/R2019-0208/1), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
President
Bank Group Senior Management
Vice Presidents, Bank, IFC and MIGA
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Report No: PAD3104

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED PRE-ARREARS CLEARANCE GRANT

IN THE AMOUNT OF SDR 30.4 MILLION
(US$42.0 MILLION EQUIVALENT)

TO THE

FEDERAL REPUBLIC OF SOMALIA

FOR THE

WATER FOR AGRO-PASTORAL PRODUCTIVITY AND RESILIENCE OR THE "BIYOOLE" PROJECT

June 4, 2019

Water Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2019)

Currency Unit =	Somali Shilling (SSHh)
SSHh 578 =	US$1
SDR 0.7262568 =	US$1

FISCAL YEAR
January 1 - December 31

ABBREVIATIONS AND ACRONYMS

AMISOM	African Union Mission in Somalia
BRCiS	Building Resilient Communities in Somalia
CDP	Community Development Plan
CERC	Contingency Emergency Response Component
CERIP	Contingent Emergency Response Implementation Plan
CMU	Country Management Unit
CPF	Country Partnership Framework
CQS	Selection Based on the Consultants' Qualification
DA	Designated Account
DALY	Disability-adjusted Life Year
EAFS	External Assistance Fiduciary Section
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization of the United Nations
FCV	Fragility, Conflict, and Violence
FRS	Federal Republic of Somalia
FM	Financial Management
FMIS	Financial Management Information System
FMS	Federal Member States
FSNAU	Food Security and Nutrition Analysis Unit
GBV	Gender-based Violence
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIS	Geographic Information System
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDP	Internally Displaced Person
IFC	International Finance Corporation

IFI	International Finance Institution
INGO	International Nongovernmental Organization
IPF	Investment Project Financing
IPSAS	International Public Sector Accounting Standards
IRM	Immediate Response Mechanism
ISA	International Standards of Auditing
LIPW	Labor-intensive Public Works
MIS	Management Information System
MoF	Ministry of Finance
MoPIED	Ministry of Planning Investment and Economic Development
MPF	Multi-partner Fund
MTR	Midterm Review
NDP	National Development Plan
NGO	Nongovernmental Organization
NPV	Net Present Value
OHS	Occupational Health and Safety
OPM	Office of the Prime Minister
PA	Project Account
PDO	Project Development Objective
PFM	Public Finance Management
PIU	Project Implementation Unit
PLFMIS	Puntland Financial Management Information System
PP	Procurement Plan
PPA	Public Procurement, Concessions, and Disposal Act
PPSD	Project Procurement Strategy for Development
QCBS	Quality- and Cost-Based Selection
RFB	Request for Bid
RFQ	Request for Quotation
RPF	Resettlement Policy Framework
RRF	Recovery and Resilience Framework
SCD	Systematic Country Diagnostic
SDR	Special Drawing Rights
SCoA	Standard Charter of Accounts
SEA	Sexual Exploitation and Abuse
SFMIS	Somali Financial Management Information System
SLFMIS	Somaliland Financial Management Information System
SoE	Statement of Expenditure
SomReP	Somalia Resilience Program
SPD	Standard Procurement Document
STEP	Systematic Tracking of Expenditure in Procurement
TTL	Task Team Leader
UN	United Nations
UNDB	United Nations Development Business
UNDP	United Nations Development Programme
UNICEF	United Nations Children’s Fund
US$	United States Dollar

VDC	Village Development Committee
WALP	Water for Agropastoral Livelihoods Pilot Project
WAPR	Water for Agro-pastoral Productivity and Resilience
WET	Wadi Evaluation Tool
WHO	World Health Organization

Regional Vice President:	Hafez M. H. Ghanem
Country Director:	Bella Bird
Senior Global Practice Director:	Jennifer J. Sara
Practice Manager:	Catherine Signe Tovey
Task Team Leaders:	Tesfaye Bekalu Wondem, Stephen D'Alessandro

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Somalia	Somalia - Water for Agro-pastoral Productivity and Resilience	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P167826	Investment Project Financing	B-Partial Assessment

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 Approval Date	Expected Closing Date
25-Jun-2019	28-Feb-2023

Bank/IFC Collaboration

No

Proposed Development Objective(s)

Develop water and agricultural services among agro-pastoralist communities in dryland areas of Somalia.

Components

Component Name	Cost (US$, millions)

Component 1: Support the Development of Multiple Use Water Sources	15.00
Component 2. Institutional and Capacity Development	6.00
Component 3: Supporting Sustainable Land Management and Livelihoods Development Around Water Points	9.50
Component 4: Project Management, M & E, Knowledge Management and Learning	9.00

Organizations

Borrower:	Federal Republic of Somalia
Implementing Agency:	Participating States and Somaliland

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	42.00
Total Financing	42.00
of which IBRD/IDA	42.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	42.00
IDA Grant	42.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
National PBA	0.00	42.00	0.00	42.00
Total	**0.00**	**42.00**	**0.00**	**42.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023

Annual	0.83	6.90	9.92	13.72	10.63
Cumulative	0.83	7.73	17.65	31.37	42.00

INSTITUTIONAL DATA

Practice Area (Lead)

Water

Contributing Practice Areas

Agriculture, Fragile, Conflict & Violence

Climate Change and Disaster Screening

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

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

9. Other	Substantial
10. Overall	High

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

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36		✓
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37	✓	
Projects on International Waterways OP/BP 7.50	✓	
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

The Recipient shall not later than two (2) months after the Effective Date, establish, and thereafter maintain, throughout the implementation of the Project, an inter-ministerial steering committee (Steering Committee) at the federal level with functions, composition and resources satisfactory to the Association.

Conditions

Type	Description
Effectiveness	The Recipient has recruited and/or designated a project coordinator and a monitoring and evaluation specialist to the National Project Coordination Unit, with experience and under terms of reference acceptable to the Association.
Type	Description
Effectiveness	The Recipient has prepared and adopted a project operation manual, in form and substance satisfactory to the Association.
Type	Description
Effectiveness	A Subsidiary Agreement has been executed on behalf of the Recipient and each Participating State and Somaliland in accordance with the provisions of Section I, Part D of Schedule 2 to this Agreement, in form and substance satisfactory to the Association.
Type	Description
Disbursement	the Recipient has determined that an Eligible Crisis or Emergency has occurred, has furnished to the Association a request to include said activities in the CERC Part in order to respond to said Eligible Crisis or Emergency, and the Association has agreed with such determination, accepted said request and notified the Recipient thereof;
Type	Description
Disbursement	the Recipient has prepared and disclosed all safeguards instruments required for said activities, and the Recipient has implemented any actions which are required to be taken under said instruments, all in accordance with the provisions of Section F of Schedule 2 to this Agreement;
Type	Description
Disbursement	the Recipient's Coordinating Authority has adequate staff and resources, in accordance with the provisions of Section F of this Schedule 2 to this Agreement, for the purposes of said activities; and
Type	Description
Disbursement	the Recipient has adopted a CERC Operations Manual in form, substance and manner acceptable to the Association and the provisions of the CERC Operations Manual remain - or have been updated in accordance with the provisions of Section C of this Schedule 2 so as to be appropriate for the inclusion and implementation of said activities under the CERC Part.

[dd

I. STRATEGIC CONTEXT

A. Country Context

1. After more than two decades of insecurity and humanitarian crises, Somalia is establishing the foundations for a new political settlement. An Agreement on a Provisional Constitution in 2011 and the subsequent establishment of a new Federal Republic of Somalia (FRS) opens a new chapter for Somalia's development and offers hope for a stable future based on a federal model. Since 2011, Al Shabab's territorial footprint has narrowed and the insurgency has mainly resorted to asymmetric attacks focused on Mogadishu.

2. New Federal Member States (FMS) have emerged in the past five years, but the federation process is complex. State formation is both a significant development opportunity and a contentious process. Urban areas in southern Somalia, formerly under Al Shabaab control, are now the capitals of newly formed FMS and responsible for subnational administration, including service delivery. While state formation provides an opportunity for Somalia's governance and service delivery, it has also opened new uncertainties over representation and power and resource sharing. Meanwhile, Somaliland's relationship with Somalia remains unresolved.

3. Somalia's economic development challenges are equally daunting, and growth remains insufficient for reducing vulnerability for a large segment of the population. Between 2013 and 2017, Somali real gross domestic product (GDP) is estimated to have grown at an average of 2.5 percent per year while population grew by 2.9 percent per year. The result has been an annual contraction in per capita incomes of 0.4 percent during the same period, leaving GDP per capita at just over US$500. Growth is mainly consumption driven, enabled by large remittance and aid inflows (US$1.4 billion and US$1.75 billion respectively in 2017), while construction, telecommunications, and money transfer services have been the key growth sectors. The diaspora remittances enable household consumption at 132 percent of GDP and represent an important component of income for the bottom 40 percent of households. Half of Somalia's estimated 12 million people live in rural areas, pursuing pastoralist and agro-pastoralist livelihoods. The agriculture sector remains the backbone of the economy and accounts for about 75 percent of GDP among the highest in the world. Livestock alone accounts for about 40 percent of the sector's 79 percent share of export earnings, bringing in over US$500 million a year.

4. Somalia is highly vulnerable to natural disasters, having experienced at least 14 drought events since 1960.[1] Rural Somalia remains acutely poor and subject to repeated cycles of devastating droughts averaging once in every four years. By February 2017, over 6.2 million Somalis needed humanitarian assistance. While famine was averted, there were nearly 400,000 cases of acute child malnutrition and an additional 1 million people displaced to rapidly expanding urban settlements and camps for internally displaced persons (IDPs). Losses in the livestock sector from the 2016/17 drought were estimated at US$2 billion with herd losses reported at between 40 percent and 60 percent. Just as Somalia was recovering from the drought, flooding in the upper Shebelle area during the first half of 2018 displaced over 230,000 people and affected over 600,000. Between 2006 and 2018, Somalia experienced five major flood events, affecting hundreds of thousands of people. Now, in 2019, Somalia is entering another crisis, with *gu* rains failing following abnormally low *deyr* rains, causing widespread crop failure and accelerated decline in

[1] Masih, I., S. Maskey, F. E. F. Mussá, and P. Trambauer. 2014. "A Review of Droughts on the African Continent: A Geospatial and Long-Term Perspective." *Hydrology and Earth System Science* 18: 3635–3649.

livestock productivity. This is likely to result in the numbers of people in crisis and emergency to climb back up to 2016/7 levels of around 2.2 million – and humanitarian financing is proving harder to mobilize.

5. Climate change is further exacerbating the situation, intensifying these droughts and floods. The Center for Global Development places Somalia at the top of the list of 167 countries for overall vulnerability to climate change adjusted for coping capacity.[2] In addition to an intensification of droughts and floods, increasing variability of between these two extremes is also expected over the coming decades. Projections of warming across Africa vary from 0.2C per decade to more than 0.5C per decade. In the short term, rainfall is predicted to increase by 7 percent across Eastern Africa. The amount of rainfall is less important to farmers than how closely its timing correlates with the planting season and the geographic distribution of the rain, and both are expected to become more irregular with climate change.[3] Moreover, Somalia is projected to experience a nearly 2C increase in maximum daily temperatures, which could stress crop productivity thresholds and endanger livestock. Thus, adaptation measures to address these increasing risks are at the core of this project and are embedded in the technical design of the proposed operation. This project is therefore critical for dampening the impacts of climate change by providing improved access to water and strengthening the adaptive capacity and livelihood resilience of rural communities to restore elements of their landscapes, thereby reducing the frequency and impacts of climate change and extreme weather events.

6. Over half of Somalia's population lives below the international poverty line.[4] Somalia's under-five mortality rate is 137 per 1,000 births. Data on stunting of under-fives is limited with estimates ranging widely from 12 percent to 38 percent.[5] Three-quarters of the population are under 30 and access to education is marred by gender inequality. The adult literacy rate is the lowest in the world, especially among women and girls. Primary school enrollment is below 50 percent and less than a tenth of school-age children attend secondary school. Somalia's youth bulge, coupled with high rates of unemployment, is a major challenge. Over two-thirds of urban households have access to basic water services, but only 20 percent of rural households do, and less than 10 percent have basic sanitation or hygiene.[6] Only about one-fifth of the population has access to electricity.

7. The Systematic Country Diagnostic (SCD)[7] (Report No. 123807-SO), identified the country's 'fragility trap' as two interconnected cycles: a short-term cycle of fiscal governance political turbulence and a longer-term cycle of natural disaster displacement vulnerability. The SCD applied a wealth accounting framework, bringing to light the depletion of assets, particularly natural capital, which creates vulnerability to shocks. The framework first assessed the stocks of various natural capital assets such as land, forests, fish, and minerals; productive assets such as buildings, machinery, infrastructure (highways

[2] The survey ranks countries across four dimensions of climate impact: extreme weather, sea-level Rise, agricultural productivity loss, and overall. Rankings are based on a comprehensive dataset described in a new working paper "Quantifying Vulnerability to Climate Change: Implications for Adaptation Assistance," by the Center for Global Development (CGD) senior fellow, David Wheeler, and can be accessed at http://www.cgdev.org/page/mapping-impacts-climate-change.
[3] Stimson. 2011. Climate Change and Famine in Somalia. (*https://www.stimson.org/content/climate-change-and-famine-somalia*)
[4] Poverty is estimated using the international US$1.90 2011 purchasing power parity (PPP) poverty line.
[5] Food Security and Nutrition Analysis Unit (FSNAU) report 12 percent post Deyr 2015/16 while the 2006 Multiple Indicator Cluster Survey (MICS) reports 38 percent.
[6] United Nations Children's Fund (UNICEF)/World Health Organization (WHO) Joint Monitoring Program https://washdata.org/data#!/som.
[7] Somalia - Systematic Country Diagnostic; *http://documents.worldbank.org/curated/en.*

and ports and electricity generation); human assets (population, education, and health); and various forms of intangible capital; and then defined the process of development as one of accumulating a diversified portfolio of national wealth.

8. Breaking out of this fragility trap will require the country to sustain the reform and growth of public institutions that can win peoples' trust through transparency and fair delivery of basic services and that broaden economic opportunities, especially to the young. However, with a tax base of just 2 percent of GDP[8] and only a nascent civil service, the reform and growth of public institutions capable of overcoming this fragility trap will need to focus investment across a carefully selected range of public functions that enable, rather than displace private, civic, and community institutions.

B. Sectoral and Institutional Context

9. Roughly half of the Somali population lives in rural areas and derives their livelihoods from animal herding and crop cultivation. As set out in the 2018 Country Economic Memorandum,[9] the livestock and crop subsectors remain critical to economic recovery and long-term development. Despite the challenges of the past three decades, the livestock and crop subsectors remain the main sources of economic activity, employment, and exports. Half of the rural population pursues nomadic pastoralist livelihoods, while the other half pursues agro-pastoral livelihoods comprising a mix of settled crop production and livestock rearing.

10. Somalia faces declining agriculture production and a widening gap between food production and consumption, estimated at more than 2 metric tons per hectare. The country's crop production depends on an increasingly narrow and fragile natural resource base and an arid and semiarid climate that has become drier, more extreme, and more variable in recent decades due to climate change. Widespread environmental degradation, fueled by, among other factors, the breakdown of traditional pastoral and clan-based land management systems, demographic pressures, and the unsustainable exploitation of groundwater, rangelands, and forests, threatens traditional livelihoods systems and the country's food security. Domestic cereal output, averaging about 265,000 tons a year, has declined nearly 60 percent from its 1989 peak and provides less than one-quarter, on average, of per capita cereal needs. Declining crop production has fueled a large increase in agricultural imports, including food aid, reaching US$1.5 billion in 2015, up from US$82 million in the late 1980s. Even before the 2016/17 drought, food aid and food imports were already larger than domestic production of grains.

11. Somalia's livestock sector has rebounded markedly, but considerable downside risks remain. Substantial investments have been made by the diaspora, Saudi-controlled companies, and some donors. They have resulted in impressive export growth and fueled a dramatic expansion in livestock's relative economic importance. After roughly a tenfold increase in live animal exports in recent decades, the subsector today accounts for an estimated 79 percent of total export earnings and is the largest source of foreign exchange after remittances. In 2015, Somalia exported a record 5.3 million head of livestock to Gulf markets, worth an estimated US$533 million. The 2017 drought in the country had a devastating effect on the livestock subsector; the volume of live animal exports declined by 75 percent, from 5.3 million animals in 2015 to 1.3 million in 2017. In addition, production constraints related to nutrition,

[8] Compared to 15 percent to 20 percent of GDP across other low-income countries.
[9] World Bank, and FAO (Food and Agriculture Organization). 2018. *Rebuilding Resilient and Sustainable Agriculture in Somalia: Volume 1 - Main Report* (English). http://documents.worldbank.org/curated/en/781281522164647812/pdf/124651-REVISED-Somalia-CEM-Agriculture-Report-Main-Report-Revised-July-2018.pdf.

disease, genetic resources, and poor resource management are compounded by structural and institutional weaknesses that impede value addition and amplify exposure to climate and other shocks. This is best evidenced by an estimated 50 percent drop in live animal exports linked to Saudi Arabia's import ban during 2017 and US$2 billion in livestock damages and losses during the 2016/17 drought period (due to a combination of lack of water and pasture).[10] Recurring export bans due to alleged disease outbreaks not only dampen critical foreign exchange earnings, but also impede sector diversification and growth.

12. Revitalizing crop production and making livestock systems more resilient to shocks requires overcoming foundational issues of water and environmental management. Most of Somalia is arid or semiarid with mean annual rainfall of 200–300 mm per year and high inter-annual and spatial rainfall variability. Two permanent rivers, the Shebelle and the Juba, flow from Ethiopia into southern Somalia. Both river basins provide much-needed surface and groundwater for irrigation and to sustain fertile alluvial flood plains covering an area 174,600 km^2. Before the Central Government collapsed in 1990, over 220,000 ha along the flood plains in the middle and lower reaches of the Juba and Shebelle Rivers, were under either controlled irrigation or flood recession farming. Today, much of the irrigation infrastructure remains in disrepair with only 100,000 ha under cultivation.[11]

13. In many African countries, groundwater sources from boreholes provide water for domestic use, livestock, and irrigation. In Somalia, however, groundwater sources are technically demanding to identify and exploit because aquifers are deep (more than half the boreholes are over 130 m deep with some over 400 m) and water within aquifers is often of low quality (salty or hard), which makes it unsuitable as drinking water or for irrigation.[12] Costs for drilling and equipping these deep boreholes are high, ranging between US$0.5 million and US$1 million due to a combination of physical, market, and security conditions.[13] In 2014, the Food and Agriculture Organization of the United Nations (FAO) mapped 3,700 water points across the country. Only 2,200 were functional and perennial under normal non-drought conditions. Of these, only around 500, mainly deep borehole groundwater sources, were improved sources.

14. While boreholes can play an important role in ensuring water security for people, they are associated with environmental degradation. The yield of groundwater-fed boreholes is less vulnerable to short-term fluctuation in rainfall than other sources such as berkads, open dams, shallow hand-dug wells, and springs. This makes boreholes an important source of water in times of severe drought especially for humanitarian response and particularly in non-riverine regions of Somalia. However, heightened pressures on pasture around these boreholes during drought events can cause long-term damage to the surrounding rangeland, creating so-called 'sacrifice zones'. Deep boreholes are also not a good solution for increasing agricultural productivity because their operation and maintenance costs are much higher than from shallow water sources and challenges related to water quality (for example, high salinity).

15. Based on recent experience, opportunities exist to enhance rural communities' access to water across Somalia's dry lands by deploying low-cost, small-scale water harvesting and storage technologies

[10] Federal Republic of Somalia. 2017. *Somalia Drought Impact and Needs Assessment: Synthesis Report*.
[11] The area currently under irrigation is roughly 50–61 percent of what it was prewar. Just before the collapse of the Government, the Somali Ministry of Agriculture estimated that 112,950 ha were under controlled irrigation and 110,000 ha were under flood-recession irrigation for a total irrigated area of 222,950 ha.
[12] FAO Somalia Water and Land Information Management (SWALIM). http://fmt.faoso.net/imms/fmt/maps/website/227.
[13] UNICEF Somalia, personal communication.

and without exacerbating conflict (see Box 1). Rivers in northern Somalia, and in areas other than the Juba and Shebelle Valleys, are ephemeral with water flowing for very short periods during the seasonal rains. Following seasonal rains, water infiltrates into shallow aquifers that last for only a few months of the year. Around these shallow aquifers, there is a small but growing horticultural production base selling vegetables to urban areas and improving rural incomes. Pilot projects in Puntland and Somaliland, including the World Bank-financed Water for Agropastoral Livelihoods Pilot Project (WALP, P152024), have demonstrated that water harvesting and storage in these dry lands can be increased through investment in small dams such as sand dams, subsurface dams, and infiltration galleries.[14] Sand dams, in particular, are experiencing a renewed interest because of their relative simplicity and their potential in enhancing the resilience of marginal dry-land environments. Studying the impacts of sand dams in Kenya on vegetation biomass, Ryan and Elsner (2016) concluded that sand dams hold strong scope to improve the adaptive capacity of dry lands by helping sustain vegetation biomass during drought periods.[15] Increased water availability supported by improved vegetation biomass and soil management means better potential to support agricultural activities and food production, and thus increased resilience to climate change and other risks.

Box 1. Addressing Conflict Risks and the Needs of Nomadic Pastoralists

In Somalia, as elsewhere in the Horn of Africa, localized conflicts between farmers and herders, and between different pastoralist groups, frequently revolve around issues of contested land use, grazing rights, and insecure access to water and pasture. Scarce and under increasing pressure, these resources must be shared with rural farming communities and the needs of growing urban centers. Expansion in recent decades of private enclosures on traditionally open communal rangelands, especially along livestock migration routes, increasingly jeopardizes the mobility of pastoralist communities, thereby weakening their capacity to cope with adverse climate conditions. Existing tensions and conflict risks are amplified during extended dry periods—the frequency and intensity of which have increased in recent decades—when pastoralist livelihoods become particularly precarious. In the absence of provisions to assist pastoralists to safeguard their capital stock during emergencies and otherwise recover from the shock, resulting economic insecurity and deprivation increases the risk of wider violence and social breakdown. Moreover, political and socioeconomic marginalization of pastoralist communities and policies that either neglect or undermine traditional governance and arbitration mechanisms have, over time, weakened resource management and conflict resolution capacities among rural communities.

The World Bank is well positioned to support the FRS in delivering services to rural communities in Somalia's marginalized dry-land areas. The current project design emphasizes a learn-by-doing approach to generate new understanding about (a) the current dynamics of nomadic pastoralist systems in Somalia; (b) the specific needs of pastoral communities, and their relationships with other livelihood groups including landed farming and agro-pastoralists communities; (c) reforms of regulations and land tenure rights relating to access to pasture land and water for communities, especially nomadic pastoralists; and (d) mechanisms needed to ensure emergency access for pastoralists to water and pasture and fodder during droughts. These lessons will inform downstream interventions designed to mitigate drivers of vulnerability and conflict, build trust within communities, and strengthen resilience. The project will also look to strengthen participation of pastoralists in consultative and decision-making processes and to support customary approaches and traditional governance systems for managing competition over natural resources and conflict resolution.

[14] These technologies protect water from high evapotranspiration rates by holding the water in shallow sand aquifers that can be used to supply limited amounts of water for domestic, livestock, and agricultural uses.

[15] Ryan C., and P. Elsner. 2016. "The Potential for Sand Dams to Increase the Adaptive Capacity of East African Drylands to Climate Change." *Regional Environmental Change* 16 (7): 2087–2096.

16. Reestablishing a rationalized public sector role in agriculture will help reintegrate markets for private goods with support for public goods and extend the reach of services across the country. Over the past decade, the private sector has moved in to fill service delivery gaps, with increasing diaspora investments[16] taking advantage of Somalia's lack of restrictions on capital transfers and low barriers to market entry. Commercial suppliers are stepping in to market new seed varieties and agrochemicals, while networks of private veterinary associations provide animal health services. This has spurred the regrowth of agricultural knowledge and innovation systems for private goods where there is favorable access to urban markets (for example, for veterinary drugs, improved seeds, and fertilizers). While much aid has also been channeled to public goods and knowledge (for example, climate-smart land management technologies to improve soil, water, and rangelands management) through the United Nations (UN) and civil society organizations to more remote areas, this has largely bypassed nascent public sector institutions. Reintroducing a core public sector role in agricultural innovation systems is essential to helping traditional rural livelihoods recover and become more resilient to climate change.

17. Following the February 2017 Presidential election, the FRS is better positioned to coherently address the numerous challenges associated with rural development. Somalia's National Development Plan (NDP), the first in more than 30 years, set out the country's priorities for national recovery and development for 2017–2019. The plan sets ambitious targets for peacebuilding, state building, and the Sustainable Development Goals structured around nine pillars across the humanitarian-development-peace continuum. Agricultural development improved natural resource management, and upgrades to infrastructure (water and roads) are top priorities to boost economic growth, help cement peace and security, alleviate poverty and malnutrition, and enhance health and nutrition outcomes in both rural and urban areas. Investment in rural development is also expected to strengthen the resilience of communities against internal and external shocks, such as climate change and conflict. These objectives are also aligned with the recently completed Recovery and Resilience Framework (RRF) developed following the 2016/17 drought.

