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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON PROPOSED CREDITS IN THE AMOUNTS OF

EURO 18.6 MILLION (US\$22.5 MILLION EQUIVALENT) TO BURKINA FASO
EURO 24.8 MILLION (US\$30.0 MILLION EQUIVALENT) TO THE REPUBLIC OF MALI
EURO 24.8 MILLION (US\$30.0 MILLION EQUIVALENT) TO THE REPUBLIC OF NIGER
EURO 18.6 MILLION (US\$22.5 MILLION EQUIVALENT) TO THE REPUBLIC OF SENEGAL

ON PROPOSED GRANTS IN THE AMOUNTS OF

SDR 15.7 MILLION (US\$22.5 MILLION EQUIVALENT) TO BURKINA FASO
SDR 69.5 MILLION (US\$100.0 MILLION EQUIVALENT) TO THE REPUBLIC OF CHAD
SDR 20.8 MILLION (US\$30.0 MILLION EQUIVALENT) TO THE REPUBLIC OF MALI
SDR 31.3 MILLION (US\$45.0 MILLION EQUIVALENT) TO THE ISLAMIC REPUBLIC OF MAURITANIA
SDR 20.8 MILLION (US\$30.0 MILLION EQUIVALENT) TO THE REPUBLIC OF NIGER
SDR 15.7 MILLION (US\$22.5 MILLION EQUIVALENT) TO THE REPUBLIC OF SENEGAL
SDR 13.9 MILLION (US\$20.0 MILLION EQUIVALENT) TO THE
PERMANENT INTERSTATE COMMITTEE FOR DROUGHT CONTROL IN THE SAHEL

FOR A

REGIONAL SAHEL PASTORALISM SUPPORT PROJECT II (PRAPS-II)

March 9, 2021

Agriculture and Food Global Practice
Western and Central Africa Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective: January 31, 2021 for Chad, CILSS, Mali, Mauritania, Niger, Senegal
February 28, 2021 for Burkina Faso

Currency Unit = United States dollars (US\$)

US\$1 = SDR 0.694 (January 31, 2021)
SDR 0.694 (February 28, 2021)

US\$1 = EUR 0.826 (January 31, 2021)
EUR 0.825 (February 28, 2021)

Currency Units:

CFA BCEAO Francs (XOF)	Burkina Faso
CFA BEAC Francs (XAF)	Chad
CFA BCEAO Francs (XOF)	CILSS
CFA BCEAO Francs (XOF)	Mali
Mauritanian Ouguiya (MRU)	Mauritania
CFA BCEAO Francs (XOF)	Niger
CFA BCEAO Francs (XOF)	Senegal

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

AFD	<i>Agence Française de Développement</i> (French Development Agency)
AfDB	African Development Bank
AMR	Antimicrobial Resistance
APESS	<i>Association pour la Promotion de l'Élevage au Sahel et en Savanne</i> (Association for the Promotion of Livestock Production in the Sahel and Savannah)
ARAA	<i>Agence Régionale pour l'Agriculture et l'Alimentation</i> (Regional Agency for Agriculture and Food)
ASAL	Arid and Semi-Arid Land
AU	African Union
AWPB	Annual Work Plan and Budget
CBPP	Contagious Bovine Pleuropneumonia
CERC	Contingent Emergency Response Component
CILSS	<i>Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel</i> (Permanent Interstate Committee for Drought Control in the Sahel)
CIRAD	<i>Centre de Coopération Internationale en Recherche Agronomique pour le Développement</i> (French International Center for Cooperation in Agricultural Research for Development)
CORAF	<i>Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles</i> (West African Council for Agricultural Research and Development)
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CRI	Corporate Results Indicator
CRSA/RAHC	<i>Centre Régional de Santé Animale</i> (Regional Animal Health Center of ECOWAS)
DA	Designated Account
DFIL	Disbursement and Financial Information Letter
DMP	<i>Direction des Marchés Publics</i> (Procurement Department of Burkina Faso)
DPF	Development Policy Financing
ECOWAS	Economic Community of West African States
EFA	Economic and Financial Analysis
EIRR	Economic Internal Rate of Return
EISMV	<i>Ecole Inter-Etats des Sciences et Médecine Vétérinaires de Dakar</i> (Inter-State School of Veterinary Science and Medicine in Dakar)
E&S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plans
ESMS	Environmental and Social Management System
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standard
EU	European Union
EUR	Euro
EWS	Early Warning System
FA	Financing Agreement
FAO	Food and Agriculture Organization of the United Nations
FBS	Feed Balance Sheets
FCV	Fragility, Conflict and Violence
FI	Financial Intermediaries
FM	Financial Management
FMS	Financial Management Specialist
GBV	Gender-based Violence
GDP	Gross Domestic Product

GEMS	Geo-Enabling initiative for Monitoring and Supervision
GGW	Great Green Wall
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GIS	Geographic Information System
GLEAM-i	Global Livestock Environmental Assessment Model–Interactive
GM	Grievance Mechanism
GRS	Grievance Redress Service
Ha	Hectare(s)
HWMPM	Hazardous Waste and Pest Management Plan
IBAR	InterAfrican Bureau for Animal Resources (of AU)
ICR	Implementation Completion and Results Report
IDA	International Development Association
IFC	International Finance Corporation
IFR	Interim (unaudited) Financial Report
IGA	Income-generating Activity
ILRI	International Livestock Research Institute
IPF	Investment Project Financing
IR	Intermediate Results
IRAM	Institute for Research and Application of Development Methods
IRR	Internal Rate of Return
ISM	Implementation support mission
ISR	Implementation Status and Results report
KBT	KoBo Toolbox
LEGS	Livestock Emergency Guidelines and Standards
LMP	Labor Management Procedures
LSIPT	Livestock Sector Investment and Policy Toolkit
M&E	Monitoring and Evaluation
MDR	Ministry of Rural Development (<i>Ministère du Développement Rural, MDR</i> of Mauritania)
MEPA	Ministry of Livestock and Animal Production (<i>Ministère de l'Élevage et des Productions Animales</i> of Chad and Senegal)
MFD	Maximizing Finance for Development
MG	Matching Grant
MRAH	Ministry of Animal Resources and Fisheries (<i>Ministère des Ressources Animales et Halieutiques</i> of Burkina Faso)
MTR	Mid-term Review
NDC	Nationally Determined Contributions
NGO	Non-governmental Organization
N-PCU	National Project Coordination Unit
NPV	Net Present Value
NRM	Natural Resource Management
NSC	National Steering Committee
NSP	National Strategic Plan
OECD	Organisation for Economic Co-operation and Development
OHS	Occupational Health and Safety
OIE	World Organisation for Animal Health
PBCs	Performance Based Conditions
PCU	Project Coordination Unit
PDO	Project Development Objective
PIM	Project Implementation Manual
PO	Pastoralist/Producer Organization
PR	Procurement Regulations
PPR	<i>Peste des Petits Ruminants</i> (Small Ruminant Plague)

PPSD	Project Procurement Strategies for Development
PRA	Prevention and Resilience Allocation
PRAPS	<i>Projet Régional d'Appui au Pastoralisme au Sahel</i> (Regional Sahel Pastoralism Support Project)
PVS	Performance of Veterinary Services (OIE PVS Tool)
RAP	Resettlement Action Plan
RBM	<i>Réseau Billital Maroobè</i> (Billital Maroobè Network)
RC	Review Committee
REDISSE	Regional Disease Surveillance Systems Enhancement Program
R-PCU	Regional Project Coordination Unit
RPF	Resettlement Policy Framework
RSC	Regional Steering Committee
RVC	Regional Veterinary Committee
SDG	Sustainable Development Goal
SDR	Special Drawing Rights
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SLM	Sustainable Landscape Management
SPD	Standard Procurement Documents
SSA	Sub-Saharan Africa
STEP	Systematic Tracking of Exchanges in Procurement
ToC	Theory of Change
ToR	Terms of Reference
TPM	Third-party Monitoring
UN	United Nations
USAID	United States Agency for International Development
VCs	Value Chains
VMP	Veterinary Medicinal Product(s)
VS	Veterinary Services
WAEMU	West African Economic Monetary Union
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization
WOP	Without Project situation
WP	With Project situation
XAF	Central African CFA franc
XOF	West African CFA franc



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DATASHEET

BASIC INFORMATION		
Country(ies) Western Africa, Burkina Faso, Mali, Mauritania, Niger, Senegal, Chad	Project Name Regional Sahel Pastoralism Support Project II	
Project ID P173197	Financing Instrument Investment Project Financing	Environmental and Social Risk Classification Substantial
Financing & Implementation Modalities		
<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)	
<input type="checkbox"/> Series of Projects (SOP)	<input checked="" type="checkbox"/> Fragile State(s)	
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)	
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country	
<input type="checkbox"/> Project-Based Guarantee	<input checked="" type="checkbox"/> Conflict	
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster	
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)	
Expected Approval Date 30-Mar-2021	Expected Closing Date 31-Dec-2027	
Bank/IFC Collaboration No		
Proposed Development Objective(s)		
To improve the resilience of pastoralists and agro-pastoralists in selected areas in the Sahel region.		