C. Relevance to Higher Level Objectives

18. The Country Partnership Framework (CPF, Report No. 124734-SO), was approved by the World Bank's Board of Executive Directors in September 2018 and covers the period 2019–2022. The CPF is based on the priorities of the current NDP and the priority sector plans such as the Public Financial Management (PFM) Action Plan, the Financial Sector Roadmap, the Education Sector Strategic Plan, the Drought Impact Needs Assessment, and the follow-up RRF. In addition, Somaliland also has a bespoke NDP 2017–2021. The activities selected in the CPF were based on the three filters: (a) building on the World Bank Group comparative advantage in Somalia; (b) addressing conflict drivers; and (c) managing access and security. Investing in water infrastructure, environmental management, and agricultural innovation to diversify and strengthen resilience of dry-land rural communities were specifically integrated into the CPF (Objective 2.4) under its second area of focus which aims at restoring economic resilience and opportunities.

19. With its debt arrears outstanding, Somalia is ineligible for assistance from IDA and other

[16] A 2014 survey highlighted that more than 50 percent of sector investments by the Somali diaspora were directed to agriculture. See Benson, Jay B., Lindsay L. Heger, Lee C. Sorensen, and Alexandria E. Wise. 2014. *Somalia Diaspora Investments Survey Report: Typologies, Drivers, and Recommendations*.

international finance institutions (IFIs) but the World Bank Group's re-engagement in 2012 funded by the Multi-partner Fund (MPF) has helped stabilize institutions and initiate IFI normalization. With support of eight key donors, the MPF has enabled the World Bank Group to strengthen federal institutions and establish basic economic regulatory foundations. The MPF will remain the core financing vehicle for the CPF but is complemented in FY19 by IDA Pre-Arrears Clearance grants of US$140 million targeting acceleration of Decision Point under the Heavily-Indebted Poor Country (HIPC) Initiative as well as immediate country needs. Provided its reform momentum continues, the Decision Point is feasible within the CPF period, allowing Somalia access to concessional resources from IDA and other IFIs, together with investment of private capital from the International Finance Corporation (IFC).

20. The World Bank is a relative newcomer in a crowded development field in Somalia, but brings comparative advantages in supporting institution building, on-budget financing, and in the market/state interface. At present, the World Bank portfolio represents approximately 8 percent of Somalia's total official development assistance). Other donors including U. K. Department of International Development, European Union, German Agency for International Development (*Gesellschaft für Internationale Zusammenarbeit, KfW*), Norway, Sweden, and the United States are playing a major role in financing rural community-based resilience either through joint UN programs or directly implemented by nongovernmental organizations (NGOs) or private sector contractors. The protracted humanitarian situation and limited use of country systems has led to a fragmented aid environment, which unless managed, will continue to undermine the capacity of national institutions and state-building initiatives. Relative to the other main actors, the World Bank's comparative advantage in Somalia has been to strengthen institutions at the national and subnational level, through the establishment of clear norms and standards. The World Bank therefore takes the lead in capacity building of government institutions, mainly focused on the public finance and civil service functions but also extending to regulation in key economic sectors, including financial services, energy, and telecom. By channeling funds through government systems, the World Bank introduces fiduciary, social, and environmental standards in the Government around which new practices and capacities can form. Until now, the World Bank has channeled more than US$100 million through these country systems. The modalities used allow the World Bank to play a strong convening role both for national and international actors. The World Bank finances and supports an annual Aid Flow analysis by the Aid Coordination Unit of the Government, which allows increased visibility on who is doing what and where. The World Bank has also facilitated dialogue between public and private sectors.

21. The proposed grant will scale up water delivery in the arid northern regions while incrementally expanding geographically into states in the south of Somalia. This national program of water resource development will build capacity of the nascent FMS and rural communities in the south to plan, deliver, and sustainably manage water infrastructure for improved livelihoods. The menu of water resource development options will be expanded from small dams to include technologies appropriate for developing groundwater resources. Emerging lessons from the project and other interventions supporting resilient rural livelihoods emphasize the need to also strengthen community-led watershed management and promote the uptake of productivity-enhancing technologies and practices. Thus, the new project will also finance community planning, mobilization activities, and the delivery of livelihood support services.

Box 2. Drawing Lessons from WALP

As the first World Bank-financed rural infrastructure project in Somalia in more than 20 years, WALP was intended to be a first step in a longer journey of World Bank reengagement in rural livelihoods support in Somalia. As a pilot project funded by the World Bank's State and Peacebuilding Fund, WALP was designed to generate lessons in a learning-by-doing approach on how best to intervene on a local level in improving rural supply services, how interventions have an impact on local communities, and how best to equip government agencies (ministries and departments) with the tools and knowledge to lead the process in the future. The project was relatively short (2.5 years) and modest (US$2 million), meant to tread lightly in the provision of water services to marginalized communities with uncertain access and often facing acute water scarcity.

Though not all objectives were achieved, there is strong recognition that WALP constitutes a leap forward in the World Bank's experience and knowledge base about how to implement sustainable, small-scale water interventions in a fragile state context. The project successfully delivered eight water points in Somaliland and Puntland, including seven dams and one berkad, which are now providing an estimated 42,000 people (and more than 200,000 animals) with an improved, reliable water source for human consumption, livestock watering, small-scale vegetable gardening, agroforestry, and other uses. Further, the project was successfully implemented by government civil servants—seconded from ministries responsible for water, agriculture, livestock, and the environment who managed all fiduciary, procurement, and monitoring and evaluation (M&E) aspects.

The WALP experience has generated some important lessons that have directly informed the design of the current scale-up project. WALP has demonstrated the suitability of small-scale dam technology in delivering critical water resources to communities in dry-land areas and the feasibility and critical importance of channelling aid for infrastructure through core country systems and private sector capacity, even in fragile states. This approach was both a fundamental principle driving the project's approach and critical element for enhancing institutional capacity as a means of ensuring the sustainability of investments. WALP also demonstrated that while enhancing access to water is an essential ingredient in addressing acute vulnerability among dry-land communities, these investments are insufficient on their own and need to be complemented by parallel investments designed to restore a more healthy ecosystem and to strengthen the capacity of local communities to sustainably and equitably manage their water assets and the natural resource base (that is, soils, pastureland, and forests) that underpins their livelihoods. While formidable knowledge gaps remain, the WALP experience has also generated a wealth of new understanding about social dynamics among marginalized livelihood groups (landed farmer, agro-pastoralists, and pastoralists) living in Somalia's dry lands and the socioeconomic drivers of resource-based conflict, which will help inform and guide downstream interventions that are community-driven, equitable across interest groups, and conflict-sensitive.





Source: WALP Project Implementation Unit - Puntland

22. The proposed operation Water for Agro-pastoral Productivity and Resilience (WAPR), or "Biyoole",[17] contributes to a range of higher-level objectives, consistent with the World Bank's twin goals of ending extreme poverty and promoting shared prosperity. Improving access to multiple-use water resources (for human consumption, livestock, and small-scale irrigation) in a dry-land environment can significantly improve human health and well-being. It reduces the effects of poverty by building community resilience to climate-induced risks and the associated vulnerabilities that disproportionately affect the poor. The project will reduce the risks and impacts of floods and droughts in the targeted areas, thereby enhancing the resilience of target communities to these threats, which are exacerbated by climate change. Improved resilience and self-reliance, in turn, will contribute to reducing poverty. The project will support income generation through sustainable livelihoods for vulnerable people and catalyzing economic growth in rural areas. Enhanced water access among target communities will support domestic use and livestock watering (and improved health outcomes), small-scale irrigation, and environmental services. By promoting more sustainable use of natural resources, the project will also help improve the availability of water for longer periods, thereby reducing water-related displacement and attenuating the drivers of resources-based conflicts.

23. **Learning by doing.** Biyoole is part of a multiyear programmatic approach with a potential to scale up horizontally to cover more areas of the country and vertically to deepen and diversify the infrastructure and livelihoods support. Building from the WALP experience and lessons learned (see Box 2), the initial focus of Biyoole is to strengthen resilience in the northern and central parts of Somalia that are more frequently affected by drought and are expected to be increasingly so in the future with climate change. As implementation experience is gained and criteria for participation are met by other states, the goal is to incrementally and sequentially scale up the project to improve rural resilience in all six states of Somalia. This will depend on the availability of resources, readiness to engage (including institutional capacity, financial management (FM), and coordination functions for example), and the security environment. This project will scale up the activities under WALP in Puntland and Somaliland while starting with new pilots in the states of Galmudug and South West. The learn-by-doing approach and experience gained will accommodate future phases to include Hirshabelle and Jubbaland. Scale-up plans for all FMS and Somaliland will be considered during the midterm evaluation of the project.

[17] 'Biyoole' means 'water fetcher' in Somalia. It is the person who collects water from shallow wells, water catchments, and other sources to distribute for household consumption, livestock, and agriculture. The biyoole is a staple of Somali agricultural and pastoral life. The FRS considers that, it is an easy brand to communicate with Somali audiences and easily pronounceable by non-Somali speakers. Biyoole is a difficult brand to hijack and, of course, includes the word 'water' in it.

II. PROJECT DESCRIPTION

A. Project Development Objectives

24. The proposed Project Development Objective (PDO) is to develop water and agricultural services among agro-pastoralist communities in dry-land areas of Somalia.

25. Achievement of the proposed PDO will be measured using the following three outcome indicators: (a) People provided with access to improved water sources under the project, of which 50 percent are female (number); (b) Farmers/clients (number) adopting improved technology, share of which are female (percent); and (c) Target beneficiaries satisfied with project investments (percentage). The project outcome (PDO-level) and intermediate indicators are presented in the Results Framework (Part V).

B. Project Components

26. The proposed WAPR focuses primarily on (a) improving access to multiple-use water resources (for human consumption, livestock, small-scale irrigation, and environmental services) in dry lands of Somalia; (b) increasing the land area under sustainable landscape management practices; (c) reaching targeted beneficiaries with agricultural services; and (d) promoting the uptake of productivity enhancing innovations among target rural communities. Importantly, the integrating focus of all of these components is the fundamental emphasis on strengthening the adaptive capacity of rural communities in Somalia and their resilience to the impacts of climate change.

27. **Component 1: Support the Development of Multiple Use Water Sources (US$15 million equivalent IDA).** Based on detailed basin-level hydrology assessments, micro-watershed action plans, and groundwater investigations, this component will finance investments in key water management infrastructure for harvesting, storing, and delivering water for people, livestock, and agriculture. The infrastructure will be designed to deliver both improved human health outcomes and water for productive uses (mainly agricultural production and agroforestry services for landscape restoration), thereby making the targeted communities more resilient to droughts and floods (restored landscapes suffer less from erosion and are thus more resilient to flooding).

28. **Subcomponent 1.1: Construction of New Community Water Points (US$11.5 million IDA).** This subcomponent will support the rehabilitation of existing water infrastructure and small works. The menu of water infrastructure investments will include small sand and subsurface dams in dry river beds (wadis), surface water storage infrastructure (for example, berkads and hafir dams), area infiltration interventions such as semicircular bunds or soil bunds, and rock catchments. As explained above, sand dams are particularly effective at enhancing the resilience of marginal dry-land environments by helping sustain vegetation biomass during drought periods. The improved vegetation biomass and soil management, combined with the increased water availability derived from these various infrastructure investments, will facilitate agricultural activities and food production. These will, in turn, increase the targeted communities' resilience to droughts and floods. Solar units will lift water and then use gravity to feed auxiliary structures such as cattle troughs, water points for human use, and so on (Annex 1 describes these technologies). In addition, if no other options are feasible, the component will support construction of boreholes for groundwater extraction. Boreholes are an important source of water during severe drought, especially for humanitarian response, and particularly in non-riverine regions of Somalia.

29. **Subcomponent 1.2: Rehabilitation of Community Water Points (US$3.5 million IDA).** This subcomponent will finance the rehabilitation of existing water infrastructure and small prioritizing boreholes. The subcomponent will also finance associated infrastructure to provide multiple-use water services (zero-emission standpipes or shallow wells with hand or solar pumps and watering troughs for livestock). Selected project sites can include multiple interventions to ensure adequate water through periods of drought and for multiple purposes: high-quality water for domestic use and moderate quality for livestock and agricultural uses. These investments will be the anchor assets around which other project activities in each selected sub-catchment will seek to capitalize and manage. The diversification of water sources based on the Wadi Evaluation Tool (WET), extensive ground truthing, and groundwater assessment will increase the supply of water and therefore mitigate the risk of droughts and climate change.

30. **Component 2: Institutional and Capacity Development (US$6 million equivalent IDA).** As Somalia consolidates its political transition and builds on the resulting peace and security dividends, there is a strong need to support the FRS and the FMS to develop the knowledge systems and institutions needed to deliver essential services and optimize use of the country's natural resources. This component will help build a strong foundation for a gradual transition to more integrated and sustainable agriculture and water development—promoting the farmers' adoption of drought-resistant seed varieties and climate-smart technologies—by strengthening local, state, and national institutions and capacities. Promoting water and agriculture in an integrated and sustainable way based on carefully managed water infrastructure and allocation of water and selection of the most efficient technologies (from a water conservation standpoint) will make the project beneficiary communities more resilient to droughts and floods. The component objectives will be delivered through two subcomponents.

31. **Subcomponent 2.1. National and state Institutional capacity Building (US$2.0 million IDA).** This subcomponent will support strengthening of national and state institutions capacities to plan, implement, and monitor integrated agriculture and water development programs. The Government needs to develop better sector oversight to coordinate external interventions with its own nascent program of domestic investment. The Government needs to establish the policies and laws to regulate the sector and ensure that infrastructure investment is sustainable. This includes developing and implementing construction standards; rangeland management guidelines; key feasibility studies for preparing project interventions (site-specific Environmental Impact Assessments (EIAs), engineering surveys, and hydrological assessments for project areas); and providing improved extension to farmers and pastoralists; management models; and cost recovery mechanisms – all aimed at helping the beneficiaries better deal with the increasing risk of droughts and floods. Better data are also needed to improve knowledge of hydrogeology and groundwater exploration so that aquifer recharge can be optimized, thus further contributing to water security and climate risk reduction. Without improved data, both external and domestic infrastructure investment will continue to be ad hoc and poorly coordinated.

32. To be able to leverage existing expertise, ground presence, and local knowledge, this component will finance a technical assistance agency (for example, FAO, NGO, university, and technical team) to support national and state government agencies in selecting, training, and monitoring nonstate actors for local project implementation. It will also support research and the development of a training needs assessment for relevant government agencies, development of curricula, and delivery of high-value training programs. It will also finance highly targeted exposure visits to neighboring countries to learn from best-practice approaches. This component will also support peer to peer knowledge exchange and sharing of experiences.

33. **Subcomponent 2.2. Community Development and Demand Mobilization (US$4.0 million IDA).** Drawing on lessons from WALP, this subcomponent will finance a holistic community engagement approach that will support activities in Components 1 and 3 through a continuing dialogue about the community's development needs, the resources they have, their priorities for managing them, and how to ensure equitable access. The state-level Project Implementation Units (PIUs) will be responsible for the mobilization process. Given human resource constraints, the PIUs will leverage project funds to contract technical assistance for community mobilization and planning activities. The PIUs and FMS ministry staff will work on teams with the mobilization contractor to transfer knowledge of mobilization theory and techniques among government staff and to add technical knowledge into dialogue with communities. Mobilization will broadly (a) increase awareness of the 'rules of the game' for participation in the project; (b) introduce the costs and benefits of different technologies to promote informed demand and increase community ownership and sustainable management of infrastructure and other investments; (c) enhance the capacity for community governance by training leaders on meeting management, ensuring inclusion and participation, conflict resolution, and so on; (d) increase awareness of the resource constraints within the community and considerations of equitable resource management across different stakeholder groups; and (e) develop community livelihood development plans to identify priority needs that can be met by collective action, specific project interventions, or leveraging other programs. Anchored by a robust and inclusive consultative process, community mobilization activities will serve to inform the team's evolving understanding of the risk landscape and, thereby, will help to ensure that project interventions are conflict-sensitive and well aligned with project safeguards. The proposed planning process embeds project exits from the beginning and focuses on building community cohesion, self-reliance, and resilience to droughts and floods after the project closes, as explained in the next paragraph.

34. In existing WALP sites, mobilization will begin immediately to help communities develop a water budget based on ongoing water monitoring activities, water-use priorities, and how to maximize local water resources in the most inclusive way possible. The activity will produce a plan for management of the water infrastructure, including upkeep and maintenance, and for sustainable and equitable allocation and access across stakeholder groups. In addition, it will produce a plan for productive livelihood development with priority investments in land management, cropping, and livestock to be supported by the project. New project sites will begin mobilization once the technical specifications for site selection have been finalized and project communities have been identified. In these communities, in addition to the activities above, the mobilization will help communities select the optimal technology to be financed by the project to increase water capture and storage (for example, sand dams, berkhads, and so on). Technical support for the implementation of livelihood development priorities will be provided through separate contracts to technical service providers issued and managed by each state PIU.

35. **Component 3. Supporting Sustainable Land Management and Livelihoods Development Around Water Points (US$9.5 million equivalent IDA).** Linking with water infrastructure and community planning and mobilization interventions under Components 1 and 2, this component will catalyze priority investments, facilitated by participating FMS line ministries, to create and strengthen productive livelihoods among target communities. The component will stimulate the growth and development of productive and sustainable income-generating activities through two subcomponents that will (a) improve the health and sustainability of the natural resource base (that is, land, water, and vegetative cover), which underpins all agriculture and pastoralist livelihoods and (b) facilitate communities' access to productive assets and extension services needed for agriculture and livestock production.

36. Component 3 activities will be piloted during Year 1 within existing WALP sites where water assets were installed and Community Development Plans (CDPs) developed during the pilot phase. Pilot activities will initially look to build on the experience of FAO and NGO consortia, for example, SomReP[18] and BRCiS,[19] and local NGOs with investments designed to facilitate post-crisis recovery of rural households and livelihoods while building stronger resilience to future climate-related shocks, primarily droughts and floods. The experience gained, and lessons learned from the existing WALP sites will inform the introduction and scale-up of validated approaches during Years 2–5 with target communities elsewhere as CDPs are developed and water assets are delivered. The component will finance, among others, services delivery contracts; field travel per diems; labor-intensive landscape interventions (through cash-for-work); and the purchase and distribution of assets (seeds, tools, irrigation, and other equipment) needed for cropping and livestock activities.

37. **Subcomponent 3.1: Integrated Landscape Management (US$3.5 million IDA).** Based on priorities from the community planning and using a micro-watershed approach, this subcomponent will finance through cash-for-work community-led soil and water conservation measures. These include landscape rehabilitation and protection through terracing of irrigable land degraded or endangered by erosion, gully rehabilitation, planting of trees and other vegetation in upland areas, rangeland management to introduce rotational grazing and stocking rate limits, and improved management and sustainable use of existing forest and vegetation resources. Together, these activities will encourage better infiltration of water during the rainy season into the surrounding land and reduce loss of valuable topsoil from surface runoff, all contributing to the restoration and management of a healthier ecosystem, one that can more sustainably support rural communities and increase their adaptive capacity to better cope with floods and droughts. This subcomponent would also promote the uptake of alternative energy solutions through awareness building, demonstrations, and financing to curtail local demand for environmentally destructive and unsustainable charcoal production. The subcomponent would also finance establishment of community tree orchards for sustainable fuelwood and charcoal production and would support the promotion and take-up of small-scale solar energy solutions for household use.

38. **Subcomponent 3.2: Agriculture and Livestock Support (US$6 million IDA).** Anchored by the water assets delivered under Component 1 and guided by the CDPs developed under Component 2, this subcomponent will support the development and diversification of livelihoods among target communities. It will facilitate the demand-driven delivery of agricultural assets and extension services based on community-specific priorities and context-specific conditions, including estimates of water availability and water-use demand. Activities envisioned under this subcomponent include the establishment of community gardens and fruit tree groves (as demonstration plots); procurement and distribution of improved seeds and other inputs; and introduction of high-efficiency micro-irrigation systems, soil micronutrient assessments, and needed training. These investments will help communities increase their production of more nutritious food for household consumption and, where possible, marketable surpluses. Training would focus on promoting farmer adoption of climate-smart farming

[18] Founded in 2011, the Somalia Resilience Program (SomReP), consortia of seven International NGOs (INGOs) (ACF, ADRA, CARE, COOPI, DRC, Oxfam, and World Vision), implements several projects across Somalia aimed at enhancing the resilience of vulnerable communities through community participatory planning, the use of financial instruments such as savings groups and the management of rangelands and ecosystem health.

[19] With an objective to “Improve the resilience of rural communities and IDP households in Somalia,” the BRCiS Consortium, or "Building Resilient Communities in Somalia,” comprises Cesvi, Concern Worldwide, Norwegian Refugee Council (lead agency), International Rescue Committee, and Save the Children and currently operates in 22 districts of the southern and central regions of Somalia.

techniques that can improve household food and nutrition security while optimizing usage efficiency of available water resources. Beyond soil and water conservation, training would focus on promoting adoption of drought-resistance crops and seed, intercropping and crop diversification, integrated pest management, fodder production and storage, animal health treatment, and household kitchen gardens using harvested rainwater. These training activities (and other activities provided through this subcomponent) will increase the beneficiaries' resilience to floods (through soil conservation) and droughts (through the remaining activities). Component activities will be overseen by technical line ministries and delivered through service provider contracts (that is, NGOs and UN agencies).

39. **Component 4: Project Management, M&E, Knowledge Management, and Learning** (**US$9.0 million equivalent IDA).** This component will finance the operational costs of the Project Management Units in participating FMS and Somaliland, as well as project coordination and fiduciary support at the FRS level. The component would also be responsible for M&E, knowledge management and learning, and evidence-based policy input. This component also covers the Contingent Emergency Response (CERC) subcomponent of the project that will support immediate and rapid response emergency needs. Component activities will be delivered through three subcomponents.

40. **Subcomponent 4.1. Project Management (US$4.0 Million IDA).** This subcomponent will ensure that the project is implemented efficiently, on time, and in accordance with the Financing Agreement. A strong PIU will be established and staffed by a team of experts at the national, state, and district levels. This subcomponent will support (a) the incremental operating costs for managing the project, (b) the cost of procurement and FM specialists, and (c) outreach and communications on the Government's role and leadership on the project to the broader Somali community.

41. **Subcomponent 4.2. M&E, Knowledge Management, and Learning (US$5.0 million IDA).** The project would support continuous learning and adaptable knowledge management. A web-based management information system (MIS) will be set up to track real-time performance of the project and is linked to an M&E system to focus on project results and outcome. This subcomponent will finance baseline, concurrent monitoring of inputs and outputs and monitoring of safeguards, conflict, and gender and focus on developing and disseminating knowledge generated through various project activities. Subcomponent activities will incorporate new modern technology such as geo-tagging of site investments, collection of field data with tablets/smartphones, and application of geospatial imaging for quantifying before and after comparisons for specific indicators. With a view to obtain more information and knowledge on the extent and period of flood, this subcomponent will support technical work such as flood mapping and support to information sharing.

42. Given the nascent institutional capacity of multisectoral rural resilience in Somalia, this subcomponent will allow the FRS to engage a suitably qualified and experienced international independent firm to provide quality enhancement and implementation support to the project. The objective of the support will be to provide an additional and independent monitoring and assurance ensuring that project funds are used for the purposes specified in project grant agreements. The firm will be contracted by the FRS and will support Somali authorities to fulfill their fiduciary, procurement, monitoring, and supervision obligations with respect to all four project components. The firm will also be responsible for monitoring the development of capacity within recipient organizations and agencies such that they advise on capacity-building needs to carry out the FM, procurement, and project management obligations. Capacity assessment will be done in collaboration with the World Bank task team and the FMS contracted engineering and sustainable land management implementation support entities

providing technical assistance and backstopping support for Components 1, 2, and 3. To this extent, the firm will be expected to provide advisory as well as monitoring support to the World Bank.

43. **Subcomponent 4.3. Contingent Emergency Response (US$0).** This subcomponent will support immediate and rapid response to an eligible crisis or emergency, as needed. This zero-cost component will finance eligible expenditures under the Immediate Response Mechanism (IRM) in the case of natural or manmade crises or disasters, severe economic shocks, or other crises and emergencies in Somalia. It can be triggered through formal declaration of a national emergency by the government authority and upon a formal request from the FRS to the World Bank through the Ministry of Finance (MoF).

44. In such cases, funds from other project components will be reallocated to finance emergency response expenditures to meet agricultural crises and emergency needs. The emergency response would include mitigation, recovery, and reconstruction following crises and disasters, such as severe droughts, floods, disease outbreaks, and landslides, among others. Implementation of this subcomponent will follow a detailed Contingent Emergency Response Implementation Plan (CERIP) satisfactory to the World Bank that will be prepared for each eligible emergency. The Project Operations Manual (POM) will have a dedicated annex for a Contingency Emergency Response Component (CERC) in line with the October 2017 guidelines.

C. Project Cost and Financing

Table 1. Summary of Project Costs by Component and Financing Source (US$ million)

Component/Subcomponent	Subtotal	Percentage
Component 1. Support the Development of Multiple Use Water Sources	**15,000,000**	**36**
1.1 Improved community water points constructed under the project	11,500,000	
1.2 Improved community water points rehabilitated under the project	3,500,000	
Component 2. Institutional and Capacity Development	**6,000,000**	**14**
2.1 National and state institutional capacity building	2,000,000	
2.2 Community development and demand mobilization	4,000,000	
Component 3. Supporting Sustainable Land Management and Livelihoods Development Around Water Points	**9,500,000**	**23**
3.1 Integrated landscape management	3,500,000	
3.2 Agriculture and livestock support	6,000,000	
Component 4. Project Management, M&E, Knowledge Management, and Learning	**9,000,000**	**21**
4.1 Project management	4,000,000	
4.2 M&E, knowledge management, and learning	5,000,000	
4.3 Contingent emergency response		
Subtotal Components	**39,500,000**	**94**
Contingency	2,500,000	6
TOTAL	**42,000,000**	

45. **Lending instrument.** The proposed lending instrument is Investment Project Financing (IPF), comprising an IDA grant of US$42 million equivalent to the FRS, implemented over five years. The IPF instrument was selected in view of its flexibility and suitability for financing a broad range of activities, including investments, technical assistance, and capacity-building measures. The project's component

allocation has also considered a contingency of US$2.5 million to meet price variations on goods and services during implementation.

46. In line with the project's plan to scale up activities under WALP in Puntland and Somaliland while starting with new pilots in Galmudug and South West States, and also considering the existing capacity and the functions expected in each of the participating institutions, project costs will be allocated as follows.

Table 2. Project Costs by Implementing Agency and Geography (US$ million)

Total Budget	**$ 42.00**					
FEDERAL GOVERNMNET OF SOMALIA (FGS)						
FGS	**Ministry of Finance (MOF)**					**1.00**
$ 4.50	**Ministry of Planning, Investment and Economic Development**					**2.50**
	Agriculture	**Livestock**	**Water**	**Environment**		
	0.25	**0.25**	**0.25**	**0.25**		
FEDERAL MEMBER STATES						
South West States	**PIU (Project Coordinator, FM, Procurement, Safeguards/M&E Specialists) - housed Planning**					
$ 5.00	**Agriculture**	**Livestock**	**Water**	**Environment**	**Planning**	
	0.50	**0.50**	**2.00**	**0.50**	**1.50**	
Galmudug	**PIU (Project Coordinator, FM, Procurement, Safeguards/M&E Specialists) housed Planning**					
$ 5.00	**Agriculture**	**Livestock**	**Water**	**Environment**	**Planning**	
	0.50	**0.50**	**2.00**	**0.50**	**1.50**	
Puntland	**PIU (Project Coordinator, FM, Procurement, Safeguards/M&E Specialists) - housed Environment**					
$ 13.50	**Environment & Agriculture***		**Water**	**Livestock**	**Planning**	
	6.00	**3.00**	**0.50**	**3.00**	**1.00**	
SOMALILAND						
Somaliland	**PIU (Project Coordinator, FM, Procurement, Safeguards Specialists) - housed Environment**					
$ 14.00	**Agriculture**	**Livestock**	**Water**	**Environment**	**Planning**	
	3.25	**3.25**	**1.00**	**5.00**	**1.50**	
SECTOR						
Finance	**Agriculture**	**Livestock**	**Water**	**Water & Environment**	**Planning**	
$ 1.00	**7.50**	**7.50**	**5.75**	**12.25**	**8.00**	
*** in Puntland the Environment and Agriculture Ministries have been merged**						

D. Direct Project Beneficiaries

47. The primary project beneficiaries are more than 250,000 (of which 140,000 are women) agro-pastoralists in Galmudug, Puntland, South West State, and Somaliland. The project will provide benefits in the form of access to improved water sources for multiple uses (domestic, livestock, agriculture, and horticulture); agricultural extension services (livestock and crops); improved livelihood resilience; and adaptive know-how.

48. In Somalia, women and children are typically responsible at the household level for collecting water. Access to improved water supply and sanitation facilities is expected to contribute to poverty reduction and better gender equality among the beneficiary populations by addressing burdens borne by women and girls. This includes the benefits of reduced time and effort spent in collecting water, as well as associated benefits such as personal security, health, and economic productivity. The project will emphasize the role of women in the decision-making process at various stages of system design, implementation, and management to improve the sustainability of investments and improve the quality of life. Gender-disaggregated indicators will be used to track gender equity in roles and benefits from the project. Moreover, World Bank experience in other countries shows that families with members who have a disability are often among the poorest and most marginalized in communities. To maximize inclusion in decision making, implementation, and benefits, the project will identify beneficiaries affected with disability, so they are included in the design of the infrastructure, in the prioritization of livelihoods, and in linking to assistive services.

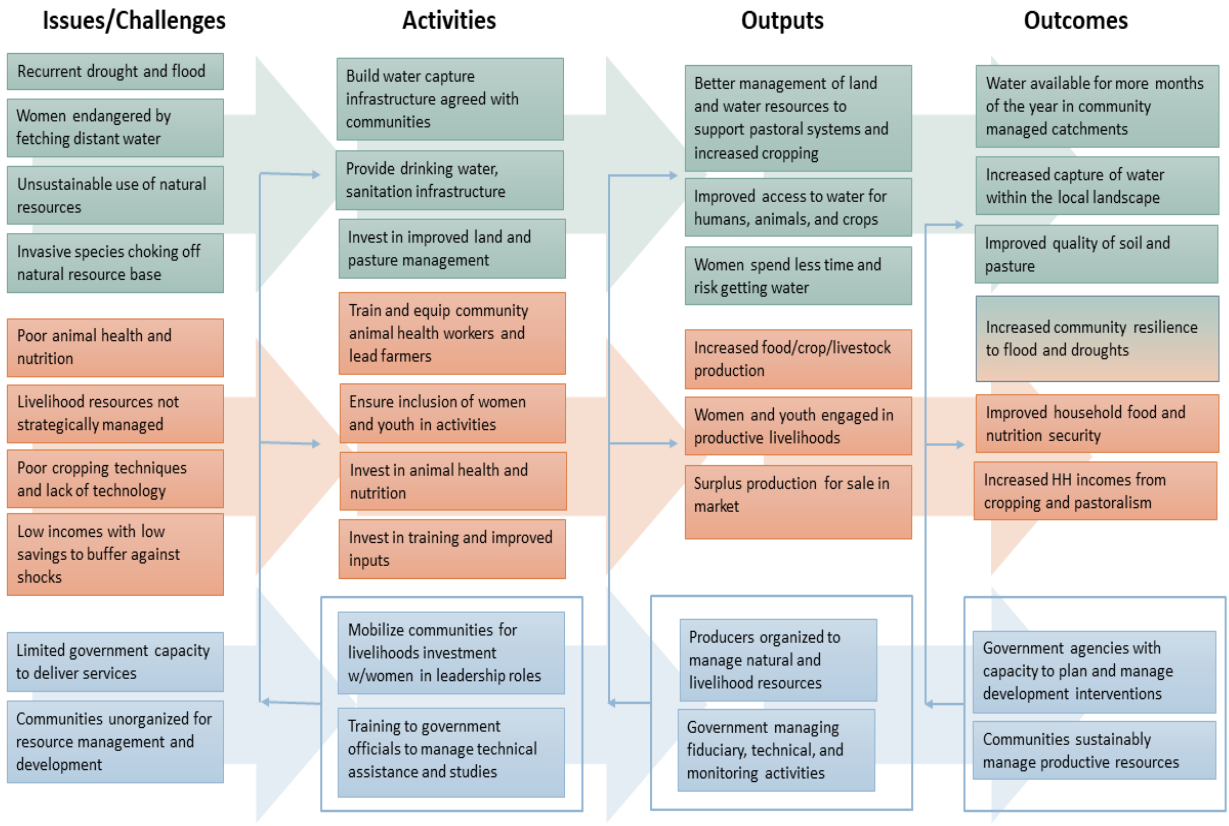
49. Given the large role that women play in both agriculture and livestock activities, the project will address challenges that have traditionally limited women's productivity particularly access to extension services and inputs. Drawing on lessons from ongoing agro-pastoral investments in Somalia, the project can make participation by women mandatory (for example, 30 percent of leadership positions) in Village Development Committees (VDCs) that participate in the project. An audit of processes will be conducted to determine risk points where women can be excluded for example, selection for asset transfers and labor-intensive public works (LIPW) income-earning opportunities. Training in livestock management and cropping will be designed to train family units together where possible, which has been found to not only increase women's access to training but also increase awareness among all family members of the role women play. Other training will be designed and delivered at times and locations that are convenient to women given the demands for their time from other duties, and child care will be provided to facilitate their participation. The POM will clarify how this is going to be tracked.

50. As outlined in the CPF, job creation is a top priority for growth, development, and social stability in Somalia. By mobilizing and empowering women and youth as positive agents of change and supporting the growth and development of rural livelihoods, the project will help address key drivers of intergenerational poverty and conflict. In project areas, the construction of infrastructure (for example, dams, offices and community centers) and related procurement of goods and services will create new jobs and revenue streams for local businesses. Land management and livelihood support interventions and cash for work programs will provide communities and households with crucial productive assets and income-generating opportunities. Core project interventions will be complemented by targeted investments in mobilizing and capacitating women and youth groups to engage in other income-generating activities such as sustainable charcoal production, provision of animal health and nutrition services, and community gardening. The project will also explore income-enhancing opportunities

through value addition and, where feasible, linking communities with surplus production to downstream markets.

E. Results Chain

Figure 1. Overview of Project Results Chain



Note: HH = Household.

51. Somalia is especially vulnerable to climate shocks and the resulting cyclical droughts and floods that hit communities, which are increasing with climate change. Following decades of insecurity, the infrastructure and local knowledge to manage these shocks and traditional coping mechanisms have deteriorated significantly. Land depleted of vegetation cover cannot retain flood waters that wash fertile soil away nor can it support extensive pastoral livelihood systems. Degradation is accelerated by droughts. With the loss of animals to drought and poor performing crops, many communities have migrated out of rural areas, relying on humanitarian assistance from the diaspora or on non-sustainable extractive livelihoods (for example, charcoal making) for income. Food and nutrition security is low among rural households, which affects their overall health and productivity.

52. This project will deliver water harvesting and storage infrastructure and facilitate community action to help restore the quality of the land. It will leverage sand dam and other water-harvesting technology to enhance the adaptive capacity of Somalia's dry lands and the livelihoods that depend on

them. Through rigorous social mobilization processes, the project will help communities better understand how their decisions about management of land and water resources affect their well-being and how to become more climate-resilient. Communities will be aided to improve the quality of their land and water resources and to invest in the technology, training, and services necessary to improve crop production, pasture management and fodder production, animal health, and productivity. With improved organization and knowledge, communities can manage a more inclusive development agenda that increases the availability of water and food for all their member households and supports sustainable livelihoods that generate income for households that can be saved to help them better withstand inevitable future shocks.

53. Project implementation is managed by civil servants from the FMS ministries responsible for the water, agriculture, land/pasture, and animal resources of their states. By being fully responsible for all contracting of works and services and fully participating in community mobilization activities, the capacity of civil servants to manage limited public resources to deliver services will also be increased. Figure 1 summarizes the theory of change embedded in the project design.

F. Lessons Learned and Reflected in the Project Design

54. The design of the project has considered lessons learned from the World Bank's engagement in fragile and conflict settings in general and directly in Somalia during the last 3–4 years. More importantly the project design is based on the lessons from the recently completed WALP operation (P152024), that includes the following:

(a) Any initiative to improve the resilience of rural communities from water-related shock in a dry environment such as Somalia needs to go beyond water service provision. A more holistic, multisectoral, and integrated approach is needed to address challenges and maximize livelihood development opportunities across the water/land/climate nexus.

(b) Resilience is not a onetime activity. It requires champions, the full participation of the community, and continuous technical backstopping and monitoring institutions at all levels from the community all the way to the federal level are equally important. They need to be empowered, capacitated, and strengthened so that they can provide the required support to the communities.

(c) In a post conflict setting like Somalia, the use of country systems (even if in a nascent form) has multiple advantages. Though the use of country systems carries some implementation risk, it helps countries emerge more rapidly from a post conflict situation, reestablish government systems, and improve the government-citizen relationship.

(d) In a post conflict setting like Somalia, a flexible 'learning-by-doing' approach is effective and the quickest way to transfer knowledge and build the capacity of institutions while adaptively mitigating risks. Making available systems procedures and resources provides institutions with opportunities to gain on-the-job experience, skills, and confidence.

55. The above lessons are consistent with the project's theory of change, which is "supporting institutional development at the local, subnational, and national levels and channeling integrated,

strategic investments into water, land, and people will enhance the relevance and sustainability of project investments and reinforce poverty impacts."

56. Beyond the Somali experience, the project design is influenced by many years of evolving and successful World Bank programs in integrated land/water management in other parts of Africa (Ethiopia, Malawi, and Great Lakes Region), India, and Latin America. Key lessons include using a participatory approach with communities for planning and implementation, while building strong local institutions; undertaking a larger-scale strategic assessment to guide small-scale implementation; using a watershed framework for developing integrated land and water interventions; including a livelihoods component to improve equity for women and other disadvantaged groups, and increase local incomes; and applying remote sensing and other information technology tools such as geographic information systems (GIS) to support planning and M&E.

57. **Somalia suffers from acute unemployment and underemployment.** Jobs play an important role in fragile environments. They not only contribute directly to poverty reduction, productivity, and economic growth but also facilitate social cohesion and reduce the risk of violence. However, the jobs environment in Somalia is particularly challenging with high political, economic, and social risks; inadequate institutional capacity; a difficult political economy; and significant constraints on financial resources to support recovery and reconstruction. According to the International Labor Organization (ILO), 54 percent of the active population (ages 15 to 64) in Somalia is unemployed. Unemployment rates are considerably higher among women and Somalis under 30 years of age, who represent 70 percent of the population. The unemployment rate among youth ages 14 to 29 years is 67 percent—among the highest rates in the world (Human Development Report, UNDP 2015). Women fare worse[20] (74 percent) compared to men (61 percent). Due to high fertility rates, estimated at 6.2 births per woman between 2010 and 2015, the youth population in Somalia (increasingly marginalized and deeply discouraged majority group) is arguably more vulnerable than any other to extremism and criminal behavior and the numbers will continue to swell.

58. **To address these challenges and create job opportunities, well-structured assistance is needed.** To help strengthen engagement on jobs in fragility, conflict, and violence (FCV) settings, the World Bank has developed an integrated jobs framework. This framework recognizes that progress on jobs in fragile situations is hard-won, and even interventions with limited reach are crucial tools for emergency relief, stabilization, and starting momentum in private sector recovery. This is true for livelihood programs, as well as programs targeting investments in certain sectors, regions, or firms. Progress on jobs is particularly crucial in FCV countries. Jobs are transformational, providing income, productivity, and social cohesion. As outlined in the CPF, job creation is a top priority for growth, development, and social stability in Somalia. By mobilizing and empowering women and youth as positive agents of change and supporting the growth and development of rural livelihoods, the project will help address key drivers of intergenerational poverty and conflict in Somalia. In project areas, the construction of infrastructure (for example, dams, offices, and community centers) and related procurement of good and services will create new jobs and revenue streams for Somali businesses. Land management and livelihood support interventions and cash-for-work programs will provide communities and households with crucial productive assets and income-generating opportunities. Core project interventions will be complemented

[20] Gender inequality is alarmingly high in Somalia at 0.776 out of a value of 1 (complete inequality), with Somalia at the fourth lowest position globally on the Gender Inequality Index, if internationally comparable data were available. Women suffer severe exclusion and inequality in all dimensions of the index—health, employment, and labor market participation (UNDP 2015).

by targeted investments in mobilizing and capacitating women and youth groups to engage in other income-generating activities such as sustainable charcoal production, provision of animal health and nutrition services, and community gardening. The project will also explore opportunities for income-enhancing opportunities through value addition and linking communities with surplus production with downstream markets.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

59. All project interventions will be led by state-level ministries, while tracking and reporting of project progress will happen at the federal level.

60. **Federal-level roles and responsibilities.** A Federal Inter-Ministerial Steering Committee chaired on a rotational basis by the Ministries of Water and Energy Resources; Ministry of Agriculture and Irrigation; Ministry of Livestock, Forestry, and Range; and the Environment Directorate in the Office of the Prime Minister (OPM) (to empower technical ministries in the overall oversight of implementation) and comprising the MoF; Ministry of Planning Investment and Economic Development (MoPIED); Ministry of Livestock, Forestry, and Range; Ministry of Agriculture and Irrigation; Ministry of Water and Energy Resources; and the OPM will be convened for the duration of the project. The Ministry of Water and Energy Resources will take the first chair role. The Steering Committee will meet quarterly to review the project's progress and identify policy or regulatory issues, particularly cross-sectoral issues, that will surface during project implementation. The MoF oversees all project disbursements to line ministries at the federal and member state level and coordinates all financial reporting. The project will support additional human resource at the MoF to manage the financial aspects and to coordinate with the MoPIED.

61. A National Project Coordination Unit (PCU) with a project coordinator, supported by an M&E specialist and data analyst, a procurement specialist, and specialists as needed with medium- and short-term input, will be appointed at the MoPIED to maximize the flow of communications among the federal ministries, FMS, and Somaliland. This will help the MoPIED oversee the M&E aspect of the project through its M&E Department. The National project coordinator will be responsible for maintaining a unified Results Framework for the project. Funds for policy analysis and other relevant sector studies will be made available to each stakeholder ministry at the federal level. FRS will also engage a suitably qualified and experienced international independent firm that will support the National PIU by providing quality enhancement and implementation support to the project.

62. **State-level roles and responsibilities.** Somaliland and each FMS will establish and maintain a PIU with representation from each participating line ministry to ensure cross-sectoral collaboration in planning and implementation activities. The PIUs will be staffed by a project management specialist and relevant fiduciary and safeguards specialists, in addition to the seconded sectoral specialists, to ensure high quality throughout implementation. A specific indicator has been included in the Results Framework under Component 2: Number of PIUs established under the project and functioning, and of which female staff is 50 percent. Drawing from experiences in the WALP where it was found that having women playing key roles in the PIUs greatly improved project implementation, the WAPR will seek to replicate this good practice and ensure women's participation by encouraging governments to establish PIUs that are gender balanced. This is particularly important in the south where initial indications, from pre-appraisal meeting

attendance (where no women joined any of the meetings), are that civil servant women are marginalized and not included in water, livestock, and agriculture project implementation or decision making.

63. **At the community level**, while not part of the supply-side implementation structure, as such, the project will work through representative community institutions to provide leadership of the implementation process, including organizing the village for participation in the project, identifying and agreeing on investment priorities, and organizing the community to deliver those investments in collaboration with the Government and other service providers. This system of community institutions for problem identification, planning, and execution is called a community management system in this project. In many communities, such an organization the VDCs have already been formed under other programs, and the project will work with them. In other communities, the project will facilitate the creation of such VDCs. Leadership of the VDCs will be elected from the village members and will include representatives from the different stakeholder groups within the village. In particular, the project will require that 40 percent of the VDC leadership are women to ensure that women's voices are included in development investment decisions.

64. **Community mobilization and planning**. Each state government will oversee the community mobilization process, which will engage communities throughout the project to help them identify their priority water interventions (costs and benefits of different technologies), how they will manage their water infrastructure, and how the community will use the water to increase their food security and income opportunities. Given capacity and human resource constraints at the state level, the project will provide funds to contract implementation support of the mobilization activity. Anchored by a robust and inclusive consultative process, community mobilization activities will serve to inform the team's evolving understanding of the risk landscape and, thereby, will help ensure that project interventions are conflict sensitive and well aligned with project safeguards. The approach will bring together all members of a village, ensuring the inclusion of all stakeholder groups for example, pastoralists, irrigated farmers, rainfed farmers, landless laborers, women, and youth.

65. **Water infrastructure.** To inform key design elements of water interventions, state-level ministries responsible for water will contract consultant engineers to (a) identify areas with potential for water development; (b) inform the mobilization discussions led by the Government with communities; and (c) provide detailed designs and supervision of the construction of water infrastructure.

66. Each FMS will respond to the demand articulated by community-level institutions, considering their preferences: (a) for the types of technology for water catchment, storage, and management; (b) for siting infrastructure given their knowledge of water flows and service needs; and (c) options for involvement in construction works.

67. Community consultation will weigh the pros and cons of technological choices considering factors such as (a) equity of access to water resources and abstraction rights; (b) affordability constraints for different types faced by communities; and (c) upstream and downstream impacts on water use including environmental flows. Construction companies will be contracted separately to carry out the construction works. The construction process, where requested by communities, will include labor-intensive methods.

68. Service delivery contracts will focus on operationalizing the livelihood plans created under Subcomponent 2.2. Each PIU will have a budget envelope to support community-driven investments in watershed/landscape management, agriculture, and livestock activities, from which they can calculate a

maximum investment envelope per community. FMS ministries will have funds available to contract implementation support from qualified NGOs, firms, or agencies to support community land and livelihood investments and to ensure the technical quality and sustainability of those investments. Implementing partners will engage directly with the community and livelihood groups formed through the mobilization process to implement their priority investments through training; civil works (for example, bunding, terracing, reforestation, pasture restoration, and community service center); and asset provision (for example, seeds, farm tools, machinery, and water-efficient irrigation equipment) needed to support the growth and development of livelihoods. Technical staff from state-level ministries will work with and provide oversight to implementation service providers to ensure the technical quality of training and other activities.

69. **Readiness criteria.** To mitigate risks related to the rollout of the project into new geographic areas in the south where government structures are less developed and human resource capacities weaker, the project will adopt a stepwise, incremental approach on two separate tracks. Project activities would be rolled out in Somaliland and Puntland immediately following project effectiveness, while in Galmudug and South West States, activities will focus during the initial 18 months of the project on laying the necessary groundwork through training and other support to address readiness criteria for accession to the project. This would provide more time for the PIUs and the extended project team to gain experience and refine the approach as challenges, not to be underestimated, of scaling out to new areas are encountered and overcome. This approach will also embed flexibility during initial project ramp up to modify the project's implementation schedule and planning if the need arises. The project could then, more comfortably and with less risk, initiate project activities in the two FMS in Southern and Central Somalia in month 18 of project implementation. Among the criteria that the project will use to evaluate the readiness for entry of the two new states are (a) the presence of a State MoF with External Assistance Fiduciary Section (EAFS); (b) evidence of an appropriate level of institutional capacity (that is, human resources and office facilities) across line ministries; and (c) strong experience with inter-ministerial collaboration, including with the FRS.

B. Results Monitoring and Evaluation Arrangements

70. The project will support continuous learning and adaptable knowledge management. The existing web-based MIS will be enhanced, if needed, to track real-time performance of the project. Data will feed into a robust M&E system developed to focus on project results and outcome. This subcomponent will finance baseline, concurrent monitoring of inputs and outputs and monitoring of safeguards, conflict, and gender, and will focus on developing and disseminating knowledge generated through various project activities. Subcomponent activities will incorporate new modern technology such as geo-tagging of site investments, collection of field data with tablets/smartphones, and application of geospatial imaging for quantifying before and after comparisons for specific indicators. This subcomponent will be managed by the MoPIED and budgeted for under Subcomponent 4.2.

71. Robust M&E frameworks developed under the WALP, and which mainly focused on hydrogeological monitoring, will be revisited and strengthened for the WAPR, ensuring that new activities, especially from Component 2, are included. Each PIU will include an M&E officer, and this person will initially be tasked with modifying the existing survey forms to include questions related to Component 2. The modified survey form will be used to work with VDCs to (a) undertake baseline surveys; (b) discuss how village-level monitoring will be done; and (c) update the WALP M&E framework. A baseline report will be produced following the first quarter of the project; thereafter, quarterly M&E reports will be

provided to the project coordinator who will send them to the Federal Government Coordinator for consolidation and submission to the World Bank.

C. Sustainability

72. Experience in the agricultural and water sectors has shown that the impact of multiple social, economic, technical, institutional, or environmental factors operating over a long period may influence the sustainability of services in rural areas. Based on lessons learned from similar projects, the project design will work toward strengthening and supporting sustainability of systems through activities aimed at, among others,

(a) Supporting the involvement of beneficiary communities and strengthening the participation and role of women in all cycles of project design and implementation;

(b) Strengthening the units responsible for post-construction operation and maintenance support at all levels;

(c) Supporting the enabling environment for active participation of the private sector to support operation and maintenance;

(d) Supporting continuous and periodical refresher trainings for user communities and directly related institutions at different levels; and

(e) Supporting the choice of services and appropriate technologies, such as water technologies and agricultural services during scheme design and implementation.