Components

Component Name	Cost (US\$, millions)
Animal health improvement and veterinary medicine control	196.00
Sustainable landscape management and governance enhancement	74.30
Livestock value chain improvement	58.20
Social and economic inclusion improvement, women and youth	48.30
Project coordination, institutional strengthening, crisis prevention and response	83.40

Organizations

Borrower:	CILSS Permanent Interstate Committee for Drought Control in the Sahel Mauritania, Minister of Economic Affairs, and Promotion of Productive Sectors Senegal, Ministry of Finance and Budget Niger, Ministry of Planning Burkina Faso, Ministry of Economy, Finance and Development Chad, Ministry of Economy, Planning, Development and International Cooperation
Implementing Agency:	Mali, Ministry of Economy and Finance Senegal, Ministry of Livestock and Animal Production Mauritania, Ministry of Rural Development CILSS Permanent Interstate Committee for Drought Control in the Sahel Niger, Ministry in charge of Livestock Burkina Faso, Ministry of Animal Resources and Fisheries Mali, Ministry in charge of Livestock Chad, Ministry of Livestock and Animal Production

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	460.20
Total Financing	460.20
of which IBRD/IDA	375.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	375.00
IDA Credit	105.00
IDA Grant	270.00

Non-World Bank Group Financing

Counterpart Funding	85.20
Borrowing Agency	2.01
Borrower/Recipient	23.05
Local Beneficiaries	60.13

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Burkina Faso	22.50	22.50	0.00	45.00
National PBA	7.50	7.50	0.00	15.00
Regional	15.00	15.00	0.00	30.00
Mali	30.00	30.00	0.00	60.00
National PBA	10.00	10.00	0.00	20.00
Regional	20.00	20.00	0.00	40.00
Mauritania	0.00	45.00	0.00	45.00
National PBA	0.00	15.00	0.00	15.00
Regional	0.00	30.00	0.00	30.00
Niger	30.00	30.00	0.00	60.00
National PBA	10.00	10.00	0.00	20.00
Regional	20.00	20.00	0.00	40.00
Senegal	22.50	22.50	0.00	45.00
National PBA	7.50	7.50	0.00	15.00
Regional	15.00	15.00	0.00	30.00
Chad	0.00	100.00	0.00	100.00

National PBA	0.00	33.50	0.00	33.50
Regional	0.00	66.50	0.00	66.50
Western Africa	0.00	20.00	0.00	20.00
Regional	0.00	20.00	0.00	20.00
Total	105.00	270.00	0.00	375.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Environment, Natural Resources & the Blue Economy, Fragile, Conflict & Violence, Social Protection & Jobs, Water

Climate Change and Disaster Screening

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

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

COMPLIANCE

Policy

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

Yes No

Does the project require any waivers of Bank policies?

Yes No

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

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

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

Legal Covenants

Sections and Description



CILSS: Section I.A.1(b)(ii)(A) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than three (3) months after the Effective Date, maintain at all times during the implementation of the Project and recruit when applicable, key staff including, a coordinator, a procurement specialist, a financial management specialist, a gender-based violence expert, a monitoring and evaluation specialist, a communication specialist and technical experts, all with qualifications, experience and under terms of reference satisfactory to the Association.

Sections and Description

CILSS: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

CILSS: Section I.A.1(b)(ii)(C) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than two (2) months after the Effective Date, update the terms of reference of its internal auditor to include the audit of activities under the Project, all in accordance with the provisions of the PIM.

Sections and Description

CILSS: Section I.A.1(b)(ii)(D) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, acquire and install a computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Mali: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than three (3) months after the Effective Date, appoint and recruit a procurement assistant and two monitoring and evaluation assistants.

Sections and Description

Mali: Section I.A.1(b)(ii)(C) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

Mali: Section I.A.1(b)(ii)(D) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, acquire and install a computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Mauritania: Section I.A.1(b)(ii)(A) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than three (3) months after the Effective Date, appoint and thereafter maintain, at all times during the implementation of the Project, NPCU staff with qualifications and under terms of reference satisfactory to the Association, including: a Project coordinator, a technical director, a procurement specialist, financial management specialist, environmental safeguards specialist, social development specialist, a gender and gender-based-violence specialist, a communications specialist, and technical experts for Parts 1, 2, 3, and 4.



Sections and Description

Mauritania: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

Mauritania: Section I.A.1(b)(ii)(C) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, acquire and install a computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Burkina Faso: Section I.A.1(b)(ii)(C) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, reconfigure its computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Senegal: Section I.A.1(b)(ii)(A) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

Senegal: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, acquire and install a computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Burkina Faso: Section I.B.2(a) of Schedule 2 of the Financing Agreement: The Recipient shall prepare and furnish to the Association not later than November 30, of each Fiscal Year during the implementation of the Project, a work plan and budget containing all activities proposed to be included in the Project during the following Fiscal Year.

Sections and Description

Niger: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor and an internal auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

Burkina Faso: Section I.A.1(b)(ii)(A) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than two (2) months after the Effective Date, appoint and thereafter maintain, at all times during the implementation of the Project, NPCU with adequate staff, including, inter alia: a project manager, an administrative and financial specialist, a procurement specialist, an internal auditor, a monitoring and evaluation specialists, a communication specialist, an environmental specialist, a social development and gender based violence specialist, and technical specialists for the oversight of Parts 1, 2, 3 and 4 of the Project, all recruited on the basis of terms of reference, qualifications, integrity and experience acceptable to the Association.



Sections and Description

Burkina Faso: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

Chad: Section I.A.1(b)(ii)(C) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, acquire and install a computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Chad: Section I.A.1(b)(ii)(B) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than six (6) months after the Effective Date, appoint an external auditor for the Project, in accordance with the provisions of the Procurement Regulations.

Sections and Description

Niger: Section I.A.1(b)(ii)(C) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than five (5) months after the Effective Date, acquire and install a computerized accounting system with technical specifications satisfactory to the Association.

Sections and Description

Niger: Section I.A.1(b)(ii)(A) of Schedule 2 of the Financing Agreement: The Recipient shall, not later than three (3) months after the Effective Date, appoint and thereafter maintain, at all times during the implementation of the Project, additional NPCU staff as required with qualifications and under terms of reference satisfactory to the Association.

Conditions

Type	Description
Effectiveness	CILSS: The Subsidiary Agreement has been executed on behalf of the Recipient and the OIE in accordance with the provisions of Section I.B of Schedule 2 to this Agreement.
Effectiveness	CILSS: The Subsidiary Agreement has been executed on behalf of the Recipient and the ECOWAS in accordance with the provisions of Section I.B of Schedule 2 to this Agreement.
Effectiveness	CILSS: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.C.1 of Schedule 2 to the Financing Agreement.
Effectiveness	Chad: The Subsidiary Agreement has been executed on behalf of the Recipient and the CILSS in accordance with the provisions of Section I.C of Schedule 2 to the Financing Agreement.



Type Effectiveness	Description Chad: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Chad: The Recipient has appointed a procurement specialist and a financial management specialist with qualifications, experience and under terms of reference satisfactory to the Association.
Type Effectiveness	Description Chad: The Recipient has refunded PRAPS I Ineligible Expenditures to the Association.
Type Effectiveness	Description Chad: The Subsidiary Agreement has been duly authorized or ratified by the Recipient and the CILSS and is legally binding upon the Recipient and the CILSS in accordance with its terms.
Type Effectiveness	Description Mali: The Subsidiary Agreement has been duly authorized or ratified by the Recipient and the CILSS and is legally binding upon the Recipient and the CILSS in accordance with its terms.
Type Effectiveness	Description Mali: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Mauritania: The Subsidiary Agreement has been executed on behalf of the Recipient and the CILSS in accordance with the provisions of Section I.C of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Mauritania: The Subsidiary Agreement has been duly authorized or ratified by the Recipient and the CILSS and is legally binding upon the Recipient and the CILSS in accordance with its terms.
Type Effectiveness	Description Mauritania: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Niger: The Subsidiary Agreement has been executed on behalf of the Recipient and the CILSS in accordance with the provisions of Section I.C of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Niger: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.



Type Effectiveness	Description Niger: The Subsidiary Agreement has been duly authorized or ratified by the Recipient and the CILSS and is legally binding upon the Recipient and the CILSS in accordance with its terms.
Type Effectiveness	Description Niger: The Recipient has appointed a procurement specialist to the National Procurement Coordination Unit with qualifications and under terms of reference satisfactory to the Association.
Type Effectiveness	Description Senegal: The Subsidiary Agreement has been duly authorized or ratified by the Recipient and the CILSS and is legally binding upon the Recipient and the CILSS in accordance with its terms.
Type Effectiveness	Description Senegal: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Senegal: The Subsidiary Agreement has been executed on behalf of the Recipient and the CILSS in accordance with the provisions of Section I.C of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Burkina Faso: The Recipient has adopted the Project Implementation Manual in accordance with the provisions of Section I.B.1 of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Burkina Faso: The Subsidiary Agreement has been executed on behalf of the Recipient and the CILSS in accordance with the provisions of Section I.C of Schedule 2 to the Financing Agreement.
Type Effectiveness	Description Burkina Faso: The Subsidiary Agreement has been duly authorized or ratified by the Recipient and the CILSS and is legally binding upon the Recipient and the CILSS in accordance with its terms.



I. STRATEGIC CONTEXT

A. Regional Context

- 1. The economies of Sahelian countries¹ have grown over the past 10 years,² but the gains are imperiled by the Coronavirus disease (COVID-19) pandemic.** Increased public spending and private investment, improved private consumption, and growth in the primary sector (notably agriculture and livestock) have driven Gross Domestic Product (GDP) growth across the region to varying degrees: Mauritania (in 2012) and Senegal (in 2019) entered the ranks of lower-middle-income countries, whereas Burkina Faso, Chad, Mali, and Niger have remained low-income countries. Over the period 2013-2019, GDP growth in these countries ranged considerably, from 1.4 percent in Mauritania in 2015 to 7.2 percent in Mali in 2014, owing to variations in: (i) agricultural production (linked to climate variability); (ii) investment and aid flows (correlated with security and political stability); and (iii) wealth extracted from natural resources (largely mining, oil, and gas). With the advent of COVID-19, growth prospects for the coming three years in the Sahel Region, which were considered good despite downside risks from insecurity and climate shocks, are now worrisome. The International Monetary Fund (IMF) predicts that real per capita GDP will contract in Sub-Saharan Africa (SSA) by 5.4 percent in 2020, before recovering by 1.1 percent in 2021.³ As a result, per capita GDP in SSA, is now likely to be 7 percentage points lower than projected before the pandemic, close to the 2010 level.
- 2. Even before the pandemic, the Sahelian region lagged behind in achieving the Sustainable Development Goals (SDGs).** Out of 17 SDGs, West Africa is on track only to meet the Climate Action Goal. The region has made moderate progress toward SDGs 2, 8, 14, 15, and 17⁴ but is unlikely to meet the others.⁵
- 3. In the Sahel, population growth has outpaced progress toward the SDGs and structural transformation, and has been accompanied by growth in absolute numbers of poor people, inequality, and malnutrition.** Poverty in Sahelian countries fell by 1 to 2 percent per year on average in the past 12 years⁶ (2 percent for the best performer, Mauritania, during the 2008–2014 commodity boom⁷), mostly because of relative price changes rather than gains in total factor productivity or structural mechanisms that enabled the poor to build human capital and other assets. Large subsets of the population—rural households, women, farmers, and especially herders—remain excluded from socio-economic progress, calling for more inclusive growth to moderate rising inequality. The resurgence of food insecurity since 2010 has brought high levels of malnutrition. Undernourishment in West Africa rose from 12.1 percent (2010) to 14.3 percent (2015) and then to 15.2 percent (2019); it is projected to reach 23 percent in 2030.⁸

¹ The Sahel Region is a subregion of West Africa, defined in this document as the countries participating in PRAPS-1 and PRAPS-2 (Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal).

² Growth was significant in absolute terms (4–5 percent) and modest in per capita terms (1–2 percent).

³ International Monetary Fund (2020), "Regional Economic Outlook for Sub-Saharan Africa." Washington, DC. June. Available at <https://www.imf.org/en/Publications/REO/SSA/Issues/2020/06/29/sreo0629>.

⁴ SDG 2 : Zero Hunger ; SDG 8 : Decent work and economic growth ; SDG 14 : Life below water ; SDG 15 : Life on land ; SDG 17 : Partnerships for the goals.

⁵ SDG Center for Africa and Sustainable Development Solutions Network (2019), "Africa SDG Index and Dashboards Report 2019." Kigali and New York.

⁶ World Development Indicators, The World Bank (2021). Available at : <https://databank.worldbank.org/source/world-development-indicators>

⁷ World Bank. Country Partnership Framework for the Islamic Republic of Mauritania (FY18-FY23). June 13, 2018. Report No.125012-MR

⁸ FAO, IFAD, UNICEF, WFP, and WHO (2020), *The State of Food Security and Nutrition in the World 2020: Transforming Food Systems for Affordable Healthy Diets*. Rome. Projections of this report do not reflect the impact of the COVID-19 pandemic.



Main development challenges

4. **The six Sahelian⁹ countries share a wide range of features**, making the Sahel a distinct region in terms of climate, production systems, economics, demographics, and consequently development challenges.
5. **Climate change exerts increasing pressure on food production and supply, and disproportionately affects the poor, mainly by reducing agricultural productivity and raising food prices.** More extreme weather and natural hazards, particularly droughts, are predicted to cause serious harm to agriculture and pastoralism, which are highly reliant on natural ecosystems exposed to climatic variability.¹⁰ Such projections are sobering, given that agriculture (including pastoralism) accounts for 20–35 percent of GDP in the Sahel Region and employs most of the workforce. Across the Sahel, temperature increases are projected to be 1.5 times higher than the global average. In Senegal, for example, mean annual temperatures have risen by 1.6°C since 1950 and are expected to rise by up to 3°C by 2060,¹¹ exposing plants and animals to much higher heat stress, with deleterious physiological and immunological effects in livestock.¹² Rainfall projections are less certain than temperature projections, given the high seasonal and annual variability of rainfall in the Sahel,¹³ but rainfall will certainly become more erratic, provoking droughts and floods and reducing animal, rangeland, and fodder productivity. Alongside climate change, factors such as widespread land degradation and poor animal health will also increase vulnerability and limit the adaptive capacity of people, animals, and plants. The Sahel Region will be challenged to overcome stagnant performance without undermining environmental sustainability. Efforts to accelerate the adoption of climate-resilient, sustainable practices will require bold investments but heighten the pressures on strained fiscal resources.
6. **Conflicts are on the rise, affecting the regional, national, and local economies and disrupting food production and livelihoods in lasting ways.** Burkina Faso, Chad, Mali, and Niger face serious security and humanitarian crises¹⁴ that are worsening and reinforcing pre-existing institutional and social vulnerabilities. More than 5,000 people were killed and more than 1.5 million displaced in 2020 in the tri-border area between Burkina Faso, Mali, and Niger.¹⁵ The Organisation for Economic Co-operation and Development (OECD) reports that over 2009–2019, about 30 percent of violent incidents resulting in casualties took place within a 50-kilometer radius from borders in North and West Africa.¹⁶ Today's conflict in the Sahelian Region can be traced to social and political unrest, a breakdown in the social contract, growing competition over resources, discontent over the lack of inclusiveness and quality of public service delivery, weak institutions, inequality, and underlying social tensions. Decentralization policies inherently reinforced the social and political marginalization of pastoralists, a subset of the population that already had less access to basic services such as education and health care.
7. **Despite these pressures, Sahelian countries have many potential sources of resilience that can be strengthened.** One source of resilience is the role of traditional and religious authorities in preventing and managing conflict, although their authority is diminishing with time. Forums for local consultation have proven to be particularly effective for reducing conflicts related to natural resources. The dominant informal economy should be approached as an essential sector for promoting resilience. Interventions must be carefully designed

⁹ Burkina Faso, Chad, Mali, Mauritania, Niger and Senegal.

¹⁰ de Haan C. Prospects for Livestock-Based Livelihoods in Africa's Drylands. The World Bank; 2016.

¹¹ Agriculture (CIAT); Bureau for Food Security, United States Agency for International Development (BFS/USAID), Washington, D.C. 20 p.

¹² C.M. Godde, D. Mason-D'Croz, D.E. Mayberry, P.K. Thornton, M. Herrero, Impacts of climate change on the livestock food supply chain; a review of the evidence, Global Food Security, Volume 28, 2021

¹³ Depending on the country, some models project almost no change in mean annual precipitation, whereas others project a decline and others an increase.

¹⁴ The recently adopted Fragility, Conflict, and Violence (FCV) strategy (February 25, 2020) includes these four countries in the list of Fragile and Conflict States: Burkina Faso, Mali, and Niger as "countries in medium-intensity conflict" and Chad as a "country with institutional and social fragility."

¹⁵ See <https://reliefweb.int/report/burkina-faso/matrice-de-suivi-des-d-placements-dtm-sahel-central-lip-tako-gourma-tableau-de>.