IV. PROJECT APPRAISAL SUMMARY

A. Economic and Financial Analysis

73. The economic and financial analysis follows World Bank guidelines and reflects evidence from similar projects in Somalia and elsewhere in the region. Annex 2 presents the detailed results. In summary, a detailed cost-benefit analysis model has been developed to assess the financial and economic impacts of these proposed project interventions and anticipated outcomes. The cost-benefit model analyzes cash flows over a 15-year period discounted at 15 percent under the base-case scenario and 20 percent under a higher-risk scenario to reflect the high cost of capital in the Somali context, where commercial projects often require a 100 percent return within the first year of operations. Identified streams of benefits accrue through direct financial savings and improved health of project beneficiaries.

74. Based on the analysis, for each million-dollar invested in the proposed water infrastructure and livelihood development activities is estimated to generate a discounted return of US$5.85 million under the baseline assumptions. The net present value (NPV) of the total benefits is estimated to be US$144.3 million with an economic internal rate of return (EIRR) of 135 percent against a discounted World Bank investment of US$32.9 million. These gains are observed primarily from improving sustained access to water for an estimated 250,000 agro-pastoralists by constructing and rehabilitating water infrastructure and small works and existing assets. The NPV highlights the significant financial benefits that will accrue to the various project beneficiaries. An EIRR that is above the estimated cost of capital also indicates that

the project represents a financially viable investment.

B. Technical

Greenhouse Gas Accounting

75. The World Bank uses the Ex Ante Carbon-Balance Tool (EX-ACT) to estimate the impact of agricultural investment lending on greenhouse gas (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 CO2 equivalent (tCO_2-eq) of GHGs that were emitted, or carbon sequestered as a result of project interventions—compared to a "without project" scenario. The net emissions for the project are 12,580 tCO_2-eq over the project's 15-year economic lifetime. The average annual emissions are 838 tCO_2-eq. The gross lifetime emissions are 18,084 tCO_2-eq. The greenfield supply systems under Component 1 have estimated net emissions of 13,758 tCO_2-eq due to electricity use and zero-emissions baseline scenario. The brownfield rehabilitation water supply systems under Component 1 have estimated net emissions of −1,178 tCO_2-eq due to an estimated 10 percent increase in energy efficiency gains, which is a respectable level of net emission reductions for a project of this size in a country where the World Bank has only recently started financing projects again. The systems to be replaced are still within their original economic lifetimes. In addition, both the brownfield and greenfield investments are expected to lock in the use of solar pumping and other solar systems, as well as zero-emissions gravity use.

Financial Management

76. **Financial Management Assessment.** The purpose of the assessment was to determine whether the FM arrangements in place ensure that financial resources reach the implementing and executing agencies and ultimate project beneficiaries in the shortest time possible, are used to finance the intended activities, are accounted for properly, and auditing arrangements are acceptable. At the national level, the EAFS Unit established within the Office of the Accountant General in the MoF is charged with overall FM responsibility for all the MPF/IDA-funded projects at the FRS and FMS. With overall guidance from the Accountant General, the EAFS Unit, in consultation with the respective Public Finance Management Reform Coordinating Units, will provide day-to-day FM of the project. The effectiveness of the EAFS Unit alongside other key functional units will be continuously monitored while key areas of capacity strengthening will be identified and supported through the project. All project FM transactions will be recognized, captured, recorded, analyzed, summarized, and reported through the Government(s) Financial Management Information System (FMIS).

77. **Flow of Funds Arrangements**. The project will adopt the Statement of Expenditure (SoE) method of disbursement. The project will open and maintain three Designated Accounts (DAs), two DAs at the CBS and one operated separately by Somaliland in a financial institution acceptable to the World Bank. DA-A in Mogadishu will be dedicated for the project activities implemented directly by the FRS, whereas DA-B will be ring-fenced and dedicated for the project activities implemented by the FMS (except Somaliland). DA-C will be dedicated for the project activities implemented by Somaliland. Each of the FMS will open and operate a Project Account (PA) to which initial funds disbursements to the PAs will be based on cash forecast to allow the FMS adequate working capital to implement the project activities. Subsequent funds disbursement from DA-B to the PAs will be supported by SoEs.

C. Procurement

78. **Procurement Assessment.** MoPIED (the main implementing agency at the national level) has no prior experience of implementing World Bank-funded projects and procurement capacity at the FMS levels is in inadequate. Thus, WAPR will endeavor to build procurement capacity during implementation through recruitment of qualified and experienced procurement staff. In addition, TA, short-term, and hands-on training will be provided to strengthen procurement capacity at all levels. Additional risk mitigation measures are detailed in the procurement section.

79. **Procurement.** Procurement will be carried out in accordance with the requirements in the Procurement Regulations for IPF Borrowers: Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised November 2017 and August 2018); 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by International Bank for Reconstruction and Development (IBRD) Loans and IDA Credits and Grants (revised as of July 1, 2016)'; and provisions stipulated in the Financing Agreement. Somalia being an FCV country, procurement under the project will be processed under special procurement arrangements referred to in paragraph 12 of the World Bank Policy IPF dated November 10, 2017.

80. **Project Procurement Strategy for Development (PPSD) and Procurement Plan (PP)**. According to the requirement of the regulations, the Recipient has developed a PPSD, based on which the PP for the first 18 months has also been prepared. The PPSD identifies that, contracts under works include construction of sand/subface dams, earth dams, boreholes/shallow wells, rehabilitation of previous WALP water structures, and office construction/rehabilitation. These being small works, the market research shows that there are several qualified local contractors, many of whom have participated and completed projects of similar nature, complexity, and value. Under the previous WALP, it has been observed that local construction companies have experience in similar works, financial capacity, and sufficient expertise. The contracts under goods include ICT equipment, vehicles, office furniture, hydrological water tools, and office supplies. The contracts under non-consulting services include activities such as hiring of conference facilities and transport or IT services. The type and budget for such activities will be defined and agreed between the Borrower and the World Bank during the project implementation period. Recruitment of individual consultants and consulting firms, NGOs, and UN-specialized agencies as the need arises for technical support and assistance. The PP sets out the selection methods to be followed by the Recipient during project implementation in the procurement of goods, works, consulting and non-consulting services, cost estimates, time schedules, the World Bank's review requirements, brief description of the activities/contract, and so on. The PP will be updated at least every 12 months, or as required, to reflect the actual project implementation needs, but each update shall require World Bank Group approval. All PPs will be publicly disclosed in accordance with the World Bank Group disclosure policy.

81. **Systematic Tracking of Exchanges in Procurement (STEP).** The World Bank Group's STEP system will be used to prepare, clear, and update PPs and conduct all procurement transactions for the project. The PIUs under WALP have been trained and are using STEP and the World Bank STEP champion and the procurement specialist will continue working closely with PIUs for smooth use of STEP.

D. Safeguards

82. **Environmental safeguards.** The proposed WAPR is classified as environmental category 'B', in accordance with the World Bank's OP 4.01 (Environmental Assessment), due to potential adverse

environmental and social impacts which are site specific and reversible. These potential adverse environmental impacts may include the following: (a) landscape degradation, especially topsoil disturbance and hardpan setting; (b) possible loss of flora and fauna due to land clearance; (c) inefficient waste management during the water infrastructure construction and operation and maintenance phases; (d) water pollution and contamination at hafir dams, with concomitant increase in the prevalence of waterborne diseases; (e) noise, dust, and vibration from construction and maintenance; (f) inadequate occupational health and safety (OHS) practices; and (g) social conflicts between preexisting and new land users.

83. The project has triggered the World Bank's OP/BP 4.04 (Natural Habitats), as seasonal streams will be altered, OP 4.09 (Pest Management) since the project plans to support agricultural intensification, OP/BP 4.11 (Physical Cultural Resources) for any unexpected occurrences of physical cultural resources and, OP/BP 4.37 (Safety of Dams) since it will support the construction of small dams. An Environmental and Social Management Framework (ESMF) has been developed to specify potential adverse impacts; detail mitigation measures; and outline safeguards supervision, monitoring, reporting, and capacity building. Public consultations were held and the ESMF and RPF were disclosed on January 15, 2019 on both the World Bank external website and in-country. The Executive Summary of the ESMF was disclosed prior to appraisal.

84. The project also triggered OP/BP 7.50 (Projects on International Waterways) as it involves the construction of small-scale sand and sub-surface dams and surface water storage infrastructures. However, this small-scale water structures are not going to be built on the main rivers of Juba and Shebelle rivers which are international waterways as defined by paragraph 1(a) of OP 7.50. Rather they will be built on the small tributaries and sub tributaries of dry river beds and are not expected to affect flow into Shebele and Juba rivers. Moreover, all the tributaries proposed for sand dams and subsurface dams run exclusively within Somalia which is the lowest downstream riparian. OP 7.50 requires riparian's to be notified and for projects with activities that have negligible impact on the flows to international water ways, allows exception from notification. Based on this background, it was determined that the activities under this project will have no impact on the flows to rivers Juba and Shebele and an exception for notification was approved by the Africa Regional Vice President on February 15, 2019.

85. Specific, costed Environmental Management Plans (EMPs) will be prepared for each site once the exact locations of those facilities have been identified in partnership with the PIUs from Somaliland, Puntland, Galmudug, and South West States. Based on discussions held so far with project teams in all the four target regions/states, it is noted that the water infrastructure development points will be constructed along traditional natural habitats such as grazing reserves. It is therefore evident that natural habitats will be affected by the proposed project activities. Therefore, OP 4.04 (Natural Habitats) is applicable. Subprojects proposed under the WAPR will be screened for impacts before financing to avoid and minimize any potential impacts on natural habitats or areas of ecological importance. If impacts occur, however, an EMP will be prepared that would outline the necessary measures needed to mitigate and address them.

86. **Social safeguards.** Key social issues for the project include (a) the issues relating to OP 4.12 (Involuntary Resettlement) and in-depth consultations to meet policy requirements as well as the careful assessment to avert conflicts, disputes, or hostility between clan/sub - clan/sub - sub clan or different groups interests as land is mostly communally owned; (b) low economic and social empowerment of women and of youth; (c) limited formal engagement with key stakeholders. In south and central Somalia,

the ability to coordinate with local authorities, civil society, beneficiaries, and other stakeholders can be constrained by logistical and security restrictions; (d) potential exclusion of poor and vulnerable households, including female-headed households and IDPs; and (e) gender-based violence (GBV) issues, in particular, risks of sexual exploitation and abuse. The project will support Social Assessment as part or in preparation of the community development planning process during implementation. The mobilization process to establish community management systems will bring together the entire community for initial consultations, priority setting, and livelihood group formation. Depending on the cultural practices of the community, the project will form groups with both males and females or groups exclusively for females to ensure that they have a vehicle to implement their livelihood choices. Mobilization will be closely monitored to ensure that women (as well as youth and marginalized groups) are included in decision making and are able to avail the benefits of the project. Based on consultations with other agencies working with communities in Somalia, it is practice requiring representation of women in leadership positions of VDCs and other livelihood groups. To ensure women's voices are being heard and reflected in decision making, leadership of VDCs must ensure that at least 40 percent of committee members are women. Moreover, in consultation with the state PIUs, the project can decide if it is necessary to require that at least one investment per village under the project is with women in the community being the prioritized.

87. **OP 4.12 (Involuntary Resettlement).** The proposed project does not intend to undertake any subprojects that will displace people. However, individual subprojects are not yet identified. Therefore, as a precautionary measure, the project prepared a Resettlement Policy Framework (RPF). The RPF addresses any issues which might arise from economic displacement and/or restriction of access to communal natural resources under the project. During implementation, special attention will be given to community participation, grievance redress and benefit-sharing mechanisms, and sociocultural systems/physical characteristics that are specific to the project sites and surroundings to ensure that those affected by implementation of the project, positively or negatively, have a voice and a mechanism for influencing project outcomes in line with the World Bank's safeguard policies. For projects on communally owned land, before project implementation, a community land resolution form will be signed, and it will have evidence of community consultation with at least two-thirds of community representation. The RPF also provides guidelines for instances of voluntary land donation in subprojects.

88. The RPF was disclosed as a separate and stand-alone report by the World Bank on December 11, 2018 and project implementation entities in Puntland, Somaliland, South West States, and Galmudug FMS on January 15, 2019. The disclosure of the document was in both project-visible locations where it can be accessed easily by public including official websites and at the World Bank's website.

89. **Gender.** Women account for 45 percent of people involved in livestock management and crop and natural resource harvesting, and they provide more than 60 percent of the labor in subsistence farming (FAO 2010). In agriculture and pastoralist communities, men are traditionally the protectors of family security, primary breadwinners, and central decision makers in both public and private enterprises, while women are responsible for bearing and raising children, all domestic tasks, and petty trading. In terms of productive activities, men and boys are responsible for buying, owning, grazing, milking, and slaughtering camels and trade while women, children, and elders are responsible for rearing cattle and small ruminants. Men and women jointly trade small ruminants, with men handling exports and women handling local subsistence trade. Women also process and sell livestock byproducts such as milk and ghee from camels, as well as milk, soap, and jewelry from camel bones. In fact, women control at least 80 percent of the country's milk production and 100 percent of milk collection. Women also dominate small-

scale poultry production, for which urban demand is growing, and their cooperatives dominate sesame production, which has growth potential for supplemental livestock feed. Drawing on lessons from other World Bank projects, the project will ensure that implementation of mobilization and livelihoods training/activities are timed so as to facilitate women's participation allowing them to balance the competing demands on their time from household works, child and elder care, and community obligations. Child care can also be provided to ensure that women are able to attend and focus on project events when needed.

90. The economic role of women has been changing in the face of recurrent crises. In the face of recurrent climate and security crises, pastoralists have become more sedentary and more reliant on satellite systems of livestock management, where families (women, children, and elders) engage in agriculture in permanent or semi-permanent households while men migrate with herds for pasture and water (FSNAU of FAO, 2012). Women sometimes migrate to IDP camps for resources and security, or they travel to towns to engage in petty trade and work in the informal economy. Men also sometimes migrate to urban centers in search of economic opportunities. These shifts are steadily changing the nature of women's work. A 2012 assessment in Baidoa by the FAO FSNAU showed that women provide 20 percent of unskilled labor in the construction sector and 70 percent in petty trade. A 2014 United Nations Development Programme (UNDP) study estimated that 60 percent of Somali business owners are women, although they are concentrated in the micro-sector. LIPW programs can also provide child care for participating women and will be monitored to ensure that women are selected to participate.

91. **GBV risks.** GBV risk assessment of intended project activities indicates that the risks are anticipated to be Moderate due to the small scale of anticipated infrastructure development and absence of labor influx. Given the challenging country context of instability and existing high rates of GBV, coupled with location of project activities in rural, often hard-to-supervise locations, and given project intentions to engage with women as key participants in decision making bodies, the project will adopt a robust series of GBV risk mitigation measures to prevent incidences from occurring. These measures, to be integrated into respective safeguard instruments, including the ESIAs and ESMPs, are (a) conducting PIU sensitization and capacity building to improve understanding, management, and monitoring of GBV risks throughout the life of the project; (b) ensuring regular community consultations to raise understanding of risk of sexual exploitation and abuse (SEA)/GBV and measures for reporting and response; (c) conducting community mapping activities (ideally as part of the Social Assessment) to identify potential GBV support services in project areas of influence; (d) ensuring that grievance redress measures include mechanisms for safe and confidential reporting of cases of GBV; and (e) ensuring procurement provisions include measures to protect against incidence (for example, ensuring GBV requirements and expectations are integrated into bidding documents and evaluation criteria, integrating Codes of Conduct with SEA/GBV-related protections. The PIU will also be responsible for the development of a GBV Action Plan, including articulation of an accountability and response framework, to be completed before construction activities commence. GBV risk screening will be conducted as water sites are selected and GBV risks will be monitored over the life of the project. The project will further ensure monitoring of GBV risks and associated mitigation measures will be integrated into responsibilities of an independent third-party monitoring to ensure proper oversight and GBV risk management. As indicated, GBV risk mitigation requirements will be integrated into all relevant safeguard instruments.

92. **Disability.** Experience in other World Bank projects has demonstrated that one issue that can consign a household to poverty is having a disabled household member. Often, the person with a disability does not have access to services that could help them participate more fully in the community medication,

OHS, assistive devices, and training. Not only do such households have members blocked from earning income, but also another member often loses income opportunities by having to take care of the disabled family member. This project will work with the community to identify households affected by disability and will include the needs of those household's accessibility issues in the design of infrastructure, livelihood opportunities that fit the abilities of the disabled, and linking to additional resources by linking with the Government and other agencies in the investment plans.

93. **Grievance Redress Mechanisms (GRMs).** A multi-tiered, multi-options-based GRM will be designed for the project, in discussions with local communities. The mechanism will be such that the complaints launched at the local level, will have a 360-degree monitoring and reporting process in place, to enable tracking of complaint resolution time, along with frequency of feedback to the complainant about the complaint status. Monitoring tiers will be defined from the local level to the PIU. Local community groups will be involved in the setting up and functioning of the GRM, with options of using free mobile technology and physical interface with a third party intermittently but regularly. This system will include identification and inclusion of key channels outside traditional dispute resolution or GRMs to enable safe and confidential reporting of incidence of sexual exploitation and abuse and other forms of GBV. Identified GRM operators will also be trained on effective response to cases of GBV should they occur.

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

E. Key Risks

95. **The overall risk to the project is rated as high.** Somalia represents a unique and complex operational environment with no shortage of risks that have the potential to derail project activities and impede achievement of the project's objectives. In addition to challenging operational environment, continued insecurity, climate-related shocks, and GBV risks, these risks relate to political and macroeconomic situation, inadequate institutional capacity for project implementation and supervision, fiduciary, environment and social, and stakeholders' risks in Somalia. The project will mitigate these risks by taking a stepwise, incremental approach based on readiness criteria and with a robust emphasis on stakeholder engagement and capacity building at all levels of the rollout, deepening and scaling of activities in existing WALP sites and into new areas in Somalia. This will maximize learning-by-doing opportunities to identify and address existing gaps in the project team's understanding of the risk landscape and to put in place evidence-based and more effective risk management strategies.

96. **Security risks are rated as high.** Somalia presents a unique and challenging security risk

environment. Project implementation will be undertaken in rural areas, where threats from terrorist groups such as Al-Shabaab exist against Somali and international partners. The provision of water could be a source for conflict and threats. Even in urban areas, there are high levels of security risks for national and international partners. The risk of security deterioration remains high. The World Bank has put in place appropriate mitigation measures for mission travel and meetings in Somalia and is reviewing these measures constantly with a security specialist in Mogadishu. Travel to FMS and Somaliland will also be managed by the team with appropriate mitigation measures, and additionally, in partnership with UN agencies and private providers as appropriate and necessary. Bespoke contingency plans to manage security conditions will be developed per implementation support mission. Missions to rural areas will be planned at least six weeks in advance and in close coordination with the Country Management Unit (CMU) and relevant partners. Pre-mission approval processes will continue to be rigorous with senior practice management and CMU approval required. Task team staff are highly skilled in operating in FCV environments and the entire team is Safe and Secure Approaches in Field Environments (SSAFE) accredited. A third-party firm will be contracted to provide quality enhancement and supervision support to the client. This will curtail the need for the project team to travel to remote rural areas.

97. **High political economy risk will exist over the course of the project.** This risk is heightened in early stages due to the African Union Mission in Somalia (AMISOM) transition and security sector reform, upcoming federal elections in 2020, the current impasse between the FRS and FMS, perpetuating low level of trust among key actors, and exhaustive political contestation. As a state in the nascent stages of federalism, these are all areas high on the Government's agenda; however, the potential exists for these tensions to derail the project. The project design is simple, community development based and as such is protected from the higher-level political issues. However, political instability can quickly result in insecurity. Fighting in Somalia tends to be isolated and in the event of the security situation suddenly deteriorating, project activities and funds can be reallocated to more secure states.

98. **Macroeconomics risk is substantial.** Though revenue collection has steadily improved in the last five years with remarkable gains in 2017, the macroeconomic situation remains shaky and the risk associated with it are rated as Substantial. The risks to the project could be reflected on the inflation of prices on goods and services as well as deteriorating relationship between the federal government and member states. The ongoing World Bank support to several programs that are helping improve revenue generation and management of funds, the Government's perusal of fiscal federalism, and improved management of public resources are expected to address this risk.

99. **Sector strategies and policies risk is substantial.** The risk due to lack of coherent sector strategies and policies for most relevant sectors (water, agriculture, natural resource management, rural development, and others) remains substantial. The project facilitates dialogue and discussion, generates data and information, and documents lessons learned that will serve as input to policy dialogue. These and the various capacity-building and institutional strengthening packages by the project will help mitigate this risk.

100. **Technical design of project is rated as high.** Project siting is important. A key technical challenge exists in choosing project sites for water sources regardless of the technology used. Incorrect siting can lead to failed construction or storage which, in turn, leads to disappointment and discontent at the community level. To mitigate, the project will heavily support the subproject siting process: (a) geospatial data will be used to identify priority catchments and siting of physical investments; (b) data from the World Bank's Regional Groundwater Initiative in the Horn of Africa project will be used to help siting of

boreholes; (c) the WET developed to support WALP will be upgraded and used to site sand and subsurface dams; and (d) back-stopping engineering support will be built into the project budget. The POM will include a detailed section on ex ante criteria for community engagement and site selection. The Government will drive the site selection process and before signing off on proposed sites, the World Bank will review the sites in person where access is possible or use alternative remote technology where access is not possible.

101. **Institutional capacity for implementation and sustainability risk is high**. The main risk to the project is political contestation among key political and economic partners (resulting in conflict) on the federal and FMS level, and the fiscal pressure on the budget from a wide array of needs across the country and recurring external shocks. Water is a multisectoral asset flowing through the remits of water, agriculture, livestock, and environment responsibilities. If not managed properly from the outset, this can create conflict. The WAPR acknowledges this risk but seeks to sustain the World Bank's engagement and build on the commitment of the authorities demonstrated through the WALP. To mitigate these risks, the project will request state-level Ministries of Planning to identify the coordinating ministry, an approach that worked successfully in the pilot WALP and will be replicated under the project. Somalia country systems are emerging and not dissimilar from other fragile state contexts. While significant growth in PIU capacity was reported under WALP for Puntland and Somaliland, implementation capacity for the water project at the federal level has not been tested. The pilots with governments in Garowe and Hargeisa have shown how with additional levels of monitoring and hand-holding the World Bank team was able to support the successful implementation of projects, and important lessons have been included into the WAPR operational procedures. The same level of implementation support will apply in the new project, continuity will be provided through retaining the same supporting team.

102. **Fiduciary risk rating for the project is rated high.** The FM risk is rated High. The overall procurement assessment risk is Substantial. The PFM and Procurement Legal Frameworks of country and implementing entities are inadequate. Fiduciary risk is compounded by limited access to the client/project sites, emerging and weakly regulated banking sector, and poor institutional and human capital capacities. Appropriate risk mitigation measures including periodic extended implementation support activities complemented by close monitoring will be undertaken in addition to providing 'on-the-ground' fiduciary capacity support to the project. World Bank FM supervision will be essential, and mitigation measures for fiduciary issues have been built into the project design in the form of strict fiduciary control mechanisms and application of World Bank fiduciary rules as well as a focus on social accountability. The project will ensure that the PIUs always have in place dedicated procurement and FM specialists who are adequately trained jointly with the EAFS Unit and other relevant staff within the Office of the Accountant General. Series of on-the-job fiduciary trainings and the World Bank's periodic review and implementation support will help in mitigating these risks.

103. **Environmental and social risks are substantial.** This is due to the potential for changes in the natural resource asset base, including land access, during project implementation. More specifically, poor community management of water points can result in increased soil fertility loss, degraded pasturelands, increased land pressures, poorly managed farming, and poor water quality, all of which have potential to amplify tensions within communities and lead to conflict, affecting project viability and sustainability. The project will mitigate these risks by engaging communities at the outset in broadly inclusive and sustained community planning and development processes that will ensure that local livelihood dynamics, resource conditions, and, most importantly, community priorities drive project interventions. A special emphasis will be placed on strengthening communities' capacity to manage the assets and to develop equitable and

sustainable water-use plans that incorporate the interests of all stakeholders, including transhumant pastoralists.

104. **Stakeholders risks are substantial.** While state formation has set a course for Somalia's governance and service delivery, it has also opened new uncertainties over representation, power-sharing, and allocation of resources. Moreover, the protracted humanitarian situation and emerging use of country systems has led to a fragmented aid environment, which unless effectively managed will continue to undermine the capacity of Somali institutions. This is true for all sectors including water and agriculture. Given the resource-constrained environment and that this project is a recipient-executed operation, there is a risk that state agencies will overestimate their capacity to deliver activities, with potential to crowd out or otherwise curtail critical services being implemented in the rural sector by nongovernment actors. Resulting disruptions could fuel tensions and jeopardize nascent state-citizen relations and the well-being of rural communities who rely on nonstate services. To mitigate these risks, the project will support the Government to better understand how to leverage nonstate actors and bring them under government direction and oversight. At the federal level, the use of a Steering Committee composed of key ministries, strong involvement of federal and state authorities, working with the various development pillar working groups under the Somalia Development and Reconstruction Facility (SDRF) framework, and the robust capacity building embedded in the project will help further mitigate these risks.