¹⁶ See <https://www.oecd.org/swac/maps/90-espaces-frontieres-dangereux.pdf>.



and adapted in this context, however, recurrent crises make it challenging for authorities and their partners to support informal actors (particularly women) in a tailored, continuous manner. The development of conflict-related early warning systems (EWS) should also improve resilience, especially if EWSs include linkages to mitigation measures delivered to communities.

8. **Women and girls in pastoral communities across the region have an even narrower set of opportunities than men, owing to persistent gender disparities.** Gender inequalities fuel fragility, underdevelopment, and even conflict to some degree. Social and economic interactions are deeply influenced by women’s “unequal access to basic social services, unequal property rights and persistent gender gaps in the labor market and in the public sphere.”¹⁷ In pastoral communities, gender gaps limit women’s income potential, access to productive resources, and voice in the disposition of community resources. High fertility rates, low rates of female literacy, and significant prevalence of gender-based violence (GBV) are common. Increased insecurity further disempowers women in the Sahel, where a mutually reinforcing relationship has been demonstrated between gender inequalities and state fragility.¹⁸ Finally, “gender inequalities within the Sahel pose a very real challenge for adaptation and resilience strategies to climate change” and for natural resource management (NRM).¹⁹ Tackling gender gaps and inequalities within pastoral communities will help to sustain livelihoods, investments, and natural resources, in addition to mitigating conflict in a context of instability and climate change.
9. **With 64.5 percent of the population under the age of 25, the Sahel is one of the world’s youngest regions, and the most important action to reap this demographic dividend is to increase opportunities for young people to find productive work in rural areas.** While the generation of Sahelian youth entering the labor force is the most educated ever, many encounter minimal and unsatisfactory prospects for employment and earnings. Rural young women and poorer rural youth in particular confront profound challenges that obstruct their path to productive employment. Increasing productivity in the agricultural sector would be the most immediate means of catalyzing economic growth and employment for young people.²⁰ Approaches to accelerate agricultural growth and improve food security must thus be integrated with efforts to create jobs for young people.
10. **Food insecurity and malnutrition are worsening in the Sahel, where insecurity and climate hazards are key drivers of growing humanitarian needs.** Despite continuous efforts of governments and partners to address food insecurity and malnutrition in the Sahel, an estimated 9 million people were enduring a food security emergency or crisis in June–August 2020, falling into Phases 3–5 of the Regional Harmonized Framework (*Cadre Harmonisé*).²¹ In the context of the COVID-19 pandemic, which is exacerbating the negative impact of climate change and insecurity, 15.2 million people were deemed at risk of food insecurity in 2020.²² Livestock systems—which offer no less than 13 pathways for influencing human food security and nutrition—are widely recognized as presenting major opportunities to improve livelihoods.²³ Interventions that increase the local availability of animal-sourced foods and improve incomes, especially for the most vulnerable populations, have significant potential for positive food security and nutritional outcomes.

¹⁷ McOmber, C. (2020), “Women and Climate Change in the Sahel.” West African Papers, No. 27. Paris: OECD. Available at <https://doi.org/10.1787/e31c77ad-en>.

¹⁸ See <https://www.files.ethz.ch/isn/191893/Gender%20inequality%20and%20state%20fragility%20in%20the%20Sahel.pdf>.

¹⁹ McOmber, C. (2020).

²⁰ Filmer, D., and L. Fox (2014), “Youth Employment in Sub-Saharan Africa.” Washington, DC: World Bank. doi:10.1596/978-1-4648-0107-5.

²¹ The *Cadre Harmonisé* is a crisis prevention tool used by 17 West African countries for the identification and analysis of areas at risk and of populations experiencing food and nutrition insecurity, allowing comparisons over time and space.

²² See WFP and UNICEF (2020), “Hotspot Exercises Overview.” Available at [https://docs.wfp.org/api/documents/WFP-0000115903/download/#:~:text=For%20the%20six%20countries%20in,\(emergency%2C%20phase%204](https://docs.wfp.org/api/documents/WFP-0000115903/download/#:~:text=For%20the%20six%20countries%20in,(emergency%2C%20phase%204).

²³ See Dominguez-Salas, P., D. Kauffmann, C. Breyne, et al. (2019), “Leveraging Human Nutrition through Livestock Interventions: Perceptions, Knowledge, Barriers and Opportunities in the Sahel.” *Food Security* 11: 777–96. <https://doi.org/10.1007/s12571-019-00957-4>.



B. Sectoral and Institutional Context

- 11. Pastoralism in the Sahel Region is a dynamic and growing subsector that provides major direct benefits for millions of households.** Pastoral systems²⁴ are highly adapted to the agro-ecological conditions in arid and semi-arid areas and are often the only productive activity that these territories can support. The value of the 280 million animals of all species raised by pastoralists and agro-pastoralists²⁵ in the six countries of the Sahel exceeds US\$50 billion,²⁶ constituting a considerable productive asset, income source, and source of resilience for millions of herders. Livestock raised in the Sahel is actively traded across Western Africa; these animals represent the second greatest source of export revenue after uranium in Niger and account for 30 percent of exports from Chad. Live animals entering value chains (VCs) are valued at more than US\$8 billion annually,²⁷ and this value increases considerably as they move through trade VCs that sustain jobs and incomes for hundreds of thousands of traders, processors, and retailers.
- 12. The development of pastoralism generates a broad range of benefits for society as a whole, but it must be better funded and managed to realize pastoralism's substantial potential for growth.** Pastoralism provides meat and dairy products to growing urban populations at competitive prices, yet the potential for livestock and animal-sourced foods to improve nutrition, jobs, resilience, and incomes of vulnerable Sahelian households remains underutilized. Under a business-as-usual scenario and compared to 2012 levels, demand for meat will rise by 327 percent and demand for dairy products by 270 percent in SSA by 2050, while demand for grains is projected to rise by 190 percent.²⁸ At the same time, pastoralism—because of its superior adaptation to arid and semi-arid ecologies compared to sedentary or “ranching” systems—is essential for maintaining and regenerating the Sahel’s vast rangelands, so that they can continue to act as valuable carbon sinks²⁹ and supply eco-systemic services. If low levels of public investment and poor governance continue to prevail in the livestock sector, its uncontrolled growth—fueled by increasing demand from the urban, middle-class population—may unleash an array of negative social, economic, and environmental impacts.

Several challenges continue to hamper the sustainable development of (agro)pastoralism

- 13. The weak capacity of Veterinary Services (VS) and poor control of animal pharmaceuticals continue to undermine productivity, cause significant animal losses, and pose public health risks.** Despite the commitment of individual countries and international and regional organizations to eradicate small ruminant plague (*peste des petits ruminants*—PPR) by 2030 and to control contagious bovine pleuropneumonia (CBPP), considerable

²⁴ Pastoral systems are defined by de Haan et al. (2016) as grassland-based, meaning that grasslands and rangelands provide more than 90 percent of the dry matter grazed or browsed by livestock, and more than 50 percent of household income comes from livestock. They are found mainly in the more arid zones of SSA. (Agro)pastoral refers to both agropastoral and pastoral systems. See de Haan, C., R. Cervigni, A. Mottet, G. Conchedda, P. Gerber, S. Msangi, M. Lesnoff, F. Ham, E. Fillol, and K. Nigussie (2016), “Vulnerability and Resilience in Livestock Systems in the Drylands of Sub-Saharan Africa,” in Chapter 5 of *Prospects for Livestock-Based Livelihoods in Africa’s Drylands*, edited by C. de Haan. Washington, DC: World Bank. Pp. 79–122. <http://dx.doi.org/10.1596/978-1-4648-0836-4>.

²⁵ Agropastoral systems are defined by de Haan et al. (2016) as systems in which livestock keepers derive a considerable part of their agricultural income from crop farming, and in which crop residues can make up a significant share of the livestock ration. Generally, more than 10 percent of the dry matter fed to animals in these systems is derived from crop by-products/stubble, and more than 10 percent of the total value of production comes from non-livestock farming activities. They are found mainly in semi-arid zones and sub-humid zones.

²⁶ FAOSTAT and price data from CILSS.

²⁷ Considering average annual offtakes of 11.5 percent for bovines, 29.5 percent for goats and sheep, and 4.75 percent for camels.

²⁸ See <http://www.fao.org/3/CA1564EN/CA1564EN.pdf>.

²⁹ CIRAD (2019) indicates that environmental co-benefits of pastoral systems are higher than anticipated and could be further exploited, based on research in Senegal showing that Sahelian rangeland ecosystems can have a neutral carbon balance, in which GHG (methane, nitrous oxide and carbon dioxide) emissions from livestock are offset by carbon sinks in rangelands, more particularly trees, shrubs, and soils. See Assouma, M., P. Lecomte, C. Corniaux, P. Hiernaux, A. Ickowicz, J. Vayssieres (2019). “Territoires d’élevage pastoral au Sahel : un bilan carbone avec un potentiel inattendu d’atténuation du changement climatique”. CIRAD. Available at <https://www.cirad.fr/actualites/toutes-les-actualites/articles/2019/ca-vient-de-sortir/perspective-52-territoires-d-elevage-et-changement-climatique-au-sahel>



progress needs to be made to reach these objectives. The weak human, technical, and financial capacity of public and private VS³⁰ in the region, as highlighted by the World Organisation for Animal Health (OIE) Performance of Veterinary Services (PVS) evaluations, do not permit adequate prevention and control of animal diseases or effective protection of public health. The causes and consequences of animal health issues are regional, given the contagious character of many pathogens and the large volumes of livestock and livestock products that move across borders for transhumance or trade. For that reason, it is essential to continue pursuing efforts (especially efforts initiated through PRAPS-1)³¹ to tackle transboundary animal diseases and veterinary public health issues at the level of national VS and through regional cooperation and integration.

14. **Competition and conflicts over resources, alongside obstacles to mobility and poor mechanisms of governance, do not provide a harmonious context for pastoral activity to develop.** Competition is increasing for access to the natural resources—water and pasture—required by pastoralism. At the same time, State capacity to deliver public interventions in coordination with communities, at the scale required to peacefully regulate resource use, is far below the needs. Increasing security risks and negative perceptions of pastoralists continue to present numerous obstacles to mobility. The onset of the pandemic had a rapid, significant impact on pastoralists. Measures to contain the spread of COVID-19 exacerbated restrictions on movement, and the closure of major rural markets disrupted the animal trade.³² Overall governance of the sector remains poor. Ministries in charge of the livestock sector have faced difficulties in coordinating policies and actions, enforcing rules, and generating solid data and evidence-based analysis to inform technical and political decisions. Pastoralists' voice and inclusion in decision making remain limited, and many pastoralist producer organizations (POs) lack representation, coordination, and dynamism.
15. **The sub-sector is also constrained by a lack of value addition along value-chains (VCs), which is linked to poor infrastructure, weak organization, limited private investments, and still-nascent regional integration.** Because livestock and livestock products are among the most perishable goods, specific conditions must be in place to unleash the development potential of these VCs. The environment for the national and regional livestock trade to expand in West Africa remains strongly constrained by a lack of basic infrastructure (from livestock markets to processing facilities), imperfect and incomplete market information, high transaction costs (including informal taxation), and pervasive obstacles to regional trade, including insufficient integration. Trade regulations for live animals and animal products are not always consistent or well respected across countries in the region, in a context of weak capacity in state institutions and POs. Trade is dominated by informal practices. The limited transparency and visibility of prices along livestock VCs is starting to be addressed by the rapid adoption of digital technologies, which also offer important opportunities to modernize the sector.
16. **Pastoralists experience discrimination and marginalization, reflected in their lower access to economic opportunities, basic services adapted to their needs, and social protection and safety nets.** Partly because of the mobility associated with pastoralism but also because of other exclusionary factors, few pastoralists appear in social and civil registries. The result of this exclusion is that pastoralists experience unequal access to social protections and safety nets, crisis responses programs, and rights associated with civil registration, such as civil and land rights. These circumstances reinforce the perception of exclusion among pastoralist populations—a perception that is central to explaining, preventing, and resolving conflict in the Sahel. States are falling short of

³⁰ Veterinary Services are the governmental and non-governmental organisations that implement animal health and welfare measures and other international standards. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations, veterinarians, veterinary paraprofessionals, or aquatic animal health professionals are normally accredited or approved by the Veterinary Authority to deliver the delegated functions.

³¹ The Regional Sahel Pastoralism Support Project (Projet Régional d'Appui au Pastoralisme au Sahel).

³² See <https://blogs.worldbank.org/opendata/monitoring-impact-covid-19-and-climate-change-pastoral-populations-sahel> and https://www.maroobe.com/images/DOCS/Bulletin_Mensuel_Suivi_Covid_Juin.pdf.



ensuring equal access for all people to services, governance, administration (particularly land), justice, and security, within an impartial state framework.

17. **The impact of exclusion is severe among young pastoralists, especially women, who have so few training and investment prospects.** Women in pastoral communities are systematically disadvantaged compared to men in accessing productive resources (livestock, land, water, credit) and services (VS, vaccination, and extension). Their limited marketing activities focus mainly on milk sales. Burdened with unpaid domestic and productive work, low social and legal status, and low incomes, women in pastoral communities find few pathways to generate better incomes or to benefit from time-saving technologies adapted to their needs. High illiteracy rates (including financial and digital literacy) and limited access to training and information restrict their options.
18. **National and regional institutions have little capacity to monitor sector outcomes and needs, even when pastoral crises occur.** The quality of data and analysis produced by these institutions is insufficient to inform policy for developing pastoralism, which may be part of their mandates as public institutions. The shortage of qualified people—especially young people—capable of intervening in support of pastoralism is chronic. Aside from their human resource needs, these institutions also require the capacity to rapidly master and use the digital technologies that will amplify and speed the delivery of services relevant to pastoralism and improve monitoring throughout the sector. Mechanisms to prevent and respond to crises affecting pastoral livestock are not yet embedded in national (and potentially regional). Table 1 summarizes gaps in governance of pastoralism at the regional and national level.

Table 1: Gaps in policy and implementation constrain regional and national governance of pastoralism

Policy-related gaps
Lack of common vision of sustainable livestock development pathways in the West Africa region, and lack of a coordinated approach to regional movements and trade
Lack of harmonization and coordination of regional policies and strategies related to animal health
National and regional pastoral water management strategies inexistent or needing revamping
Pastoralists' voice and inclusion in policy and regulatory processes poor
Shortage of qualified human resources in the public and private sectors capable of supporting pastoralism/pastoralists
Unclear definition of institutional roles and responsibilities at all levels, and limited cross-sectoral collaboration and planning
Crisis prevention and management systems loosely institutionalized and reliant on externally funded projects
Implementation-related gaps
Weaknesses of the VSs (public and private), as highlighted by the OIE PVS evaluations, in terms of human, technical, and financial capacity
Insufficient capacity of the States to deliver public interventions coordinated with communities on the scale required to peacefully regulate access to the natural resources (water and pasture) essential for pastoralism
Lack of appropriation of digital technologies by public institutions for improved service delivery to pastoral systems
Insufficient quality and quantity of data and analysis produced related to the livestock sector, including pastoral systems
Incomplete enforcement of existing regional policy framework; persistent barriers to livestock mobility
Informal taxation practices hamper expansion of the livestock trade, and regional trade regulations for live animals and animal products are not always consistent or well respected across countries
Pastoralists excluded from social protection, safety net mechanisms, and social and civil registries

Regional challenges require coordinated regional interventions

19. **Many of the challenges summarized here are regional in nature and must be met with a strong political commitment, shared vision, and well-coordinated approach and investments.** The October 2013 Nouakchott Declaration on Pastoralism embodies this political will and recognizes the profound need for well-coordinated regional interventions on behalf of pastoralism. The Nouakchott Declaration followed the May 2013 N'Djamena



Declaration on the Contribution of Pastoral Livestock to the Security and Development of the Sahelian Region.³³ These declarations identify key development challenges for pastoralism that require coordinated, long-term regional interventions to improve the provision of four types of regional public goods under the following pillars: (i) improved animal health services and the prevention of transboundary diseases; (ii) peaceful access to well-managed water and feed resources across borders; (iii) the development of regional trade, markets, and VCs; and (iv) the prevention of pastoral crises. Tackling these challenges will require coordinated approaches and mutual efforts, backed by regional organizations with the capacity to catalyze dialogue on major regional public strategies and policies, and establish an enabling environment that leads to greater regional integration.

20. **The first phase of *Projet Régional d'Appui au Pastoralisme au Sahel* (Regional Sahel Pastoralism Support Project (PRAPS-1, 2015–2021, P147674) responded directly to the Nouakchott Declaration and is delivering an action program of institutional support, policy reforms, and investments.** PRAPS-1 is managed by the Permanent Interstate Committee for Drought Control in the Sahel (*Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel*, CILSS) under the political leadership of the Economic Community of West African States (ECOWAS) and the West African Economic Monetary Union (WAEMU). Under the four pillars just mentioned, PRAPS-1 has delivered significant (although uneven) results among countries; piloted new approaches, tools, and methodologies; and started to fill major gaps in investment, including investment in infrastructure. Box 1 and Annex 2 summarize the key Project results.