105. **Risk of GBV and sexual exploitation, harassment, and abuse has been assessed as moderate** after the project has undergone GBV risk screening. However, given the challenging country context, anticipated supervision challenges and potential risks to female beneficiaries participating in project activities, robust risk mitigation measures will be integrated into key safeguard instruments. Likely risks include (a) increased exposure of women in communities to sexual exploitation or abuse by contractors or workers associated in the project; (b) exposure of female workers to sexual harassment by male colleagues under the project; (c) potential of exclusion or marginalization of women from community-level decision making, and (d) potential amplification of community tensions because of enhanced participation of women in local decision making and economic activity. According to the CPF, protection challenges and GBV will remain a central focus. This will be supported through links to the targeted Inclusive Community Resilience and GBV Pilot and through increased social risk assessments and integration of GBV mitigation measures to ensure that project investments minimize and mitigate potential risks of GBV and sexual exploitation, harassment, and abuse. Key measures to enable safe, ethical, and survivor-centered response will also be identified and integrated into project implementation documents. Safeguard instruments developed under the project, including in particular the ESIA and ESMPs, will address these risks and negative impacts and propose corresponding preventive, mitigation, and management measures designed to minimize and enhance the overall environmental and social performance of the project. In addition, an independent, third-party firm will be contracted to assist the project team and the PIUs to proactively monitor these risks and advise on the implementation of appropriate risk mitigation strategies as local circumstances dictate.

106. **Risks of localized conflicts are considered substantial.** Resource-born conflicts are a relatively common feature across Africa's arid and semiarid lands. Availability and access to water and pasture determine where people and livestock settle and where they migrate over time and across seasons. During dry seasons, when temporary surface water sources dry up, heightened tensions and proximity competition for access to remaining groundwater sources (through deep boreholes) and receding pastureland among pastoralists and their animals can lead to localized conflicts. In some regions, raids

and counter raids among pastoralist communities have long been viewed as a customary but not officially sanctioned coping mechanism, especially during periods of severe drought. The weakening of traditional governance and resource management systems and the gradual expansion in recent decades of private enclosures on traditionally open communal rangelands by ranchers and farming communities, especially along livestock migration routes, increasingly threaten nomadic pastoralist communities who depend on mobility and seasonal migration to sustain their herds.

107. **Within the above socioeconomic context, project interventions pose notable risks.** By intervening directly in the supply and management of such a high-value and vital resource as water in Somalia's chronically water-scarce regions, the project has the potential to adversely affect and disrupt existing community dynamics and interrelationships among livelihood groups. Poorly understood and managed, heightened tensions could lead to localized conflicts. Possible vectors include the increasing value and contestation over land due the installation of water infrastructure and water supply services and reduced access by pastoralists to watering points due to expansion of land-use activities and associated land enclosures. Drawing lessons from World Bank experience in Sudan, Ethiopia, and elsewhere in the region, the project will seek to mitigate these risks by (a) ensuring conflict-sensitive site selection that avoids disrupting customary migration routes; (b) emphasizing the buildout of small-scale, limited capacity, and water harvesting and storage technologies targeting localized community needs/demand; and (c) engaging communities in broadly inclusive and sustained community planning and development processes that will build community ownership while ensuring that local livelihood dynamics, resource conditions, and ultimately community priorities will inform and drive project interventions. A special emphasis will be placed on supporting communities to develop equitable, sustainable, and conflict-sensitive water use and investments plans that incorporate the interests of all stakeholders, including transhumant pastoralists.

108. **Climate and disaster risks are rated Substantial.** Preliminary climate and disaster risk screening highlights that project areas will be significantly exposed to climate change hazards (rising temperature, intensified precipitation, and extreme droughts and flooding). Measures to mitigate these risks are at the heart of the technical design of the proposed operation, which aims to reduce the impacts of climate change by providing improved access to water and strengthening community capacity to better manage their natural asset base for improved resilience. In recognition of Somalia's acute vulnerability to climate risks and the strong potential for another extreme drought event to disrupt project implementation during the project life cycle, the project incorporates a zero-cost component that will facilitate a rapid mobilization of emergency response contingency measures when needed to respond to any humanitarian crises. Water infrastructure will also be appropriately designed and reinforced to withstand extreme flooding events.

V. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Somalia

Somalia - Water for Agro-pastoral Productivity and Resilience

Project Development Objectives(s)

Develop water and agricultural services among agro-pastoralist communities in dryland areas of Somalia.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	End Target
People provided with access to improved water sources under the project, of which 50 percent are fem			
People provided with access to improved water sources under the project, of which 50 percent are female (Number)		0.00	250,000.00
Farmers/clients (number) adopting improved technology, share of which are female (percent)			
Farmers/clients (number) adopting improved technology, share of which are female (Number)		0.00	110,000.00
Target beneficiaries satisfied with project investments (percentage).			
Target beneficiaries satisfied with project investments. (Percentage)		0.00	60.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	End Target
Component 1. Support the development of multiple use water sources			
Improved community water points constructed under the project (Number)		0.00	75.00
Improved community water points rehabilitated under the project (Number)		0.00	25.00
Component 2. Institutional and Capacity Development			
Number of PIUs established under the project and functioning, and of which female staff is 50 percent (Number)		0.00	4.00
Number of Community Management Systems Established (Number)		0.00	75.00
Number of PIU members trained disaggregated by (male/female) (Number)		0.00	40.00
Component 3. Supporting Sustainable Land Management and Livelihoods Development Around Water Points			
Farmers/clients reached with Agricutural serivices, of which women (Percentage)		0.00	80.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
People provided with access to improved water sources under the project, of which 50 percent are female	This indicator measures the cumulative number of people who benefited from improved water supply	Bi - Annually	PIU Reports	Periodical supervision	PIU

	services constructed under the project.				
Farmers/clients (number) adopting improved technology, share of which are female	The indicator evaluates the good agricultural practice transferred during technical assistance and number of the farmers who adopt it.	Bi-Annually	PIU-Reports	Periodical supervision	PIU
Target beneficiaries satisfied with project investments.	This indicator measures the percentage of clients who expressed satisfaction with the agricultural and rural advisory services provided in the project areas based on formal or informal surveys. The informal survey will be part of the project monitoring and the formal survey will be conducted during the project Mid term review. The feed back from these surveys will be used to update the design and refine the packages of the Agricultural advisory services.	Bi-Annually	PIU-Reports	Periodical supervision	PIU

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Improved community water points constructed under the project	A community water point includes small sand and sub-surface dams in dry river beds (wadis), surface water storage infrastructure (e.g. berkads and hafir dams), area infiltration interventions such as semi-circular bunds or soil bunds, rock catchments and Shallow and boreholes for groundwater extraction.	Bi-Annually	PIU-Reports	Periodical Supervision	PIU
Improved community water points rehabilitated under the project	Community water points constructed before the project and damaged or out of service, rehabilitated under the project. This indicator measures those rehabilitation works.	Bi - Annually	PIU -Reports	Periodical Supervision	PIU
Number of PIUs established under the project and functioning, and of which female staff is 50 percent	PIUs established and leading project interventions in surface and/or ground water development and management, agriculture and livestock	Annually	PIU	Project Supervision	PIU
Number of Community Management Systems Established	This indicator will measure the existence and quality of organizations at the	Annually	PIU Reports	Project supervision Report	PIU

	community level to organize demand for investments, set priorities, and oversee implementation with the community. This includes having VDCs with at least 40 percent of leadership roles being women. Based on a set of criteria, each village will be assessed at mid-term and end of project to assess the community organizations on a scale of A, B, C, or D with A being the strongest. Those communities with a A and B rating will be considered a good functioning community management system.				
Number of PIU members trained disaggregated by (male/female)	The number of project staffs working at federal and member state levels trained to implement the project. The training includes initial and periodic refresher and on the job trainings.	Bi - Annually	PIU Reports	Project supervision	PIU
Farmers/clients reached with Agricutural serivices, of which women					

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Somalia

Somalia - Water for Agro-pastoral Productivity and Resilience

A. Project Design

1. The project has four main components as outlined in the following paragraphs.

2. **Component 1: Support the Development of Multiple Use Water Sources (US$15 million equivalent IDA).** Based on detailed basin-level hydrology assessments, micro-watershed action plans, and groundwater investigations, this component will finance investments in key water management infrastructure for harvesting, storing, and delivering water for people, livestock, and agriculture. The infrastructure will be designed to deliver both improved human health outcomes and water for productive uses (mainly agricultural production and agroforestry services for landscape restoration), thereby making the targeted communities more resilient to droughts and floods (restored landscapes suffer less from erosion and are thus more resilient to flooding).

3. **Subcomponent 1.1: Construction of New Community Water Points (US$11.5 million IDA).** This subcomponent will support the construction of water infrastructure and small works. The menu of water infrastructure investments will include small sand and subsurface dams in dry river beds (wadis), surface water storage infrastructure (for example, berkads and hafir dams), area infiltration interventions such as semicircular bunds or soil bunds, and rock catchments. As explained earlier, sand dams are particularly effective at enhancing the resilience of marginal dry-land environments by helping sustain vegetation biomass during drought periods. The improved vegetation biomass and soil management, combined with the increased water availability derived from these various infrastructure investments, will facilitate agricultural activities and food production. These will, in turn, increase the targeted communities' resilience to droughts and floods. Solar units will lift water and then use gravity to feed auxiliary structures such as cattle troughs, water points for human use, and so on. In addition, if no other options are feasible, the component will support construction of boreholes for groundwater extraction. Boreholes are an important source of water during severe drought, especially for humanitarian response, and particularly in non-riverine regions of Somalia.

4. **Subcomponent 1.2: Rehabilitation of Community Water Points (US$3.5 million IDA).** This subcomponent will finance the rehabilitation of existing water infrastructure and small works prioritizing boreholes. The subcomponent will also finance associated infrastructure to provide multiple-use water services (zero-emission standpipes or shallow wells with hand or solar pumps and watering troughs for livestock).

Table 1.1. Water Technology Options

Measure	Description	Impact on Water Balance	Pre-selection of Areas in the WET	Approximate Cost (US$)
Balley/Haffir	Earth dam at runoff concentrating flow path without clear stream bed, structures made of soil with a storing capacity of 3,000 m^3 to 12,000 m^3	Point intervention, surface runoff storage	Runoff and slope	90,000
Berkads	Water basin to store surface water (3–12 m^3) Improved design that separates human and livestock offtake points, solar still design with	Point intervention, surface runoff	Runoff, small slope, and settlements	41,000

Measure	Description	Impact on Water Balance	Pre-selection of Areas in the WET	Approximate Cost (US$)
	glass, Perspex or semitransparent roof covers to catch evaporation, channel it to an internal gutter, and then outside into a storage tank	storage		
Sand storage dam	Barrier in stream channel up to bank height depending on the site and other factors, with a storing capacity of 2,000 m^3 to 5,000 m^3	Point intervention, streamflow storage	As implemented in the WET	90,000
Semicircular bunds	Similar to soil bunds, but semicircular structures of 2.5 m diameter, placed as a regular pattern on hillsides to increase infiltration and prevent nearby farmlands from erosion	Area intervention increase Infiltration	Slope, soil	500 per hectare
Soil bunds	Earth banks, 1.5 m wide, thrown across the slope along the contour. They are suitable in low rainfall areas (up to 600 mm annual rainfall) having slopes 1–70 m and more permeable soils while not suitable in clay soils. The main function of these bunds is to reduce slope length which in turn reduces soil erosion and to store and retain water. 'Indian type'—with 2x3x0.3 m excavations in front of the bund to save topsoil and increase infiltration.	Area intervention increase Infiltration	Slope, soil	5,00 per hectare
Subsurface dam	Subsurface dams are similar to sand storage dams except of the crest being under the surface of the riverbed. The inflowing water is stored in the riverbed sediments and can be used by means of shallow wells. The rise of the water level also promotes natural vegetation growth. There are two ways of implementing subsurface dams as impermeable geomembrane or as concrete dam in the riverbed, the latter being more sustainable. Depending on the site and other factors, with a storing capacity of 2,000 m^3 to 7,000 m^3	Point intervention, streamflow storage	Similar to sand dams, but no distinct river channel needed	90,000
Rock catchment	Utilization of concrete improved rocky slopes for water catchment	Point intervention	Surface geology (rock), slope, settlement, and rainfall	20,000
Shallow wells/shallow boreholes	This is a hole dug, bored, driven, or drilled into the ground for extracting water. The definition follows different depths in different places, but for the sake of this project a shallow borehole is up to 50 m depth and a borehole can go up to 200–300 m depth or beyond. The yield also can vary from as low as 0.8 liters per second to 5 liters per second and beyond to artisan free flow.	Point source, groundwater extraction	Surface geology (rock), slope, settlement, and rainfall	50,000

5. **Site selection is crucial in the project.** Sites are selected initially through remote sensing using the WET developed under WALP and then ground truthing field visits to confirm suitability. The WAPR preparation is in an advanced stage of site selection. In Somaliland, for WALP, 16 sites were identified using the WET for possible sand dam construction, ground truthing was undertaken by the PIU, and 12

sites were deemed suitable. Under the previous WALP, four sites were developed, and there are eight potential sites that can move straight to the geophysical studies stage. In Puntland, 21 potential sites were identified for World Bank support under the Special Financing Facility for Local Development Emergency Response (P156257) to the 2016 drought. That project however ultimately chose to focus on southern Somalia and these 21 sites are at the stage where they can move directly to ground truthing. In Galmudug and South West States, using World Bank-Executed funds the project team has used the WET and local geoscientists to identify potential sites.

Component 2: Institutional and Capacity Development (US$6 million equivalent IDA)

6. As Somalia consolidates its political transition and builds on the resulting peace and security dividends, there is strong need to support the FRS and the FMS to develop the knowledge systems and institutions needed to deliver essential services and optimize usage of the country's natural resources. This component will support the building of a strong foundation for a gradual transition to more integrated and sustainable agriculture and water development, promoting the farmers' adoption of drought-resistant seed varieties and climate-smart technologies by strengthening local, state, and national institutions and capacities. Promoting water and agriculture in an integrated and sustainable way based on carefully managed water infrastructure and allocation of water and selection of the most efficient technologies from a water-conservation standpoint will make the project beneficiary communities more resilient to droughts and floods. The component objectives will be delivered through two subcomponents.

7. **Subcomponent 2.1: National and State Institutional Capacity Building (US$2.0 million IDA).** This subcomponent will support strengthening of national and state institutions capacities to plan, implement, and monitor integrated agriculture and water development programs. The Government needs to develop better sector oversight to coordinate external interventions with its own nascent program of domestic investment. The Government needs to establish the policies and laws to regulate the sector and ensure that infrastructure investment is sustainable. This includes developing and implementing construction standards; rangeland management guidelines; key feasibility studies for preparing project interventions (site-specific EIAs, engineering surveys, and hydrological assessments for project areas); and providing improved extension to farmers and pastoralists; management models; and cost recovery mechanisms – all aimed at helping the beneficiaries better deal with the increasing risk of droughts and floods. Better data are also needed to improve knowledge of hydrogeology and groundwater exploration so that aquifer recharge can be optimized, thus further contributing to water security. Without improved data, both external and domestic infrastructure investment will continue to be ad hoc and poorly coordinated. To be able to leverage existing expertise, ground presence, and local knowledge, this component will finance a technical assistance agency (for example, FAO, NGO, university, and technical team) to support national and state government agencies in selecting, training, and monitoring nonstate actors for local project implementation. It will also support research and the development of a training needs assessment for relevant government agencies, development of curricula, and delivery of high-value training programs. It will also finance highly targeted exposure visits to neighboring countries to learn from best-practice approaches.

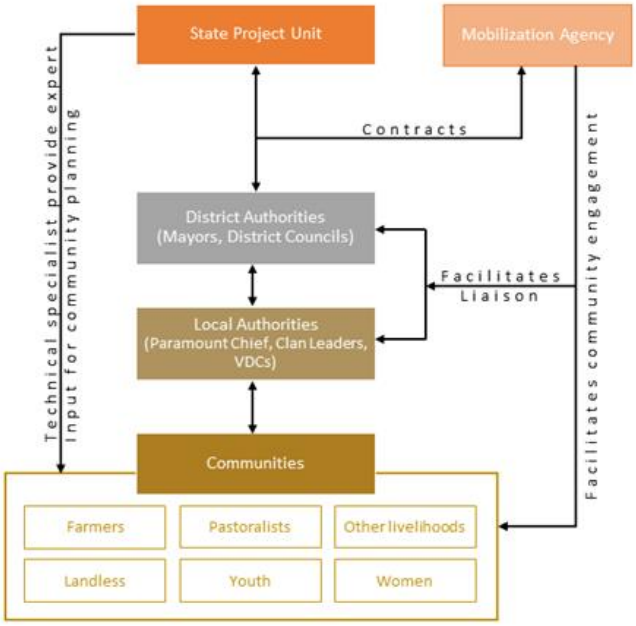
8. **Subcomponent 2.2: Community Development and Demand Mobilization (US$4.0 million IDA).** Drawing on lessons from WALP, this subcomponent will (a) introduce the project to government and traditional authorities at the district and community levels and other stakeholders working in the area; (b) build a collaborative relationship between the project and these stakeholders to maximize synergies with other investments; and (c) undertake a holistic engagement and capacity building of the beneficiary

communities to identify and co-manage specific priority investments to support their agriculture and livestock-based livelihoods in an inclusive and transparent manner.

9. **Lessons from WALP will guide the mobilization process.** A study commissioned by the World Bank near the end of WALP implementation identified issues within the project communities in Somaliland and Puntland that have emerged with the new water infrastructure. The findings of that study show that the communities are different, in terms of social issues, economic priorities, and level of cohesion. In Puntland, for example, communities are mostly pastoralist, so they share many of the same priorities around water and increasing their livestock herd, although some expressed interest in taking up agriculture as well. In Somaliland, communities vary from agro-pastoral to pastoral, peri-urban to rural, and their interests varied greatly. Issues of access to water for agriculture were clear, with wealthier farmers near the banks of the wadi being able to access the new water while poorer farmers could not. Somaliland communities were also divided about the sale of water to urban water truck operations, for with the benefits were unclear. The mobilization process is an intensive engagement with the target communities requiring regular and frequent visits for meetings with the full village or with fully representative groups for planning and training. The process will seek to activate all members of the village including the poor, landless, youth, women and other groups that are often excluded from decision making to ensure that the benefits of the new water source are not captured only by elite interest groups.

10. **FMS and Somaliland will manage mobilization through the PIU.** The PIUs will have the funds to contract mobilization support on the ground. Mobilization will broadly (a) increase awareness of the 'rules of the game' for participation in the project; (b) introduce the costs and benefits of different technologies to promote informed demand and increase community ownership and sustainable management of infrastructure and other investments; (c) increase the capacity for community governance by training leaders on meeting management, ensuring inclusion and participation, conflict resolution, and so on; and (d) increase awareness of the resource constraints within the community and considerations of equitable resource management across different stakeholder groups. The mobilization contractor would bring extensive practical experience in building community capacity for inclusive meetings, obtaining input from marginalized groups, building management capacity of community representatives, and providing community conflict resolution techniques in addition to technical experience in rural development. The mobilization contractor would also provide training on the skills necessary to successful community management, for example, leadership, management of meetings, development of investment plans, and communications.

Figure 1.1. Flow of Engagement for Community Mobilization



11. The project will bring in focus on water and natural resource-based livelihoods to community engagement. It will help communities place into perspective how much additional water they will have from the infrastructure investment, how much water their livelihood plans would take, and how technical support from the project could help them use their water more sustainably. Sectoral experts from the PIU, and the relevant FMS ministries as needed, will fully participate in community mobilization, which will allow them to collect more details on the specific problems that communities face. They will also be able to provide technical information that can explain the underlying causes of problems and the technical solutions that will work to solve them. Ultimately, they will bring the information needed for the communities to make informed decisions. The sector technical experts can brief their ministries on the specific problems faced by the communities, so they can prepare appropriate responses through project-supported livelihood investments.

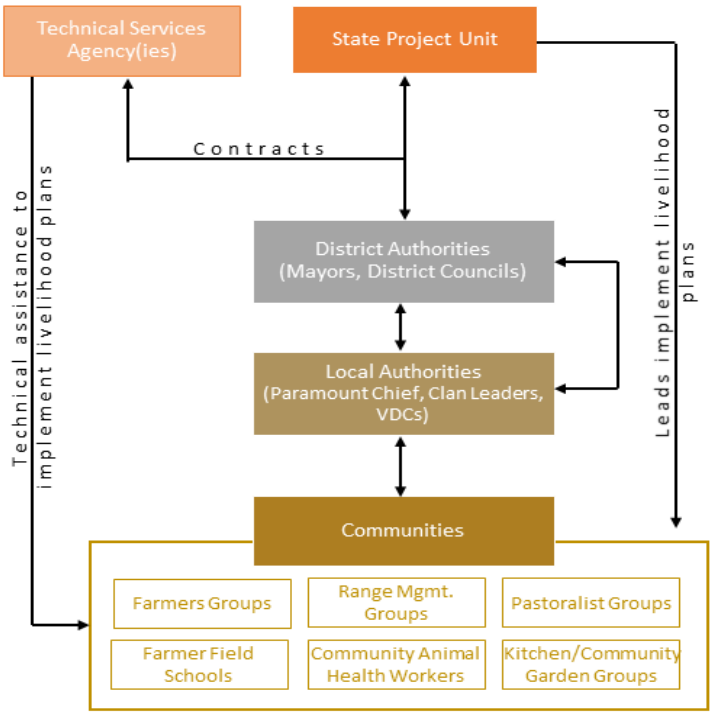
12. Given the rich community development environment, the PIUs and the mobilization contractor will engage other stakeholders to ensure any potential leveraging of other programs—to access training, market linkage opportunities, alternative non-farm livelihood training, and so on—are made available to project communities. The mobilization will engage the entire community using a process to maximize inclusion and ensuring that the needs and interests of women, youth, the disabled, and other marginalized stakeholders participate fully in decisions about water and related infrastructure priorities and design to ensure equal access and use of that infrastructure. Mobilization will also ensure that the creation of livelihood opportunities is maximized to benefit men, women, youth, the disabled, and so on. Upon entry into a project village, the mobilizers will support a process that helps identify the different stakeholder groups and their needs using techniques such as participatory wealth ranking, participatory identification of the poor, and participatory services mapping. This process will help ensure that value chains in which women are most often involved are supported for development, that infrastructure is accessible to them, it meets the needs of the entire community, and that the community forges links with service providers who can provide additional services beyond their immediate area, for example, skills training for youth

employment and assistive devices for the disabled. Mobilization will build on successful initiatives already on the ground. There have been many UN- and international (INGO)-led community development programs that have organized communities in the project area over the past several years. For example, SomReP works in Somaliland and Puntland and comprises seven INGOs with extensive international experience in community development, agriculture, and livestock.[21] WAPR shares similar goals with SomReP, which seeks to build household and community resilience to drought and related risks, and it does this through a participatory process that facilitates the formation and capacity development of VDCs, which oversee the development of CDPs and manage holistic community development. Another consortium, BRCiS similarly seeks to build communities' capacity to resist and absorb minor shocks without undermining their ability to move out of poverty.[22] Finally, FAO, UNICEF, and the World Food Program have a joint resilience program action that uses similar approaches.

13. **Learning-by-doing approach with gradual scale up from WALP sites.** In existing WALP sites, mobilization will begin immediately to help communities develop a water budget based on ongoing water monitoring activities and water availability, communities' water-use priorities, and how they can maximize their available water resources in the most inclusive way possible. The activity will produce a plan for management of the water infrastructure, including upkeep and maintenance, and for sustainable and equitable allocation and access across stakeholder groups. In addition, it will produce a plan for productive livelihood development with priority investments in land management, cropping, and livestock to be supported by the project. It will also facilitate group formation to lead those investments in the community for example, pastoralist groups, farmer groups, community nutrition groups, and so on. New project sites will begin mobilization once the technical specifications for site selection have been finalized and project communities have been identified. In these communities, in addition to the activities above, the mobilization will help communities select the optimal technology to be financed by the project to increase water capture and storage (for example, sand dams and berkhads). Technical support for the implementation of livelihood development priorities will be provided through separate contracts to technical service providers under Component 3.

[21] SomReP agencies include CARE, Action Against Hunger, ADRA, COOPI, Danish Refugee Council, OXFAM, and World Vision International.
[22] BRCiS includes *Cooperazione e Sviluppo* (CESVI), Concern Worldwide (CWW), the Norwegian Refugee Council (NRC), the International Rescue Committee (IRC), and Save the Children International (SCI).