Box 1: Selected key results achieved under PRAPS-1 as of December 2020

- More than 2.3 million pastoralists and agro-pastoralists have benefited from PRAPS-1 activities.
- More than 5.5 million hectares have been brought under sustainable landscape management (SLM) through the adoption and initial implementation of multi-actor management agreements such as the *chartes pastorales* to support peaceful, managed access to land, the restoration of degraded land, protection from bush fires, and other landscape management approaches.
- Critical infrastructure has been built or rehabilitated, including 116 veterinary units in pastoral and transborder areas, 282 vaccination pens, 256 water points, and 69 live animal markets along strategic transhumance and trade routes.
- Community engagement based on a social engineering approach[†] has been mainstreamed using tools specifically designed for pastoral infrastructure to prevent future conflicts and increase sustainability, particularly around water points and markets.
- All VSs have developed and started to implement national strategic plans (NSP) for controlling CBPP and PPR. These plans include initiatives related to training, the procurement of quality-certified vaccines, vaccination campaigns, and epidemiological surveillance surveys, among others, increasingly using digital technologies (KoBo Toolbox (KBT)).
- Cross-border dialogue (at all levels) has been established to improve collaboration in the management of livestock transhumance and trade.
- Crisis prevention and response capacity have been enhanced with the adoption of manuals, the training of Livestock Emergency Guidelines and Standards (LEGS) experts, and the collection and reporting of data on up to 13 pastoral indicators for the EWSs informing the *Cadre Harmonisé*.

[†] Described in Box A2.1, Annex 2.

21. **While PRAPS-1 has taken important steps that demonstrate relevance and impacts for pastoral communities, current circumstances call for a scaled-up response to develop more resilient and innovative pastoralism.** Only a scaled-up approach can address the notable increase in social and political unrest, growing risks of localized

³³ The N'Djamena Declaration defined the priorities for a policy supporting regional pastoralism, which closely linked development and security issues. The declaration also recognized the critical role that pastoralists can play in maintaining stability in the Sahel Region.



conflicts related to competition over natural resources, deepening regional insecurity linked to armed and extremist groups,³⁴ accelerating climate change, and the widening impact of COVID-19. An effective policy response must be mounted to significantly increase opportunities by enabling pastoralist households—including youth, and targeting women as key actors in community resilience—to “step up” (supporting access to adequate services and input and output markets that allow pastoralists to engage effectively in emerging markets and VCs), “step out” (providing opportunities for livelihoods beyond the pastoralist sector by developing skills and providing small-scale financing to support emerging economic sectors), and “hang in” (targeting the most vulnerable through interventions that provide opportunities for pastoralists to move toward food and nutritional security and begin to generate income through livestock and non-livestock activities).³⁵

22. Considerable potential exists to further enhance the ability of pastoral systems in the Sahel to generate social, economic, and environmental benefits and contribute to peace and stability. Building on the initial achievements and lessons from PRAPS-1, as well as other recent knowledge and analyses, PRAPS-2 will retain the holistic approach followed by PRAPS-1 to address the cross-sectoral, intertwined dimensions of resilience, while expanding its geographic and thematic scale and scope. More specifically, this second phase will: (i) place greater emphasis on regional and national institutional capacity, including strategies, regulations, governance mechanisms, and tools and data supporting regional integration (all PRAPS-2 components); (ii) enhance cross-border/regional collaboration and agreements to facilitate the safe, peaceful movement (transhumance and trade) of livestock throughout the region (Components 1, 2, and 3); (iii) pursue ambitious goals to strengthen the performance of VS (Component 1); (iv) increase the available grazing area through strategic investments (water points, management schemes) (Component 2); (v) offer new instruments (matching grants (MG)) to stimulate private sector engagement and support the development and adoption of innovations in VC ventures (Component 3); (vi) include new interventions supporting social and economic inclusion, and more specifically targeting women and youth (mainly Component 4, with greater attention to women and youth across components); and (vii) embrace new opportunities offered by the rapid development of digital technologies (across all components and dimensions addressed). By providing further support for the mutually beneficial strengthening and improvement of animal health systems³⁶ and ecosystem health, PRAPS-2 will also embrace the One Health approach. The Project will synergize with a growing portfolio of investments from the World Bank and other partners in the Sahel to leverage respective strengths and increase impact on the ground.

C. Relevance to Higher Level Objectives

23. The proposed second phase of PRAPS will consolidate phase one achievements and further support countries and the region in translating continental and regional livestock strategies into tangible results. In this effort, PRAPS-2 aligns with objectives of the African Union Interafrican Bureau For Animal Resources (AU-IBAR) Livestock Development Strategy For Africa (Lidesa) 2015–2035, the AU Policy Framework on Pastoralism

³⁴ Faced with the presence of armed groups, pastoralists move in larger groups, change their migration routes, reduce transhumance to a minimum, or arm themselves. All of these strategies negatively affect the well-being of herds and relations with the sedentary population. Impoverished young pastoralists have also become perpetrators of violence.

³⁵ Cervigni and Morris (2016) establish the rationale for pastoral households to diversify their sources of revenues and for some members to exit the sector. See Cervigni, R., and M. Morris (2016), *Confronting Drought in Africa's Drylands: Opportunities for Enhancing Resilience*. Washington, DC: World Bank and Agence Française de Développement. Available at <https://openknowledge.worldbank.org/handle/10986/23576>.

³⁶ Veterinary Services also work collaboratively with Human Health Services under the World Bank-funded Regional Disease Surveillance Systems Enhancement Program in West Africa (REDISSE), which fosters a One Health approach.



- (2011),³⁷ the ECOWAS Strategic Action Plan for the Development and Transformation of Livestock Sector (2011–2020), and the ECOWAS Protocol on Transhumance (1998) and its supporting Regulation (2003).
24. **PRAPS-2 also strongly aligns with the World Bank Strategy for Fragility, Conflict and Violence (FCV) (2020–2025)³⁸ and the Regional Integration and Cooperation Assistance Strategy Update (2021–2023)³⁹.** By adopting a conflict-sensitive approach and directly addressing some of the drivers of conflict and fragility, the proposed Project will reinforce: (i) social cohesion and inclusion of pastoral populations; (ii) regional trade through (agro)pastoral livestock VCs; and (iii) resilience of some of the most vulnerable Sahelian populations, while leveraging regional dialogue and collaboration and scaling up the use of technology (particularly digital technology) for more efficient systems. PRAPS-2 will also contribute to the four pillars of the Regional strategy—namely, regional connectivity, trade and market integration, human capital development and building resilience. The proposed Project will also mitigate the impacts of the COVID-19 pandemic on (agro)pastoral populations and contribute to their recovery through its multipronged interventions, and building medium to longer term resilience (see Annex 8).
25. **PRAPS-2 is fully consistent with the Country Partnership Framework (CPF) of each country involved, and it is informed by the Sahel Risk and Resilience Assessment (2019).** Several of proposed PRAPS-2 activities closely align with the Prevention and Resilience Allocations (PRA) established or under preparation in the four FCV countries (Burkina Faso, Chad, Mali, and Niger), ensuring that the (agro)pastoral livestock sector is central to the agenda of economic growth, resilience, and job creation. More specifically, PRAPS-2 will help to improve the coexistence of pastoral activities with other land uses (agriculture in particular) by addressing aspects of access to natural resources, a common source of conflict. The Project's effort to improve the living conditions of pastoral populations, their access to services and assets, and their inclusion in governance systems will also address drivers of marginalization and exclusion. For details on how PRAPS-2 will support the CPF of each country, see Annex 2.
26. **The climate change strategies and plans of the World Bank, as well as the nationally determined contributions (NDCs) of PRAPS-2 countries, are an integral part of the Project's aims and activities.** Climate and disaster risk screening indicate that warmer and drier weather will likely exacerbate West Africa's periodic droughts, while more intense rainfall increases flood risks—magnifying the vulnerability of livestock and associated livelihoods. The PRAPS-2 objective of strengthening resilience through improved NRM clearly aligns with World Bank efforts to reduce vulnerability and increase resilience, including the World Bank 2021-2025 Climate Change Targets⁴⁰. The proposed Project also furthers the aims of the Next Generation Africa Climate Business Plan (2020-2025),⁴¹ which calls for bold, development-centered climate actions to address food insecurity, climate vulnerability, and related challenges, while the emphasis on scaling up support for social resilience in the most vulnerable pastoralist populations clearly aligns with the Action Plan on Climate Adaptation and Resilience (2021-2025).⁴²

³⁷ African Union Department of Rural Economy and Agriculture (2010), "Policy Framework for Pastoralism In Africa: Securing, Protecting, and Improving the Lives, Livelihoods, and Rights of Pastoralist Communities," Addis Ababa, available at https://au.int/sites/default/files/documents/30240-doc-policy_framework_for_pastoralism.pdf.