Figure 1.2. Arrangements for Livelihoods Support



Component 3: Supporting Sustainable Land Management and Livelihoods Development Around Water Points (US$9.5 million equivalent IDA)

14. Linking with water infrastructure and community planning and mobilization interventions under Components 1 and 2, this component will catalyze priority investments, facilitated by participating FMS line ministries, to create and strengthen productive livelihoods among target communities. The component will stimulate the growth and development of productive and sustainable income-generating activities through two subcomponents that will (a) improve the health and sustainability of the natural resource base (that is, land, water, and vegetative cover) which underpins all agriculture and pastoralist livelihoods and (b) facilitate communities' access to productive assets and extension services needed for agriculture and livestock production.

15. Component 3 activities will be piloted during Year 1 within existing WALP sites where water assets were installed and CDPs developed during the pilot phase. Pilot activities will initially look to build on the experience of FAO and NGO consortia for example, SomReP and BRCiS), and local NGOs with investments designed to facilitate post-crisis recovery of rural households and livelihoods while building stronger resilience to future climate related shocks, primarily droughts and floods. The experience gained, and lessons learned from the existing WALP sites will inform the introduction and scale-up of validated approaches during Years 2–5 with target communities elsewhere as CDPs are developed and water assets are delivered. The component will finance, among others, services delivery contracts; field travel per diems; labor-intensive landscape interventions (through cash for work); and the purchase and distribution of assets (seeds, tools, irrigation, and other equipment) needed for cropping and livestock activities.

16. **Subcomponent 3.1: Integrated Landscape Management (US$3.5 million IDA).** Based on priorities from the community planning and using a micro-watershed approach**,** this subcomponent will finance community-led soil and water conservation measures. These include landscape rehabilitation and protection through terracing of irrigable land degraded or endangered by erosion, gully rehabilitation; planting of trees and other vegetation in upland areas, rangeland management to introduce rotational grazing and stocking rate limits, and improved management and sustainable use of existing forest and vegetation resources. Together, these activities will encourage better infiltration of water during the rainy season into the surrounding land and reduce loss of valuable topsoil from surface runoff, all contributing to the restoration and management of a healthier ecosystem, one that can more sustainably support rural communities and increase their adaptive capacity to better cope with floods and droughts. This subcomponent would also promote the uptake of alternative energy solutions through awareness-building, demonstrations, and financing to curtail local demand for environmentally-destructive and unsustainable charcoal production. The subcomponent would also finance establishment of community tree orchards for sustainable fuelwood and charcoal production and would support the promotion and take-up of small-scale solar energy solutions for household use.

Table 1.2. Examples of Landscape Restoration Activities that Could Be Supported

Livestock Management	Soil and Water Management	Agroforestry	Integrated Food Energy Systems
• Establishing rotational grazing • Grassland restoration and conservation	• Terraces and bunds • Planting pits • Water storage (for example, water pans) • Pits, and ridges	• Boundary trees and hedgerows • Multipurpose trees • Tree/shrub regeneration • Woodlots	• Biogas • Production of energy plants • Improved stoves • Solar and wind energy

17. **Subcomponent 3.2: Agriculture and Livestock Support (US$6.0 million IDA).** Anchored by the water assets delivered under Component 1 and guided by the CDPs developed under Component 2, this subcomponent will support the development and diversification of livelihoods among target communities. It will facilitate the demand-driven delivery of agricultural assets and extension services based on community-specific priorities and context-specific conditions, including estimates of water availability and water use demand. Activities envisioned under this subcomponent include the establishment community gardens and fruit tree groves (as demonstration plots); procurement and distribution of improved seeds and other inputs; and introduction of high-efficiency micro-irrigation systems, soil micronutrient assessments, and needed training. These investments will help communities increase their production of more nutritious food for household consumption, and where possible, marketable surpluses. Training would focus on promoting farmer adoption of climate-smart farming techniques that can improve household food and nutrition security while optimizing usage efficiency of available water resources. Beyond soil and water conservation, training would focus on promoting adoption of drought-resistance crops and seed, intercropping and crop diversification, integrated pest management, fodder production and storage, animal health treatment, and household kitchen gardens using harvested rainwater. Component activities will be overseen by technical line ministries and delivered through service provider contracts (that is, NGOs and UN agencies).

Table 1.3. Examples of Climate-Smart Agriculture Practices

Crop Management	Livestock Management	Soil and Water Management	Agroforestry
• Intercropping with legumes • Crop rotations • New crop varieties (for example, drought resistant) • Improved storage and processing techniques • Increased crop diversity	• Improved feeding strategies (for example, cut 'n carry) • Fodder crops • Manure treatment • Improved livestock health • Animal husbandry improvement	• Conservation agriculture (for example, minimum tillage) • Contour planting • Planting pits • Improved irrigation (for example, drip)	• Nitrogen-fixing trees on farms • Multipurpose trees • Improved fallow with fertilizer shrubs • Establishment of citrus groves • Improved fruit orchard management

Component 4: Project Management, M&E, Knowledge Management, and Learning (US$9.0 million equivalent IDA)

18. This component will finance the operational costs of the project management units in participating FMS and Somaliland, as well as project coordination and fiduciary support at the FRS level. The component would also be responsible for M&E, knowledge management and learning, and evidence-based policy input. This component also covers the Contingent Emergency Response (CERC) subcomponent of the project that will support immediate and rapid response emergency needs. Component activities will be delivered through three subcomponents.

19. **Subcomponent 4.1. Project Management (US$ 4.0 million IDA).** This subcomponent will ensure that the project is implemented efficiently, on time, and in accordance with the Loan Agreement. A strong PIU will be established and staffed by a team of experts at the national, state, and district levels. This subcomponent will support (a) the incremental operating costs for managing the project, (b) the cost of procurement and FM specialists, and (c) outreach and communications on the Government's role and leadership on the project to the broader Somali community.

20. **Subcomponent 4.2. M&E, Knowledge Management, and Learning (US$5.0 million IDA).** The project would support continuous learning and adaptable knowledge management. A web-based MIS will be set up to track real-time performance of the project and is linked to an M&E system to focus on project results and outcome. This subcomponent will finance baseline, concurrent monitoring of inputs and outputs and monitoring of safeguards, conflict, and gender and focus on developing and disseminating knowledge generated through various project activities. Subcomponent activities will incorporate new modern technology such as geo-tagging of site investments, collection of field data with tablets/smartphones, and application of geospatial imaging for quantifying before and after comparisons for specific indicators. With a view to obtain more information and knowledge on the extent and period of flood, this subcomponent will support technical work such as flood mapping and support to information sharing.

21. Given the nascent institutional capacity of multisectoral rural resilience in Somalia, this subcomponent will allow the FRS to engage a suitably qualified and experienced international independent firm to provide quality enhancement and implementation support to the project. The

objective of the support will be to provide an additional and independent monitoring and assurance ensuring that WAPR project funds are used for the purposes specified in project grant agreements. The firm will be contracted by the FRS and will support Somali authorities to fulfill their fiduciary, procurement, monitoring, and supervision obligations with respect to all four project components. The firm will also be responsible for monitoring the development of capacity within recipient organizations and agencies such that they advise on capacity-building needs to carry out the FM, procurement, and project management obligations. Capacity assessment will be done in collaboration with the World Bank task team and the FMS contracted engineering and sustainable land management implementation support entities providing technical assistance and backstopping support for Components 1, 2, and 3. To this extent, the firm will be expected to provide advisory as well as monitoring support to the World Bank

22. **Subcomponent 4.3. Contingent Emergency Response.** This subcomponent will support immediate and rapid response to an eligible crisis or emergency, as needed. This zero-cost component will finance eligible expenditures under the IRM in the case of natural or manmade crises or disasters, severe economic shocks, or other crises and emergencies in Somalia. It can be triggered through formal declaration of a national emergency by the government authority and upon a formal request from the FRS to the World Bank through the MoF.

23. In such cases, funds from other project components will be reallocated to finance emergency response expenditures to meet agricultural crises and emergency needs. The emergency response would include mitigation, recovery, and reconstruction following crises and disasters, such as severe droughts, floods, disease outbreaks, and landslides, among others. Implementation of this subcomponent will follow a detailed CERIP satisfactory to the World Bank that will be prepared for each eligible emergency.

Project Institutional and Implementation Arrangements

24. All project interventions will be led by state-level ministries, while tracking and reporting of project progress will happen at the federal level.

Federal Level Roles and Responsibilities

25. A Federal Inter-Ministerial Steering Committee chaired on a rotational basis by the Ministries of Water and Energy Resources; Ministry of Agriculture and Irrigation; Ministry of Livestock, Forestry, and Range; and the Environment Directorate in the OPM (with a view to empower technical ministries in the overall oversight of implementation) and comprising the MoF; MoPIED; Ministry of Livestock, Forestry, and Range; Ministry of Agriculture and Irrigation; Ministry of Water and Energy Resources; and the OPM will be convened for the duration of the project. The Ministry of Water and Energy Resources will take the first chair role. The Steering Committee will meet quarterly to review the project's progress and identify any policy or regulatory issues, particularly cross-sectoral issues, that will surface during project implementation. The MoF oversees all project disbursements to line ministries at the federal and member state level and coordinates all financial reporting. The project will support additional human resource at the MoF to manage the financial aspects and to coordinate with MoPIED.

26. A National Project Coordination Unit (PCU) with a project coordinator, supported by M&E, a procurement specialist, and specialists as needed with medium- and short-term input, will be appointed at the MoPIED to maximize the flow of communications among the federal ministries, FMS, and Somaliland. This will help the MoPIED oversee the M&E aspect of the project through its M&E Department. The project coordinator will be responsible for maintaining a unified Results Framework for

the project. Funds for policy analysis and other relevant sector studies will be made available to each stakeholder ministry at the federal level.

State-Level Roles and Responsibilities

27. Water interventions will anchor all other interventions in the project and will be the starting point for livelihood support interventions under the project.

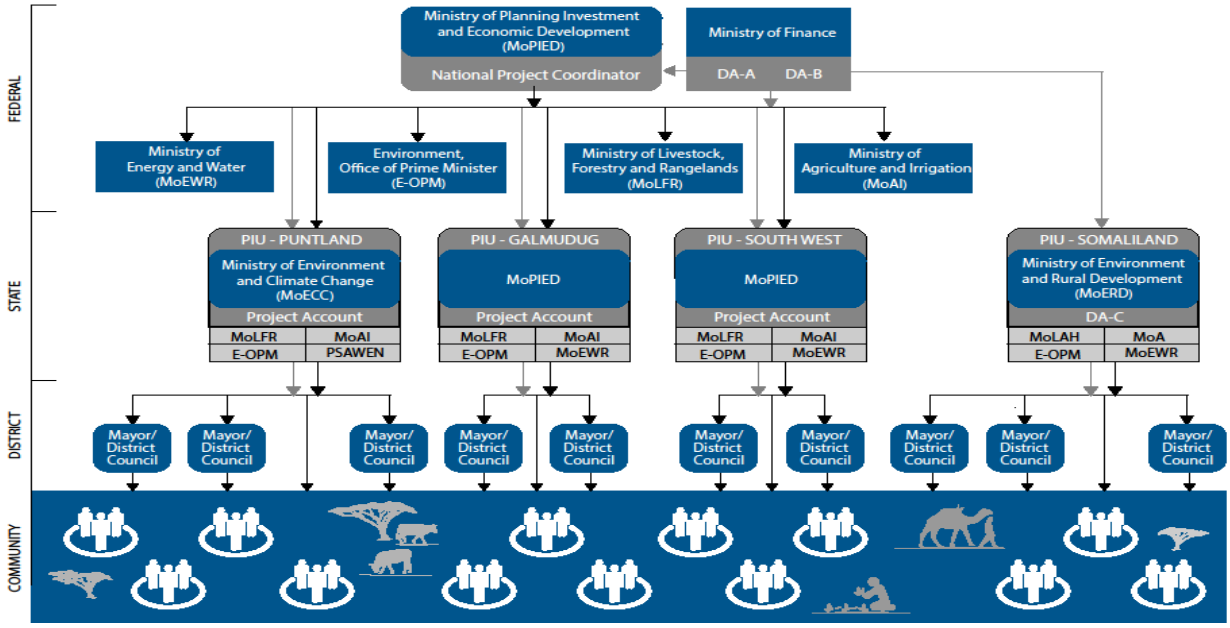
28. Somaliland and each FMS will establish and maintain a PIU with representation from each participating line ministry to ensure cross-sectoral collaboration in planning and implementation activities. The PIUs will be staffed by a project management specialist and relevant fiduciary and safeguards specialists, in addition to the deputed sectoral specialists, to ensure high quality throughout implementation.

29. **Community mobilization and planning.** Each state government will oversee the community mobilization process, which will engage communities throughout the project to help them identify their priority water interventions (costs and benefits of different technologies), how they will manage their water infrastructure, and how the community will use the water to increase their food security and income opportunities. Given capacity and human resource constraints at the state level, the project will provide funds to contract implementation support of the mobilization activity. The approach will bring together all members of a village, ensuring the inclusion of all stakeholder groups for example, pastoralists, irrigated farmers, rainfed farmers, landless laborers, women, and youth.

30. **Water infrastructure.** To inform key design elements of water interventions, state-level ministries responsible for water will contract consultant engineers to (a) identify areas with potential for water development, (b) inform the mobilization discussions led by the Government with communities, and (c) provide detailed designs and supervision of the construction of water infrastructure.

31. Each FMS will respond to the demand articulated by community-level institutions, considering their preferences: (a) for the types of technology for water catchment, storage, and management; (b) for siting infrastructure given their knowledge of water flows and service needs; and (c) options for involvement in construction works. Community consultation will weigh the pros and cons of technological choices considering factors such as (a) equity of access to water resources and abstraction rights; (b) affordability constraints for different types faced by communities; and (c) upstream and downstream impacts on water use including environmental flows. Construction companies will be contracted separately to carry out the construction works. The construction process, where requested by communities, will include labor-intensive methods.

Figure 1.3. Organizational Flow of Services and Project Resources from the FRS to Community Level



32. **Livelihoods.** Mobilization will help the community identify and address the shocks they face to their lives and livelihoods, for example, land degradation, access to inputs, and pest and disease and how they can work together as a community to address those shocks and work to solve those problems and develop more resilient livelihoods using the increased water availability. The process will form a VDC comprising traditional leaders and representatives from the stakeholder groups will lead the formation of a village livelihood development plan that will prioritize the use of water and how that use will be managed. Groups will be formed to lead different interventions, for example, a community garden group, producer groups with market orientation, pastoralist groups, water user associations, and so on. Office bearers of the groups will be trained on leadership, monitoring investment progress, and dispute resolution. The mobilization agency will assist the village in translating their priority activities into detailed implementation plans that outline the materials, training needed, inputs and implements required, and nature of community group contribution (cash, kind, or combination). Funds will be available for each state to contract implementation assistance to work with each community group on their livelihood investment. Based on recent community consultations, the activities under the technical assistance contracts will include (a) land/watershed management (done through LIPW wherever possible); (b) basic training in good agricultural practices (including training community extension workers); and (c) livestock health and nutrition services (including training of community animal health workers).

33. Funds will be made available to state ministries for contracting of UN agencies and/or consortia of INGOs to deliver services under Component 2. The implementing partner will be supervised and overseen by the PIU and will be selected based on a set of objective criteria. Implementing partners may be the same or may differ from one state to the next and in Somaliland. The Table 1.4 provides a summary of selected implementation agencies for the various activities by subcomponents.

34. **Project management, fiduciary, and safeguards management.** State-level ministries will also be responsible for M&E and for safeguards implementation though federal-level institutions will provide backstopping support for these fiduciary aspects of water infrastructure and livelihoods development.

Table 1.4. Summary of Implementing Agencies

Components	*Activities*	*Implementing agency*
Component 1. Support the Development of Multiple Use Water Sources		
	• Oversight of water policy and standards and M&E, and safeguards • Facilitating community engagement on selection of water technologies/interventions • Construction of water assets, incorporating labor-intensive approaches	*State-level implementing agencies contracting of engineering firms Contracting of construction firms*
Component 2: Institutional Strengthening and Capacity Development		
Subcomponent 2.1: National and state institutional capacity building.	• Development of policies, strategies, guidelines and others • Preparing key feasibility studies	*Multiple TA options will be explored including in house capacity, UN agencies, civil society, or educational institutions*
Subcomponent 2.2: Community development and Demand mobilization	• Creation of village livelihood development plans • Formation of implementation subgroups (e.g., pastoralist groups, farmer groups, community garden groups, etc.)	*Multiple TA options will be explored including in house capacity, UN agencies, civil society, or educational institutions*
Component 3: Supporting Sustainable Land Management and Livelihoods Development Around Water Points		
Subcomponent 3.1: Integrated landscape management	• Rehabilitation and protection of endangered lands • Establishment of trees and other vegetation in upland areas • Promote the uptake of alternative energy solutions	*Multiple TA options will be explored including in house capacity, UN agencies, civil society, or educational institutions*
Subcomponent 3.2: Agriculture and livestock support	• Establishment of community gardens and fruit tree groves. • Training on climate smart farming techniques • Training on adoption of draught resistance crops and seed	*Multiple TA options will be explored including in house capacity, UN agencies, civil society, or educational institutions*

C. Financial Management

35. The EAFS Units are already established under the Office of the Accountant General and staffed with mainstream civil servants. EAFS Units are fully operational in the FRS, FMS, and Government of Somaliland, and are charged with overall FM responsibility for all the MPF/IDA-funded projects. The project will provide elevated support towards operationalization of the EAFS Unit in Hirshebelle which has recently been established and operational on transitional arrangements. Their performance has been satisfactory. With overall guidance from the respective Accountant General, the EAFS Unit in consultation with the respective PFM PIUs will continue to provide day-to-day FM of the project. The effectiveness of the EAFS Unit alongside other key functional units will be continuously monitored while key areas of capacity strengthening will be identified and supported through the project. The existing organizational and functional structure of the EAFS Unit is expected to be maintained and further strengthened to provide effective FM support to the project. All project FM transactions will be recognized, captured, recorded, analyzed, summarized, and reported through the Government's FMIS. The EAFS Units with support of the Accountant General will ensure that

(a) All important business and financial processes are adhered to;

(b) Adequate internal controls and procedures are in place and adequately enforced;

(c) Unaudited interim financial reports (IFRs) are prepared on time;

(d) Project financial statements are prepared on time and in accordance with International Public Sector Accounting Standards (IPSAS) cash basis; and

(e) External audit is completed on time and audit findings and recommendations/issues raised in the Management Letter are implemented expeditiously.

Figure 1.4 Organization Structure for the EAFS

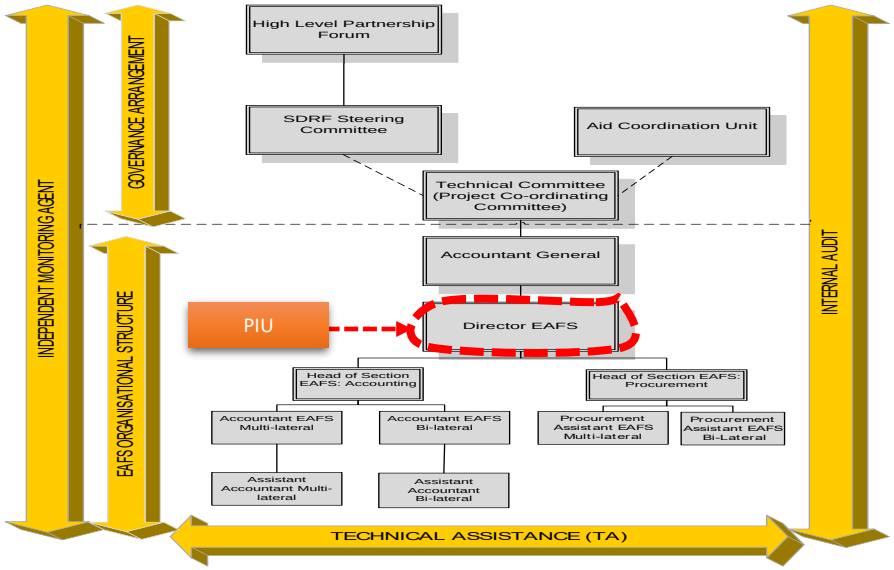
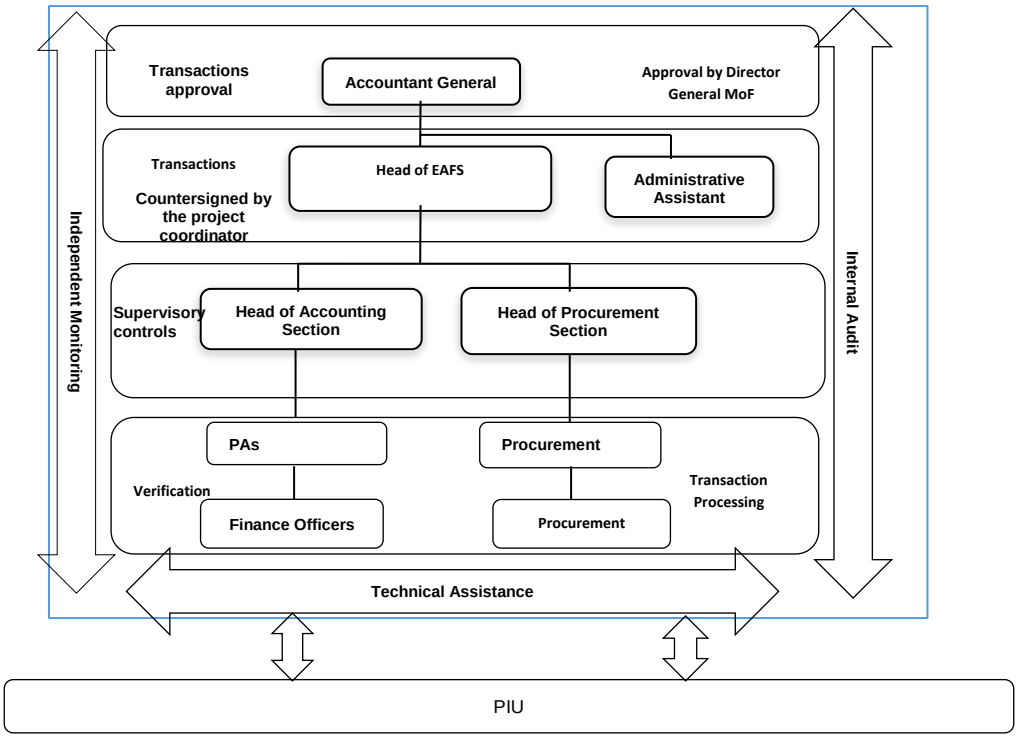


Figure 1.5 EAFS Functional Structure

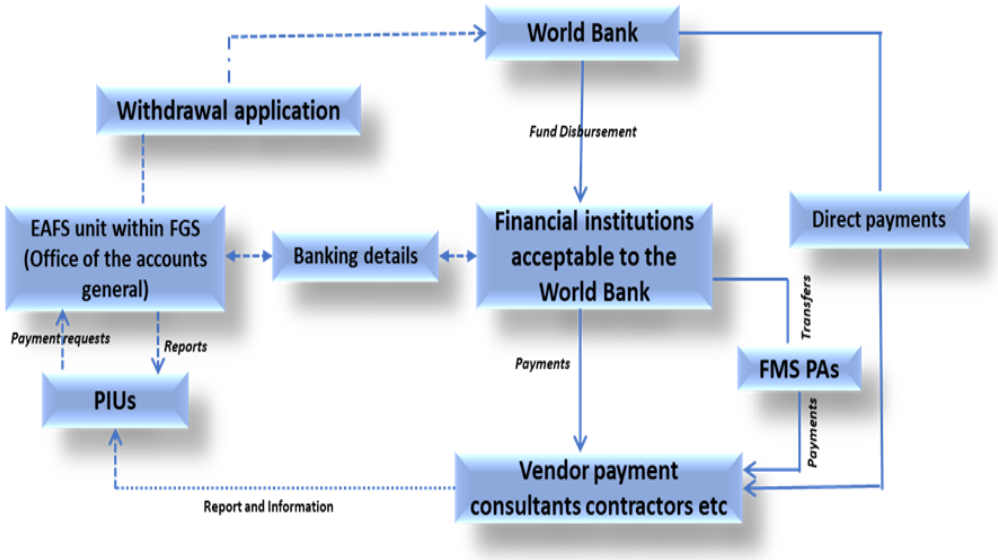


36. **Budgeting.** The EAFS Units working closely with the FRS PIU and FMS PIUs will prepare and submit the project's annual work plans and budget and cash flow forecast for each project component for the necessary approvals by the World Bank. The work plans, cash flow projections, and budget will include the figures for the year analyzed by months and quarters. The cash budget for each month and quarter will reflect the detailed specifications for project activities, schedules (including PP), and expenditure on project activities scheduled respectively for the quarter. All annual cash budgets will be sent to the TTL no later than two months before the beginning of the Government fiscal year for review and approval. The project estimated annual disbursements for each component will be integrated and aligned to the implementing ministries' budget calendar ('on-budget') and will form part of the appropriated budget by the parliament. Budget utilization reports shall be prepared from the government FM systems (Puntland Financial Management Information System [PLFMIS], Somaliland Financial Information System [SLFMIS], and Somalia Financial Information System [SFMIS]) as part of the internal government periodic reports as well as quarterly reports and submitted to the World Bank.