³⁸ Report No 146551

³⁹ Report No 154458

⁴⁰ Available at: <http://pubdocs.worldbank.org/en/368601543772742074/2025-Targets-to-Step-Up-Climate-Action.pdf>.

⁴¹ World Bank (2020), "Next Generation Africa Climate Business Plan – Ramping Up Development Centered Climate Action." Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/34098/34098.pdf?sequence=25&isAllowed=y>

⁴² World Bank (2019), "The World Bank Group Action Plan on Climate Change Adaptation and Resilience." Available at <http://documents1.worldbank.org/curated/en/519821547481031999/The-World-Bank-Groups-Action-Plan-on-Climate-Change-Adaptation-and-Resilience-Managing-Risks-for-a-More-Resilient>



27. **The proposed Project will address climate risks and vulnerabilities by prioritizing investments that help to increase the resilience of (agro)pastoral systems.** These investments include strengthening the capacity to improve animal production and health, promoting sustainable land management, improving livestock VCs, and building social resilience through economic improvement measures. To reduce greenhouse gas (GHG) emissions from Project interventions, the Project will finance activities from the approved list in Annex A.C.1 of the 2019 Joint Report on Multilateral Development Banks' Climate Finance⁴³ and World Bank Guidance for Addressing Climate Change Corporate Commitments in Agriculture.⁴⁴ The GHG accounting results are summarized in Section IV.A and detailed in Annex 5. The Project will fill gaps in climate knowledge and data by supporting institutional capacity to use satellite imagery and digitally disseminate information, and it will finance investments to enhance climate adaptation and mitigation in pastoral livestock systems that provide livelihoods for millions of vulnerable people across the Sahel. All countries participating in the proposed Project have developed NDCs that refer to pastoral systems that PRAPS-2 will directly support. For details on those individual NDCs, see Annex 2.
28. **Under IDA 19, the proposed Project is one of the core regional operations addressing the drivers of fragility and conflict in the Sahel while bolstering the livelihoods of a vulnerable population.** PRAPS-2 will build economic dynamism along regional economic corridors, develop functioning regional markets, and address the risk of fragility, including the risks of emerging and re-emerging infectious diseases under the One-Health Framework. It complements other regional programs such as the Sahel Women Empowerment and Demographic Dividend Project (SWEDD - P150080), Sahel Irrigation Support Project (SIIP - P154482), Regional Disease Surveillance Systems Enhancement Program (REDISSE - P154807, P159040, P161163), and the upcoming Community-based Recovery Stabilization Project or Sahel and Food System Resilience Project (FSRP – P172769). The proposed Project will build on the legacy of PRAPS-1, a flagship project of the Sahel Alliance, which emphasizes the rapid delivery of streamlined, multi-sectoral projects in fragile zones to enhance the resilience and security of vulnerable populations and collaboration at the local level.
29. **Finally, the six PRAPS-2 countries are part of the Great Green Wall (GGW) initiative, and PRAPS-2 investments will reflect GGW objectives and contribute to its targets.** The GGW is a pan-African initiative to restore degraded land and sustainably manage land in the Sahelo-Saharan region. Its targets include restoring 100 million hectares, sequestering 250 million tons of CO₂, and creating 10 million green jobs by 2030, as part of implementing the Rio Conventions on Biodiversity, Climate Change and Desertification and meeting the SDGs. The GGW operates under the political auspices of the AU, with technical coordination provided by the Pan-African Agency of the GGW, with its Secretariat in Nouakchott, Mauritania.

II. PROJECT DESCRIPTION

A. Project Development Objective

30. The Project Development Objective (PDO) is to improve the resilience of pastoralists and agro-pastoralists in selected areas in the Sahel Region.
31. As defined by the United Nations Food and Agriculture Organization (FAO), the resilience of a household depends primarily on the options available for making a living.⁴⁵ In the context of PRAPS-2, the resilience of

⁴³ See <http://dx.doi.org/10.18235/0002528>. Project activities fully qualify as generating climate change mitigation co-benefits under Category 4.1 (Agriculture: Agricultural projects that improve existing carbon pools) from the A.C.1 list of activities eligible for classification as climate mitigation finance.

⁴⁴ World Bank (2018), "Climate Change Requirements: Guidance Note for Meeting Corporate Requirements in Climate Smart Agriculture." Available at <https://worldbankgroup.sharepoint.com/sites/Agriculture/Knowledge%20Base/Guidance%20NoteClimateChangeRequirementsAgriculturalOperations.pdf>.

⁴⁵ Livelihood resilience is defined by FAO as: "The ability to prevent disasters and crises as well as to anticipate, absorb, accommodate or recover from



(agro)pastoralists is determined primarily by: (i) sustained and maintained assets (livestock); (ii) sustained and maintained ecosystems; and (iii) sustained and maintained means of making a living and generating income.

PDO Level Indicators

32. The PDO-level indicators include:

- (i) Vaccination coverage rate for CBPP (percentage, by country and regional level)
- (ii) Number of small ruminants vaccinated and marked against PPR (number, by country and regional level)
- (iii) Land area under SLM practices (hectares, by country and regional level) (corporate results indicator (CRI))
- (iv) Income increase of pastoral household generated with the support of the Project (percentage, by country)

B. Project Components

33. **PRAPS-2 builds on the foundations of PRAPS-1.** Like its predecessor, PRAPS-2 has been developed around five technical components, with the addition of focal areas that are essential to holistically address some of the core drivers of resilience among (agro)pastoral populations (see the Project Results Chain in Section D and Detailed Component Description in Annex 2). The proposed activities will be implemented over a six-year period. Each component will include complementary activities at the national and regional level, conforming to the principle of subsidiarity of interventions between regional and national levels. Institutional capacity building will be supported across components and activities to create an enabling environment to govern the sector in an economically, socially, and environmentally sustainable manner. The preparation of the Project has relied extensively on the World Bank/FAO Sustainable Livestock Guide.⁴⁶

34. **Regional spillover impact of PRAPS-2 interventions.** Sahelian (agro)pastoral systems rely on natural resources extending across national boundaries to accommodate climate variability and the seasonality of resources, and they also rely on regional market outlets (mainly in coastal countries) to move livestock and livestock products. At the same time, this activity increases vulnerability to contagious livestock diseases (also termed “transboundary” diseases). PRAPS-2 combines investments at the national level with coordination and support from regional institutions to generate benefits extending beyond the individual countries participating in the Project (regional public goods). These benefits include a reduction in animal health risks in countries that are transit areas or destinations for livestock (which helps to protect livestock capital throughout the region), a reduction in competition for natural resources (which reduces the risks of land degradation and conflict), and improved trade facilitation (which leads to greater economic gains and overall greater regional stability). The proposed Project will play a major role in forging essential cross-sectoral and cross-border collaboration, and it will ensure synergies and complementarities—spatial and thematic—between Project investments and other ongoing and planned interventions.

35. **PRAPS-2 will prioritize geographic areas based on three principles.** They are: (i) consolidating PRAPS-1 achievements in implementing natural resource and infrastructure governance mechanisms; (ii) reinforcing

them in a timely, efficient and sustainable manner. This includes protecting, restoring and improving livelihoods systems in the face of threats that impact agriculture, nutrition, food security and food safety." (<http://www.fao.org/emergencies/how-we-work/resilience/en>). In other words, resilience is the ability of people, communities or systems that are confronted by disasters or crises to withstand damage and to recover rapidly. Making a living includes access to assets, public services and social safety nets, income-generating activities (from Food Security Information for Decision Making, Measuring Resilience: a Concept Note on the Resilience Tool. EC-FAO Program on “Linking Information and Decision Making to Improve Food Security”).

⁴⁶ <https://www.sustainablelivestockguide.org/project-in-formulation>



spatial coherence and clustering along key livestock mobility routes to increase synergies among interventions and avoid the dispersion of investments; and (iii) supporting cross-border cooperation and dialogue in the Sahel Region to tackle cross-border transhumance, regional trade, and planning along selected strategic livestock trade routes. Some interventions will be implemented nationwide, including those related to animal health, social inclusion, and institutional capacity building. The Project map is shown in Annex 10.