37. The EAFS Units will check and ensure that the project's budgets are realistic, prepared by the PCU and respective PIUs with due regard to government policy (FRS, PL, and SL), and implemented in an orderly and predictable manner. The budget estimates of the project shall be included in the annual government (FRS, PL, and SL) budgets. Also, the EAFS Units will work with the respective Ministries of Finance to ensure that required resources are appropriated in the financial years as and when required. The project budget estimated will be analyzed and posted into the FMIS in line with the approved Standard Chart of Accounts (SCoA).

38. **Funds flow and banking arrangements.** The project will open and maintain three DAs, two DAs at the Central Bank of Somalia and one operated separately by Somaliland in a financial institution acceptable to the World Bank. DA-A in Mogadishu will be dedicated for the project activities implemented directly by the FRS, whereas DA-B will be ring-fenced and dedicated for the project activities implemented by the FMS (except Somaliland). DA-C will be dedicated for the project activities implemented by Somaliland. Each of the FMS will open and operate a PA to which initial funds disbursements to the PAs will be based on cash forecast to allow the FMS adequate working capital to implement the project activities. Subsequent funds disbursement from DA-B to the PAs will be supported by SoE.

Figure 1.6 Project Financial Management Arrangements



39. The U.S. dollar (US$)-denominated DA(s) will be opened in a financial institution acceptable to the World Bank. Payments from the DA will only be for eligible expenditure which will be justified and properly documented. The EAFS Units will ensure that there are adequate and timely funds are available to finance project implementation as planned in all the implementing agencies, including the FMSs (South West and Galmudug) which will have PAs. The EAFS will prepare and submit withdrawal applications for the DA. Funds will be transferred into the DAs against an approved withdrawal application as provided in Figure 1.8. The first IDA fund release will be an advance payment based on an agreed ceiling and on the submission of a withdrawal application. Replenishment and reimbursement of withdrawal applications will be accompanied by SoEs and direct payment will be accompanied by copies of records in accordance with the procedures established in the Disbursement Letter and the World Bank's Disbursement Guidelines. Disbursements from DA-C will be processed to the PAs based on the detailed disbursements and accountability procedures as shall be defined in the Project Operations Manual. The proposed signing mandates for the respective DAs are as follows:

DA Signatories

(a) **Federal Government: DA-A**

(i) Panel A (FRS): Director General of MoF with Director of Administration as alternate

(ii) Panel B (FRS): Accountant General (with Deputy Accountant General as alternate)

(b) **Puntland, South West, Galmudug: DA-B**

(i) Panel A (FRS): Director General of MoF (with Director of Administration as alternate)

(ii) Panel B (FRS): Accountant General (with Deputy Accountant General as alternate): All from FRS

(c) **Somaliland: DA-C**

(i) Panel A (SL): Director General of MoF (with Director of Finance as alternate)

(ii) Panel B (SL): Accountant General (with Deputy Accountant General as alternate)

(d) **FMS PAs: Puntland, South West, Galmudug**

(i) Panel A: Director General MoF (with Deputy Director Administration)

(ii) Panel B: Director Treasury (with Deputy Director Treasury as the alternate)

Figure 1.7 Fund Flow through PAs

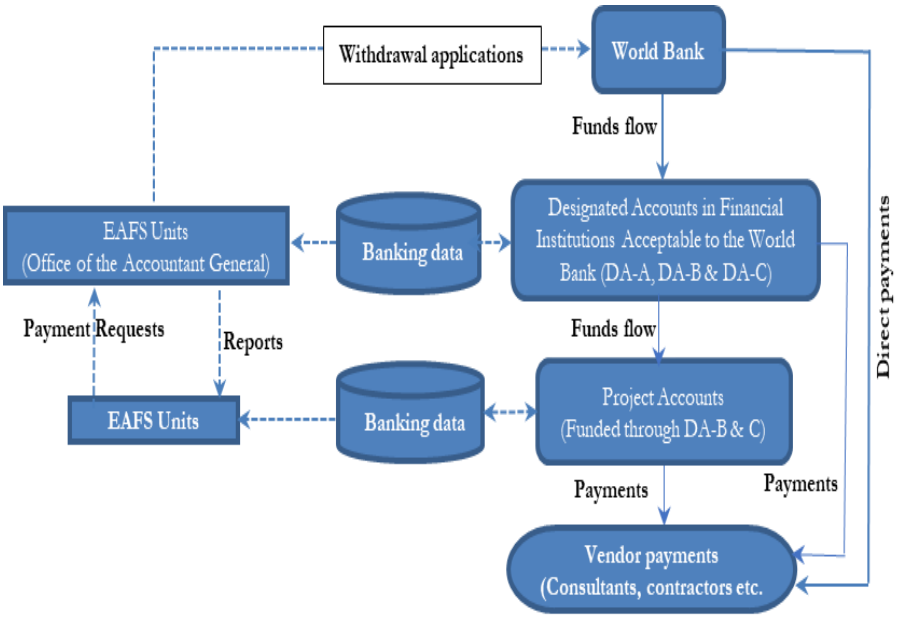


Table 1.5 Eligible Expenditures

Category	Amount of the Grant Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) For Participating States: (a) Goods, works, non-consulting services, Training and consulting services for the Project under Parts 1, 2, and 3.2, 4.1 and 4.2 of the Project. (b) Works, Goods, non-consulting services, Training and consulting services under Part 3.1 of the Project	18,945,000 1,695,000	100%
(2) For Somaliland: (a) Goods, works, non-consulting services, Training and consulting services for the Project under Parts 1, 2, and 3.2, 4.1 and 4.2 of the Project. (b) Works, Goods, non-consulting services, Training and consulting services under Part 3.1 of the Project	8,925,000 835,000	
(3) Emergency Expenditures under Part 4.3 of the Project	0	
TOTAL AMOUNT	30,400,000	

40. **Accounting systems.** The accounting system will ensure that financial reports are designed to provide relevant and timely information to the project management units and various stakeholders monitoring the project's performance. It is expected that all levels of implementation will maintain adequate filing and archival systems of all accounting and relevant supporting documents for review and for audit purposes. The project original financial records including all the supporting documentations shall be maintained at the EAFS Units. The project's financial transactions will be captured, recorded, analyzed, summarized, and reported in line with the provisions of the IPSAS cash basis of accounting. These will be supported by appropriate records and documentation to track commitments and to safeguard assets. To facilitate preparation of the relevant reports and annual financial statements, the project budgets and expenditures will be recorded, classified, and reported through the FMISs according to the approved SCoA. The project will be required to provide periodic and annual reports covering total project expenditures: total expenditure on each of the project's components/activities, an analysis of that total expenditure into various categories of goods, works, training, consultants, and other procurement and disbursement categories. Eligibility of expenditures will be based on the actual amount incurred and supported by appropriate documentation. Accounting records will be maintained in U.S. dollars. The EAFS, in consultation with the project accountants, will ensure that invoices and payment requests are consistent with signed contracts before processing and release of payments. They will also monitor and report on the utilization of project funds, including the fiduciary standards and the reliability of the FM systems.

41. A project Fixed Assets Register will be prepared, regularly updated, and physical verification of assets routinely carried out. The Fixed Assets Register will reflect details of suppliers, description and location of goods, original costs, disposal of assets, assets reference (identification) numbers, serial or registration numbers, dates of purchase, assets additions, condition of assets, assets' useful life, and residual value. The EAFS Units will ensure that there are adequate processes for contract administration and implementing ministries have systems in place to monitor all the FM-related aspects of contract

administration. In this respect, Contract Registers will be maintained with respect to all contracts with consultants, contractors, and suppliers.

42. **Reporting.** SFMIS, PLFMIS, and SLFMIS will be configured appropriately to facilitate generation of the project IUFRs directly from the systems. The EAFS Units, in consultation with the PIUs, will prepare and submit approved IUFRs not later than 45 days after the end of the quarter. The IUFRs shall report on all funds received under the project, including any counterpart or other donors' funds received under the project. The reports shall include a statement showing period and cumulative inflows by sources and outflows by main expenditure classifications, beginning and ending cash balances, and supporting schedules comparing actual and planned expenditures. All IUFRs submitted shall be duly reviewed, approved, and necessary originals maintained at the EAFS and copies at the PIU. Expenditures shall be classified by component, subcomponent, and categories. The agreed IUFR formats will be designed and integrated into the FMIS. The EAFS will prepare project financial statements covering all the activities of the project. Signed consolidated AFSs for the project shall be submitted to the Auditor General at the FRS, FMS, and Somaliland for audit not later than 3 months after the end of the financial year. The AFSs will be prepared in accordance with cash basis IPSAS, as shall be agreed between the Government and the World Bank. The annual financial statement will include adequate notes and disclosures consistent with the cash basis of financial reporting under IPSAS.

43. **Internal controls.** The respective EAFS Units, the Ministries of Finance, and implementing agencies will ensure that satisfactory arrangements to monitor, evaluate, and validate project results are in place throughout the project implementation period. The project internal controls procedures and processes will be outlined in the Project Implementation Manual and EAFS Manual. The project will ensure that all important business and financial processes are adhered to and adequate internal controls and procedures are in place. Possibility of circumventing the internal control system with colluding practices as bribes, abuse of administrative positions, mis procurement, and so on is a critical issue and may include (a) late submission of supporting documents; (b) poor filing and records; (c) lack of system integration; (d) lack of budget discipline; (e) unauthorized commitment to suppliers, bypassing budget and expenses vetting procedures; (f) unsecured safekeeping and transportation of funds; (g) uncertainty over the banking arrangements supporting the project; (h) potential exposure to money laundering; and (i) insecurity and political instability.

44. These are mitigated as follows: (a) specific aspects on corruption auditing would be included in the external audit and monitoring arrangements ToR; (b) FM Procedures (as part of the EAFS Manual) would be approved and in operation for the project; (c) strong FM arrangements would be provided (including qualified project accountants in the EAFS Units); (d) periodic IUFRs including budget execution and monitoring would be issued; (e) measures to improve social accountability and transparency would be built into the project design, by ensuring project reports are available to the public; and (f) annual PFM forums will be held. The respective MoFs are currently working on establishing an internal audit function with adequate capacity to enhance the internal control processes.

45. **Community level Accountability.** Community level activities will be detailed in the project-wide annual work plan and annual budget including any community contributions if any. The FRS PIU will be responsible for preparation, consolidation of project-wide annual work plan and budgets across all the levels of the project implementation. The consolidated plans will be presented to the Project Steering Committee for review and approval. The project will support innovative technologies to facilitate monitoring implementation of the community level activities. The eligibility criteria, implementation

arrangements, accountability, monitoring, reporting and oversight arrangements for the community based sub-projects/ activities will be detailed in the Project Operations Manual (POM).

46. **External audit.** The Auditors General of FRS, in collaboration with Federal member states, will carry out external audit of the project with support of technical assistance. An external audit firm will be engaged and funded by the project to carry out the audit of the project activities. The audited project financial statements together with any additional information required will be submitted to the World Bank not later than six months after the end of the project. The audit would be in conformity with the World Bank's audit requirements and in accordance with internationally recognized auditing standards. The auditor will express an opinion on the Financial Statements in compliance with International Standards on Auditing (ISA) and prepare a Management Letter giving observations and comments and providing recommendations for improvements in accounting records, systems, controls, and compliance with financial Guidelines.

47. The external audit will pay special attention to the risks of material misstatement of the financial statements due to fraud, in line with ISA 240: 'The auditor's responsibilities relating to fraud in an audit of financial statements. The specific project FM arrangements will further be spelled out in the Project Implementation Manual. Fixed assets control procedures over fixed assets and contracts management will be the responsibility of the EAFS in consultation with the PIU. Internal audit function, once established in the FRS, FMS, and Somaliland, will be mainstreamed into project activities. The project will liaise with the Internal Audit Unit to ensure that project internal audit reviews are included in the annual work plans. The project internal audit reports shall be prepared and shared with the EAFSs/PIUs and made available to the World Bank team during project supervision. The internal audit capacity needs to be strengthened and linked with other governments' and development partners' capacity-building interventions. The internal auditors will carry out risk-based systems audits to strengthen the project's internal control systems.

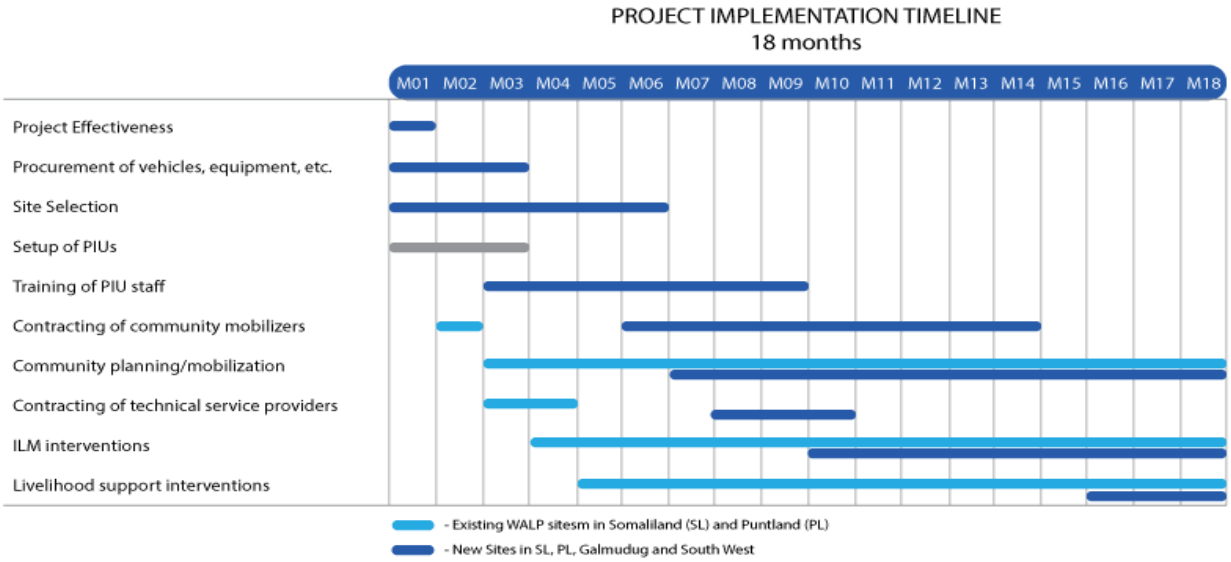
48. **Fraud and corruption.** Possibility of circumventing the internal control system with colluding practices as bribes, abuse of administrative positions, misprocurement, and so on, is a critical issue and may include (a) late submission of supporting documents; (b) poor filing and records; (c) lack of system integration; (d) lack of budget discipline; (e) unauthorized commitment to suppliers, bypassing budget and expenses vetting procedures; (f) unsecured safekeeping and transportation of funds. These are mitigated as follows: (a) specific aspects on corruption auditing would be included in the external audit ToR; (b) FM Procedures (as part of the Operations Manual) would be approved and in operation for the project; (c) strong FM arrangements would be provided (including qualified project accountants in the EAFS Units); (d) periodic IUFRs including budget execution and monitoring; and (e) measures to improve social accountability and transparency are built into the projects' design.

Procurement

49. Procurement will be carried out in accordance with the requirements in the Procurement Regulations for IPF Borrowers: Goods, Works, Non-Consulting and Consulting Services dated July 1, 2016 (revised November 2017 and August 2018); 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by International Bank for Reconstruction and Development (IBRD) Loans and IDA Credits and Grants (revised as of July 1, 2016)'; and provisions stipulated in the Financing Agreement. Somalia being an FCV country, procurement under the projects will be processed under special procurement arrangements referred to in paragraph 12 of the World Bank Policy IPF dated November 10, 2017.

50. **PPSD and PP.** According to the requirement of the Regulations, the Recipient has developed a PPSD, based on which the PP for the first 18 months has also been prepared. The PP sets out the selection methods to be followed by the Recipient during project implementation in the procurement of goods, works, consulting and non-consulting services, cost estimates, time schedules, the World Bank's review requirements, brief description of the activities/contract, and so on. The PP will be updated at least every 12 months, or as required, to reflect the actual project implementation needs, but each update shall require World Bank Group approval. All PPs will be publicly disclosed in accordance with the World Bank Group disclosure policy.

Figure 1.8 Project Implementation Timeline (18 months)



51. **PPSD summary.** Summary of the proposed procurement contracts is detailed below. The project envisages procurement of the following main contracts:

(a) **Works.** Contracts under works include construction of sand/subface dams, earth dams, boreholes/shallow wells, rehabilitation of previous WALP water structures, and office construction/rehabilitation.

(b) **Goods and non-consulting service.** The contracts under goods include ICT equipment, vehicles, office furniture, hydrological water tools, and office supplies. The contracts under non-consulting services include activities such as hiring of conference facilities and transport or IT services. The type and budget for such activities will be defined and agreed between the Borrower and the World Bank during the project implementation period.

(c) **Consulting services.** Recruitment of individual consultants and consulting firms, NGOs, and UN-specialized agencies as the need arises for technical support and assistance.

Operating Context

Governance Aspects

52. The FRS is faced with the challenge of rebuilding state institutions in the midst of recurrent and protracted conflict. Since the collapse of the Siad Barre Government in 1991, Somalia has experienced cycles of conflict that fragmented the country, destroyed legitimate institutions, and created widespread vulnerability. Past transitional governments were undermined by warlord's mismanagement and external interference, giving rise to militia-based opposition and the al Shabab insurgency. The fragile governance context is further exacerbated by competition over key economic resources by groups with an active interest in sustaining conflict primarily to gain access to the economic and financial resources.

53. New FMS have emerged in the past five years, but the federation process is complex. State formation is both a significant development opportunity and a contentious process. Urban areas in southern Somalia formerly under Al Shabaab control are now the capitals of newly formed FMS and responsible for subnational administration. Powerful local actors emerged as leaders of the five FMS. While state formation has set a course for Somalia's governance and service delivery, it has also opened new uncertainties over representation and sharing power and resources. Meanwhile, Somaliland's relationship with Somalia remains contested.

Economic Aspects

54. Somalia is classified by the UN as one of the least-developed countries. Despite experiencing two decades of civil war, the country has maintained an informal economy, based mainly on livestock, remittance/money transfers from abroad, and telecommunications. Somalia's GDP per capita of US$450 makes it the fifth poorest country in the world. In 2015, Somalia's economy was estimated to be US$6.5 billion. In addition, remittances from the diaspora were estimated at US$1.2 to US$2 billion and remain an important source of household income and a buffer against shocks. In recent years, aid flows have increased dramatically, reaching US$2 billion in 2017. Half of Somalia's estimated 12 million people live in rural areas pursuing pastoralist and agro-pastoralist livelihoods. The agriculture sector remains the backbone of the economy and accounts for about 75 percent of GDP, among the highest in the world. Livestock alone accounts for about 40 percent of the sector's 79 percent share of export earnings, bringing in over US$500 million a year

Sustainability Aspects

55. Because of the protracted war and persistent drought conditions in many parts of Somalia, the country is facing uncertainty regarding the sustainability of the programs intended to support the growth of the economy and thus support sustainable programming.

56. It is hoped that with the steps that the country has been able to take since 2012, and with the new Government in place, the country will be able to develop more long-term sustainable development.

Technological Aspects

57. Besides the devastating impact of Somalia's civil war, an aspirational technology sector has been growing in the country for years. Somalia has one of the most active mobile money markets in the world,

with millions of people subscribed to e-payment services. Young people, with increased access to the Internet and mobile phones, have shown interest in launching technology-driven businesses and crowdfunding entities—and even innovating around famine relief efforts.

Market Research and Analysis

(a) **Works.** Contract under works include the construction of sand/subface dams, earth dams, boreholes/shallow wells, rehabilitation of previous WALP water structures, and office construction/rehabilitation. These being small works, the market research shows that there are several qualified local contractors, many of whom have participated and completed projects of similar nature, complexity, and value. Under the previous WALP, it has been observed that local construction companies have experience in similar works, financial capacity, and sufficient expertise. However, the major concern is that many bidders will need some training on how to avoid simple mistakes that could make bids to be rejected at preliminary examination stage. It is therefore recommended that pre-bid conferences be held to brief bidders on what is required when submitting bids. The proposed procurement method is Request for Bids (RFB) and Request for Quotation (RFQ) based on the budget estimates. Therefore, a national approach will be considered.

(b) **Consultancy services.** The procurement activities under consultancy services for this project will be hiring consultants. These will include both individual and consultant firms from local and international markets as appropriate as well as NGOs and UN-specialized agencies as needed. There are qualified consulting firms and individuals mainly from the region who have participated in previous similar assignments funded by the World Bank. In some instances, the foreign firms have partnered with local firms to enhance their experience. The preferred procurement methods for the recruitment of firms under consulting services would be Quality- and Cost-Based Selection (QCBS). However, other methods including Selection Based on the Consultants' Qualification (CQS) as well as Direct Selection would be used where necessary.

(c) **Procurement of non-consulting services.** Contracts under non-consulting services include activities such as hiring conference facilities, transport, or IT services. Given the nature and size of the non-consultancy services to be procured, most of the potential bidders are available locally. Such items will be procured through National Open Competitive market approach and RFQs.

(d) **Office equipment, vehicles, and supplies.** Somalia has available local traders for ICT equipment, scientific equipment, motor vehicles, furniture, and other office supplies. These items are available either locally or internationally. Such items will be procured using either Open National/International or RFQ methods as appropriate.

58. **STEP.** The World Bank's STEP system will be used to prepare, clear, and update PPs and conduct all procurement transactions for the project. The staff will be trained on using STEP.

59. **Procurement templates.** The World Bank's Standard Procurement Documents (SPDs) shall be used for procurement of goods, works, consulting, and non-consulting services under International Competitive Procurement. However, International Competitive Procurement is not anticipated. As there are no National Bidding documents, the World Bank's SPDs may be used under National Procurement

Procedures. Similarly, selection of consultant firms shall use the World Bank's SPDs, in line with procedures described in the Procurement Regulations.

60. **Publication (advertising).** The borrower is required to prepare and submit to the World Bank a General Procurement Notice. The World Bank will arrange for its publication in United Nations Development Business online (United Nations Development Business [UNDB] online) and on the World Bank's external website. Specific Procurement Notices for all procurement under International Competitive Bidding and Requests for Expressions of Interest for all consultancies shall be published in at least one newspaper of national circulation in the borrower's country, or in the official gazette, or on a widely used website or electronic portal with free national and international access, and in UNDB online.

61. **National Public Procurement Law.** The Public Procurement, Concessions, and Disposal Act, 2015 (PPA) for the FRS is the relevant public procurement legal framework. The new Act foresees a decentralized system of procurement. The Act further provides for an independent oversight body that will foster the regulatory and the policy framework of public procurement in the country. The PPA has been reviewed by the World Bank and found to be satisfactory and consistent with the National Procurement Procedure requirements prescribed in paragraph 5.4 of the Regulations to a large extent. However, institutions are not yet in place in accordance with the Act. Similarly, regulations and other procurement guidance documents, including Standard Bidding Documents, are yet to be prepared. The private sector and civil society have limited capacity or functionality. Currently, the process of operationalizing the PPA are under way, through a consultancy assignment. Until such time that the PPA is operationalized, and the documents reviewed and found satisfactory by the World Bank, the project shall use the World Bank's SPDs. In accordance with the PPA, it is anticipated that, when the PPA is operationalized, for the national procedures to be used, the following shall be observed: (a) the RFB/request for proposals document shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the World Bank's Anti-Corruption Guidelines, including without limitation the World Bank's right to sanction and the World Bank's inspection and audit rights and (b) rights for the World Bank to review the Borrower's procurement documentation and activities.

62. **Training and workshops.** The project will finance training and workshops. These costs should not be on the PP. If required, based on an annual training plan and budget which shall be submitted to the World Bank for its prior review and approval. The annual training plan will identify, among others, (a) the training envisaged, (b) the justification for the training, (c) the personnel to be trained, (d) the duration for such training, and (e) the estimated cost of the training. At the time of the actual training, the request shall be submitted to the World Bank for review and approval. Upon completion of the training, the trainees shall be required to prepare and submit a report on the training received.

63. **Procurement implementation arrangements.** The project will be implemented by (a) the FRS and (b) FMS (Galmudug, Puntland, and South West States) and Somaliland. All project interventions will be led by state-level ministries while tracking and reporting of progress will be at the federal level. At the federal level, a project coordinator, supported by an accountant and an M&E specialist, will be appointed to maximize the flow of communications among the federal ministries and among the FMS and Somaliland. In addition, the project coordinator will be responsible for maintaining a unified Results Framework for the project.

64. Each FMS (Galmudug, Puntland, and South West States) and Somaliland will establish and maintain a PIU with representation from each participating line ministry to ensure cross-sectoral

collaboration in planning and implementation activities. The PIUs will be staffed by a project management specialist and the relevant fiduciary and safeguards specialists, in addition to the seconded sectoral specialists, to ensure high quality throughout implementation. A procurement specialist will be recruited to play a central role in supporting the FMS and Somaliland entities in the implementation of sound procurement practices in accordance with the World Bank's fiduciary requirements.

65. Recruitment of PIU staff (procurement specialist, financial specialist, project engineers, and site engineers) and their capacity-building activities will be undertaken by the client. The positions will be competitively recruited and as under previous WALP, the World Bank team will work closely with the client in undertaking these activities.

66. **Procurement assessment.** A procurement capacity assessment of the three PIUs in the FMS (Galmudug, Puntland, and South West) and the PIU in Somaliland to implement the project procurement was conducted in October 2018. The objectives of the assessment were to (a) evaluate the capability of the PIUs to undertake procurement and the adequacy of the systems that are in place to administer procurement; (b) assess the ability of the PIUs to effectively carry out the procurement processes; (c) develop an action plan to be implemented as part of the project to address the deficiencies detected by the assessment, aimed at minimizing the risks identified; and (d) propose procurement supervision plans for the World Bank considering the relative strengths and weaknesses and risks revealed by the assessment.

67. The assessment reviewed that the implementing agencies have previous procurement experience, but they lack adequate capacity and previous experience in the World Bank Procurement procedures (World Bank New Procurement Framework [NPF]) and hence will require support to undertake the necessary procurements according to the World Bank procedures satisfactorily. Due to anticipated procurement work load, it is proposed that each PIU recruits a procurement specialist with knowledge and experience of the World Bank procurement procedures to support the procurement activities of the project. The procurement specialists will work alongside the procurement personnel in the ministries for knowledge transfer to enable them to gradually take over the procurement activities of the project. The World Bank will also provide procurement trainings/hands-on support to build the capacity of the client local procurement staff during the project implementation. The major procurement challenges of the PIUs include (a) inadequate experience in undertaking procurement in accordance with the requirements in the Procurement Regulations for IPF Borrowers: Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised November 2017 and August 2018); (b) inadequate experience in contract management; and (c) weak record keeping system.

68. **Risk assessment.** In view of the challenges outlined above, the risk for procurement was considered High. The risk is reduced to a residual rating of 'Substantial' in view of the mitigation measures proposed in the table below.

Table 1.6 Procurement Risks and Mitigation Measures

Sl. No.	Risk Description	Mitigation Measures	Time Frame	Responsibility
1.	Inadequate knowledge and experience of World Bank Procurement Regulations for IPF Borrowers: Goods,	Recruit a procurement specialist with knowledge and experience of World Bank procurement. Conduct training to client on	During project implementation	FMS (Galmudug, Puntland, South West), and Somaliland/World Bank

Sl. No.	Risk Description	Mitigation Measures	Time Frame	Responsibility
	Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised November 2017 and August 2018)	World Bank Procurement Regulations for Borrowers under IPF: Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016 (revised November 2017 and 2018) Prior review of all contracts regardless of the value.		
2.	Inadequate knowledge and skills in contract management by the implementing agencies	Conduct training tailored towards addressing weakness in contract management for PIU staff and technical departments	During project implementation	*FMS (Galmudug, Puntland, South West), and Somaliland/World Bank*
3.	Inadequate skills by the end users in developing specifications and ToR	Need for TAs/consultants in the respective technical areas to extend hands-on support and the support of HEIS	During project implementation	*FMS (Galmudug, Puntland, South West), and Somaliland/World Bank*
4.	Need for systematic filing system to have complete records of the procurement processes	Establishment of a satisfactory filing system	During project implementation	*FMS (Galmudug, Puntland, South West), and Somaliland/World Bank*
5.	Due to security challenges and inadequate public sector functionality, the private sector participation and efficiency would be limited, and this affects the supply market functionality.	All bidding opportunities will be advertised on the available websites and posted on widely circulated national gazette.	During project implementation	*FMS (Galmudug, Puntland, South West), and Somaliland/World Bank*
6.	Fraud and corruption risks (including collusion and outside interference in contracting process	Disclosure of PP, disclosure of contract awards, and creating awareness on effects of fraud and corruption	During project implementation	
7.	Use of unqualified and inexperienced evaluation members and varying of the evaluation criteria through elimination or skewed sub criteria	Use of qualified and experienced sector-relevant evaluation panel who have the time to undertake the evaluation within the shortest possible time and ensure confidentiality. Use of clearly defined evaluation criteria established in the bidding documents without varying to skew. Training of the evaluation members on carrying out bid evaluations.	During project implementation	*FMS (Galmudug, Puntland, South West), and Somaliland/WB*

69. **Procurement oversight and monitoring arrangements.** The World Bank exercises its procurement oversight through a risk-based approach comprising prior and post reviews, as appropriate. The World Bank sets mandatory thresholds for prior review based on the procurement risk rating of the project. Based on the risk rating of the project, the Borrower and the World Bank will agree procurement above the applicable thresholds as provided in Table 1.5 which shall be subjected to prior or post review. The requirement for a prior or post review shall be specified in the PP. During project implementation, the World Bank will monitor and reassess the risk and risk mitigation measures and, if determined by the World Bank to be necessary and appropriate, the World Bank may require the Borrower to revise the prior and/or post review requirements in the PP. The World Bank will carry out post reviews of procurement activities undertaken by the Borrower to determine whether they comply with the requirements of the Financing Agreement.

Table 1.7. Thresholds for Procurement Approaches and Methods (US$, millions)

Goods, Works, and Non-Consulting Services				
Category	**Prior Review**	**Open International**	**Open National**	**RFQ**
Works	≥ 0.2	≥ 5.0	< 5.0	≤ 0.2
Goods, IT, and non-consulting services	≥ 0.1	≥ 0.5	< 0.5	≤ 0.1
Consulting Services				
Category	**Prior Review**	**Short List of National Consultants**		
		Consulting Services	**Engineering and Construction Supervision**	
Consultants (Firms)	≥0.1	≤0.1	≤ 0.2	
Individual Consultants	≥0.05	n.a.	n.a.	

70. **Selection method.** For goods and non-consulting services RFB and RFQ will be used as appropriate. Where there is justification, Direct Selection maybe used. For consulting services, the preferred method would be QCBS. However, other methods such as CQS and Direct Selection would be used where necessary.

71. **Contract strategy.** Goods, services, and works will be packaged in economical packages to attract bidders who are qualified and can offer good prices and complete contracts within stipulated period resulting into value for money.

G. Implementation Support Plan and Resource Requirements

72. A core technical team will provide hands-on support to implementing agencies and liaise with development partners, including a TTL based in the Nairobi, Kenya, and Co-TTL based in Washington, DC, providing the much-needed link with World Bank Headquarters. Moreover, the World Bank's implementation support team will leverage the presence in the Somalia Country Office of Procurement and FM, all of whom have had significant experience in supporting programs in fragile and conflict setting.

Table 1.8. Implementation Support Plan and Resource Requirements

Time	Focus	Skills Needed	Resource Estimate (US$, millions)
First 12 months	Project start-up, preparation of safeguards instruments, training fiduciary staff, establishment of PIU, development of MIS, and initiation of procurement	See table 1.5	0.5
12–48 months	Implementation support missions, leverage community-based platforms, facilitate recruitment of local facilitators, support formulation, and implementation of plans, and foster citizen engagement	See table 1.5	0.7
Total			1.2

Table 1.9. Skills Requirements

Skills Needed	Number of Staff Weeks	Number of Trips
Team Leader	30	6
Sector Specialists (lead and senior)	20	4
Procurement Specialist	15	3
Financial Management Specialist	15	3
Environmental Safeguards Specialist	15	3
Social Safeguards Specialist	15	3
Technical Specialists	40	12

(a) **General resource inputs.** The World Bank will devote about 150 staff weeks per year and a total of about 400 staff weeks through FY23 to help the Government implement the project and supervise progress.

(b) This is a project under a challenging operational environment and enhanced security risks that may not allow supervision of implementation with standard World Bank supervision budget allocation. Considering this challenge, the project has allocated resources for the FRS to engage an international independent firm to provide quality enhancement and implementation support to the project. This has an objective of providing additional independent monitoring. The firm will support Somali authorities to fulfill their fiduciary, procurement, monitoring, and supervision obligations with respect to all four project components. The firm will be expected to provide advisory as well as monitoring support to the World Bank to the extent of undertaking interim implementation review visits and providing the World Bank team with status reports.

(c) **Implementation support missions.** Twice yearly formal implementation support missions and additional interim implementation support missions every quarter will be carried out. Security permitting, all sites will be visited at least once in person by the project team, where

access is not possible monitoring will be done using remote technology such as unmanned aircraft systems (drones) and the Geo Enabling Method for Monitoring and Supervision (GEMS). Ongoing support and dialogue will be maintained throughout to monitor progress and address pertinent issues. An implementation support strategy will be included in the POM.

(d) **Ongoing dialogue.** Regular dialogue, at least on a weekly basis, will be maintained through direct contact, audio and/or video conferences between the World Bank team and the FRS and FMS officials to assure regular follow-up to agreed actions during project implementation.

(e) **Procurement support.** The procurement specialist will play a central role in supporting the federal FMS entities in implementation of sound procurement practices, in accordance with the World Bank's fiduciary requirements.

(f) **Safeguards support.** World Bank safeguards staff will provide needed support with respect to environmental and social safeguards as needed. They will conduct staffed missions to project areas at least once a year and will remain available to support as needed on safeguards aspects.

(g) **M&E.** The World Bank will support the FRS in establishing sound M&E arrangements. The initial project implementation phase will need support on confirmation of baselines for M&E purposes. A World Bank-contracted consultant will be deployed specifically for this activity. M&E will be included in the project launch and initial missions until the World Bank is satisfied that sound M&E practices are in place, following which ongoing M&E support can be provided. The end-line survey concluded for the WALP will contribute to the baseline survey. The Project will incorporate the Geo-Enabling method for Monitoring and Supervision (GEMS) developed by the World Bank FCV Group to establish a remote supervision system for operations and improve the capacity of clients to conduct accountable and well-structured M&E. The PIU will be accountable for integrating GEMS into the Project, as part of its responsibility for the overall project implementation management functions, including M&E and safeguards. The GEMS platform enables project teams to use open source tools for in-field collection of structured digital data that automatically feeds into a centralized M&E system. The integrated data can include any kind of indicators, based on tailor-made forms; photos, audio, videos; time and date stamps; and GPS coordinates that allow for automated geo-mapping of the information.

(h) **Midterm review (MTR).** The MTR mission will require participation of the entire spectrum of specialists having participated to appraisal. The Implementation Support Plan will be reviewed at least once a year to ensure that it continues to meet the implementation support needs of the project.

(i) Political and security risk will exist over the course of the project and is heightened in early stages due to the AMISOM transition and security sector reform and federal elections in 2020. In the event of deteriorating security situation not allowing implementation in one or more states, in consultation with the FRS, the project will be structured to allow implementation to continue in the other states. The team will continue to monitor and, as the need arises, MTR could be an appropriate milestone for that kind of consideration.

ANNEX 2. Economic and Financial Analysis

73. Significant net project benefits are expected. The project aims at increasing availability of water for multiple uses, particularly during the dry period of the year. The available water will be used for human consumption, livestock watering, small-scale garden irrigation, and other requirements. This will have benefits on human health, agricultural, and livestock productivity, improving market routes for livestock (by making pasture and water along the export corridors and others). Additional benefits are community facilitation; citizen engagement; community-led local development; provision of technical assistance; technical and vocational skills; and improved project management with training, capacity building, and providing technical assistance. The proposed project is expected not only to increase incomes of people and their technical and vocational skills but also help achieve other objectives of economic development, community participation, and creation of ownership of the projects.

74. A detailed cost-benefit analysis model has been developed to assess the financial and economic impacts of these proposed project interventions and anticipated outcomes. The cost-benefit model analyzes cash flows over a 15-year period discounted at 15 percent under the base-case scenario and 20 percent under a higher-risk scenario to reflect the high cost of capital in the Somali context, where commercial projects often require a 100 percent return within the first year of operations. The cost-benefit model tests the sensitivity of the NPV of the discounted cash flows to key variables.

75. Identified costs include all World Bank project costs as well as estimates for maintaining the water infrastructure assets over the 15-year period. In addition, the model considers the cost of net GHG emissions, estimated to be on average 838 tCO2-eq annually. The source of funds for the maintenance costs have not yet been identified but are included as they are critical in ensuring that the water assets remain functional throughout the 15-year period. The functionality of the water points is tested in the sensitivity analysis.

76. Identified streams of benefits accrue through direct financial savings and improved health of project beneficiaries. There are additional cash flows that accrue to external emergency response teams, who can avoid allocating resources to treat diseases such as diarrhea and cholera. Specific streams of benefits that have been quantified for this assessment include the following:

- The direct economic benefit of avoiding payments for water from expensive tanker services
- Economic value of improved access to water for livestock and agriculture
- Time savings from fetching water
- Economic value derived from reducing school absenteeism
- Direct health benefits calculated using disability-adjusted life years (DALYs) due to access to water
- Health care cost savings due to reduced incidence of diarrhea and cholera
- Indirect health benefits because of access to cleaner water
- Avoiding the loss of livestock deaths and livestock quality due to failed rains

77. In addition to these quantifiable benefits, there are others that are not factored into the cost-benefit analysis because of a lack of reliable data and where some benefits cannot be easily quantified.

These include benefits related to a stronger enabling environment for economic development and overall systemic improvement with regards to equity, efficiency, and shared prosperity. In addition, community facilitation, citizens' engagement, community-led local development, provision of technical assistance, technical and vocational skills and improved project management with training, capacity building, and technical assistance are also some of the additional benefits that contribute to the identified benefits. While these interventions have not been assessed separately in the cost-benefit model, they are necessary investments that underpin the returns that are generated by the infrastructure.

78. Based on the analysis, every million-dollar invested in the proposed water infrastructure and livelihood development activities is estimated to generate a discounted return of US$5.85 million under the baseline assumptions. The NPV of the total benefits is estimated to be US$144.3 million with an EIRR of 135 percent against a discounted World Bank investment of US$32.9 million. These gains are observed primarily from improving sustained access to water for an estimated 250,000 agro-pastoralists by constructing and rehabilitation of existing water infrastructure and small works. The NPV highlights the significant financial benefits that will accrue to the various project beneficiaries. An EIRR that is above the estimated cost of capital also indicates that the project represents a financially viable investment.

Table 2.1. Project Costs-Benefits Analysis Summary (US$)

COSTS	
World Bank investment	42,000,000
Other costs	42, 971,078
Total cost	84,971,078
Discounted World Bank investment	32,903,635
Discounted total cost	48,232,221
BENEFITS	
Total benefits	550,308,788
Discounted total benefits	192,259,233
Discounted net benefits	144,259,233
NPV	144,259,233
EIRR	135 percent
Discounted investment leverage ratio	5.85

79. In the absence of reliable access to water points, people are forced to rely on purchasing water from privately operated water trucks, where prices can range from US$2 to US$30 per m^3. The cost-benefit model uses data from the first WALP and assumes that the cost of water before the proposed intervention is US$8.41 per m3, which was the average observed in the WALP sites in Puntland. Similarly, the cost of water after the intervention is assumed to be US$0.53 per m^3. The discounted direct economic benefit is therefore estimated to be approximately US$27 million over 15 years, assuming that the demand averages the sphere standard of 15 liters of water per person per day.

80. Project interventions are also anticipated to significantly reduce the amount of time spent collecting water, especially for women. Using GDP per capita as a basis for the value of time, the model assumes that the productivity of beneficiaries in the project area is US$0.68 per person per day, which is half of the national GDP per capita. This reflects the assumption that beneficiaries in the project area are primarily subsistence farmers and pastoralists and therefore time saved has a lower economic value.

Under these assumptions, the discounted value of total time saved fetching water is estimated to be US$37 million.

81. The lack of access to clean water is well established as a significant contributor to the global burden of diseases. The cost-benefit model attempts to quantify this value by estimating the number and the value of DALYs averted because of the project intervention. The model uses the WHO data, which indicates that the DALYs attributable to water supply, sanitation, and hygiene in Somalia totaled 808,000 out of a population of 8 million people in 2004. Assuming the same proportion and a value derived as demonstrated above, it is estimated that the discounted value of DALYs averted because of the proposed intervention is US$32 million.

82. The economic benefits that accrue to emergency response teams are calculated based on savings gained by preventing instead of having to treat cholera and diarrhea in the target population. Emergency response teams would need to spend an estimated US$52 per patient on treating cholera and US$1 per patient treating diarrhea. Within the target population, the discounted total savings are estimated to be US$918,000.

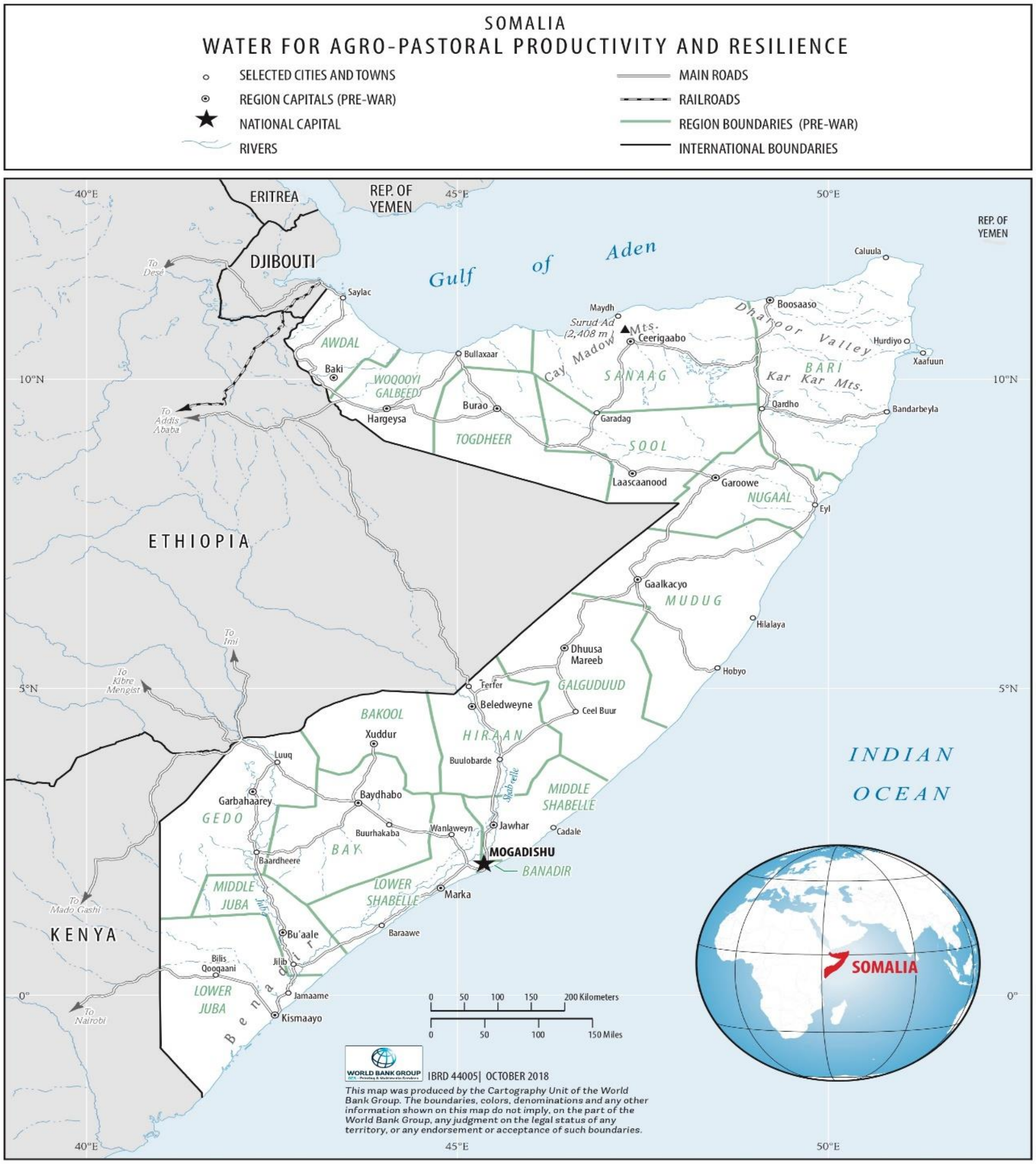
83. Because the largest economic benefits accrue from improved access to water, the biggest risk factor in realizing these economic benefits is from not achieving the target of construction and rehabilitation of existing water infrastructure and small works. Similarly, the estimated economic benefits will not be realized if these water points are built but later fail. Assuming a scenario where only 75 percent of the target water points are built and remain viable, the project NPV is reduced to US$96.9 million with an EIRR of 90 percent. The cost savings in the price of water is also a major factor in the economic viability of the proposed interventions. Reducing the savings to zero would result in an NPV of US$117.5 million with an EIRR of 107 percent. This is an unlikely scenario, but the proposed investment would still maintain a positive NPV and an EIRR that is higher than the cost of capital.

84. The proposed interventions are estimated to eventually ensure a reliable supply of an average of 5.1 million m3 of water per year. Assuming that 250,000 beneficiaries consume 15 liters of water per person per day, this water supply will cover 100 percent of domestic consumption and provide 3.7 million m3 of water for other productive uses, including agriculture and livestock. Access to water in agro-pastoral communities also has a significant impact on the loss of value derived from livestock due to death and animal weight and milk losses in a drought scenario. The model uses historical data to calculate the probability of failed rains and the value lost. The analysis uses a conservative estimate of 20 animals per pastoral household to reflect the most vulnerable populations. This figure can increase to more than 1,000 animals depending on the precise location of the water points. Based on these assumptions, the total discounted avoided loss of livestock value is estimated to be US$92.7 million.

85. The net emissions for the project are 12,580 tCO2-eq over the project's 15-year economic lifetime. The average annual emissions are 838 tCO2-eq. The gross lifetime emissions are 18,084 tCO2-eq. The greenfield supply systems under Component 1 have estimated net emissions of 13,758 tCO2-eq due to electricity use and zero-emissions baseline scenario. The brownfield rehabilitation water supply systems under Component 1 have estimated net emissions of −1,178 tCO2-eq due to an estimated 10 percent increase in energy efficiency gains. The systems to be replaced are still within their original economic lifetimes. In addition, both the brownfield and greenfield investments are expected to lock in the use of solar pumping and other solar systems, as well as zero-emissions gravity use.

86. Other benefits excluded from the analysis due to a lack of data include the impact of shorter travel distances for animals to access water, reduced mortality due to weaker immune systems from to a lack of water, and the added value of healthier livestock in the market. In a developed market, for example, clean water can help contribute to weight gain in cattle by up to 5 percent, which translates into a higher value for cattle in the market.

ANNEX 3. MAP


SOMALIA
WATER FOR AGRO-PASTORAL PRODUCTIVITY AND RESILIENCE
SELECTED CITIES AND TOWNS
REGION CAPITALS (PRE-WAR)
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
REGION BOUNDARIES (PRE-WAR)
INTERNATIONAL BOUNDARIES
ERITREA
REP. OF YEMEN
DJIBOUTI
ETHIOPIA
KENYA
Gulf of Aden
INDIAN OCEAN
AWDAL
WOQOOYI GALBEED
TOGDHEER
SANAAG
SOOL
BARI
NUGAAL
MUDUG
GALGUDUUD
BAKOOL
HIRAAN
MIDDLE SHABELLE
GEDO
BAY
LOWER SHABELLE
BANADIR
MIDDLE JUBA
LOWER JUBA
Saylac
Baki
Hargeysa
Burao
Bullaxaar
Maydh
Surud Ad (2,408 m)
Ceerigaabo
Cal Madow Mts.
Garadag
Boosaaso
Dharoor Valley
Kar Kar Mts.
Caluula
Hurdiyo
Xaafuun
Qardho
Bandarbeyla
Laascaanood
Garoowe
Eyl
Gaalkacyo
Hilalaya
Dhuusa Mareeb
Hobyo
Ferfer
Beledweyne
Ceel Buur
Xuddur
Buulobarde
Luuq
Garbahaarey
Baydhabo
Buurhakaba
Wanlaweyn
Jawhar
Cadale
MOGADISHU
Baardheere
Marka
Bu'aale
Baraawe
Jilib
Bilis Qooqaani
Jamaame
Kismaayo
To Desē
To Addis Ababa
To Imi
To Kibre Mengist
To Mado Gashi
To Nairobi
SOMALIA
40°E
45°E
50°E
10°N
5°N
0°
0 50 100 150 200 Kilometers
0 50 100 150 Miles
IBRD 44005| OCTOBER 2018
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