36. **Climate resilience.** PRAPS-2 interventions will directly build climate resilience in these climate-sensitive (agro)pastoral systems, which sustain millions of vulnerable people. All Project activities will support climate adaptation—for example, by: (i) enhancing animal health (enabling animals to resist climate stress); (ii) enhancing animal feeding through improved governance and management of pastoral lands (enabling livestock mobility and access to new grazing areas, restoring degraded rangelands, reducing water stress, and increasing the availability of and access to cultivated fodder, to complement supplies from rangelands and pastoral ecosystems); (iii) enhancing and diversifying sources of revenue through climate-smart investments along VCs and alternative livelihood options to cope with climate-related shocks; and (iv) improving data, knowledge, skills, strategies, and awareness of key stakeholders to take climate-informed/adapted decisions. Some interventions will also contribute to climate mitigation, including but not limited to carbon sequestration on millions of hectares of rangeland (see Annex 5), improved feed efficiency, and energy-efficient infrastructure.
37. **Maximizing Finance for Development (MFD).** In its effort to develop competitive regional (agro)pastoral livestock VCs, PRAPS-2 supports activities that are highly relevant to the MFD agenda. The World Bank financing under the Project will focus on addressing market failures and providing public goods that are currently not supplied by public or private actors. Project investments will strengthen: (i) public (and private) animal health services and better access to feed and water, thereby increasing the supply of healthy animal products entering VCs; and (ii) the generation and dissemination of knowledge and information (notably on prices and numbers of traded animals) and on risks (pastoral EWS). The Project will enhance market intelligence and knowledge of regional VCs by financing supply and demand studies focused on quality animal products in the Sahel Region, and it will propose investment roadmaps for livestock sector development (Component 5). The investment roadmaps will contribute to strategies for establishing key livestock infrastructure at cross-border sites and at the regional level. PRAPS-2 investments will also improve the business environment for private actors to engage at all stages of animal product VCs by: (i) defining effective regional trade policies for livestock and livestock products in a more inclusive manner and (ii) improving the national governance frameworks on pastoralism. Matching grants (MGs) will provide incentives in targeted VCs for the private sector to increase its engagement in inclusive business models that improve linkages among smallholders and small enterprises. These private solutions will have sufficient scale and sustainability to make a lasting impact. The Project will also help to remove some constraints that have prevented more substantive participation by commercial sources of financing in livestock VCs, such as low levels of financial literacy, which will be enhanced through the technical assistance mobilized in support for the preparation of subprojects. The private financing of businesses related to livestock will also be leveraged by requiring MG beneficiaries to self-finance or use bank loans to cover a percentage of eligible investment costs. The MG initiative will absorb some of the risk associated with developing the targeted VCs and establishing private agro-processing and marketing operations.

Component 1: Animal health improvement and veterinary medicine control (total cost US\$196 million equivalent, of which US\$125.3 IDA, US\$56.4 million Beneficiaries, and US\$56.4 million Government)

38. The main outcome of this component will be increased capacity in VS to protect large and small ruminants from PPR and CBPP, two transboundary animal diseases that cause major losses throughout the region. The proposed Project will pursue investments initiated under PRAPS-1 to establish more robust animal health systems in beneficiary countries (Subcomponent 1.1), finance vaccination and surveillance campaigns primarily targeting



- PPR and CBPP (Subcomponent 1.2), and support quality control of veterinary medicinal products (VMPs) (Subcomponent 1.3). Recognizing the highly contagious nature of PPR and CBPP and the public health threats of misusing VMPs and increasing antimicrobial resistance (AMR), this component will be implemented throughout the beneficiary countries, with critical infrastructure (veterinary posts, vaccination pens) being upgraded primarily in underserved pastoral areas. Enhancing animal health is a key strategy for adapting to climate change, because animals experiencing less disease are more resistant to climate stresses such as extreme heat and drought. By improving VS capacity, reducing mortality, and bringing endemic, production-limiting diseases under control, Component 1 will help to improve animal and herd productivity, reduce emission intensities, and help mitigate climate change. Better-performing VS will also be more capable of preventing other critical diseases, including those that are climate sensitive and/or other public threats (zoonoses).
39. **Subcomponent 1.1: Strengthening capacity of National Veterinary Services.** To strengthen the capacity of national VS to perform their core public good mandate (primarily to prevent and control contagious animal diseases), benefiting all herders and especially pastoralists and agro-pastoralists, the Project will: (i) support VS workforce development by regularly updating VS training plans based on identified gaps in human resources, helping to implement training plans by sponsoring veterinary masters and doctoral degrees and continuing education programs, and establishing private veterinary clinics to provide animal health care services in strategic areas; (ii) construction or upgrade of essential infrastructure and equipment for VS, particularly field veterinary units or pharmacies, border inspection posts, and vaccination pens, and provision of critical equipment; and (iii) improve the management of staff and material resources, as well as disease information and data collection and analysis, by strengthening and maintaining digital databases and tools, using KoBo Toolbox (KBT) in particular.
40. **Subcomponent 1.2: Support to harmonized surveillance and control of priority contagious animal diseases.** To intensify efforts initiated under PRAPS-1 against CBPP and PPR, the proposed Project will support: (i) the regular updating of National Strategic Plans (NSPs) against these diseases, in line with global and regional strategies and based on respective national capacities and financing available; (ii) the co-financing of nationwide mass vaccination campaigns and surveillance programs, and necessary equipment, based on disease NSPs to reach the highest possible level of protection against CBPP and PPR in the livestock population; (iii) surveillance and capacity-building programs for other important transboundary animal diseases, including climate-sensitive and zoonotic diseases such as Rift Valley fever and foot and mouth disease; and (iv) laboratory capacity strengthening for the testing and treatment of contagious animal diseases.
41. **Subcomponent 1.3: Support to control veterinary medicines.** To help address growing concerns over the misuse of VMPs, particularly antimicrobials, which have wide negative impacts on animal and human health and economies, the Project will: (i) support the development or improvement and initial implementation of a NSP on VMPs, as well as a national action plan on antimicrobial resistance, consistent with the global World Health Organization (WHO)/FAO/OIE strategy; (ii) help to finance the implementation of surveillance and monitoring plans to ensure the quality of VMPs and reduce antimicrobial resistance (in slaughterhouses, marketplace, and farms), and (iii) establish more regular inspection campaigns to reduce illegal sales of VMPs, which are virtually unchecked. These plans will include extensive communication activities to increase awareness of these issues in the general population (herders in particular).
42. **At the regional level,** Component 1 will support two main types of activities related to the three subcomponents implemented by the VS: (i) animal health management (implemented by the ECOWAS Regional Animal Health Center (*Centre Régional de Santé Animale* CRSA/RAHC); and (ii) targeted technical assistance and training to support PRAPS-2 beneficiary countries in implementing their activities (implemented by OIE). Under (i), PRAPS-2 will support strategic regional activities, including veterinary networks on laboratory and epidemiological surveillance aimed at standardizing and harmonizing procedures in the ECOWAS region; cross-border



coordination to control priority diseases; the functioning of the Regional Veterinary Committee (RVC) guiding decisions on regional policies and strategies; harmonization of regulations for cross-border trade of livestock; monitoring the implementation of regional VMP regulations (namely those of WAEMU); and supporting the strengthening of regional reference institutions such as the Inter-State School of Veterinary Science and Medicine in Dakar (*Ecole Inter-Etats des Sciences et Médecine Vétérinaires de Dakar*, EISMV). Under (ii), PRAPS-2 will provide targeted support to participating countries to ensure more efficient planning, implementation, and monitoring of the NSPs for the two priority diseases as well as VMPs, and scaling up the use of KBT (among other tools) to enhance the performance of VS.

Component 2: Sustainable landscape management and governance enhancement (total cost US\$74.3 million equivalent, of which US\$74.3 million IDA, US\$0 million Beneficiaries, and US\$0 million Government)

43. The main outcomes of Component 2 will be an increased area under sustainable landscape management (SLM) and stronger governance of pastoral lands and livestock mobility, in compliance with national regulations and framework on pastoralism. Building on the legacy of PRAPS-1, the proposed Project will further secure mobility and enhance access to natural resources (Subcomponent 2.1); finance the construction, rehabilitation, and sustainable management of essential water infrastructure (Subcomponent 2.2); and support fodder production (Subcomponent 3.3). These activities will enhance the resilience of pastoralists to climate risks and—by improving grazing management and livestock productivity—will improve soil carbon sequestration and reduce livestock emission intensities to mitigate climate change and provide additional ecosystem services. To the extent possible, Project investments will be directed at well-targeted transhumance routes and key livestock mobility corridors at the local, national, and cross-border level, to ensure the geographic concentration of activities and enable dialogue between adjacent cross-border communities in support of peaceful transhumance and resource use.
44. **Subcomponent 2.1: Access to natural resources and SLM.** PRAPS-2 will strengthen the capacity of institutional stakeholders to develop multi-sectoral strategies at the national and local level for sustainably managing pastoral resources. Concomitantly, this subcomponent will finance activities to improve the governance of pastoral lands, pastoral mobility (which will strengthen pastoralists' adaptation to climate change), and access to new grazing areas (making more natural forage available, which is key to the adaptation and resilience of pastoral systems). Activities will include, for example: (i) establishing community-driven landscape management and transhumance management mechanisms, such as pastoral agreements at the level of local and cross-border mobility routes; (ii) developing the capacity of decentralized land management authorities and transhumance committees; (iii) physically delineating transhumance tracks and rest areas; and (iv) establishing local conflict management and prevention committees. The Project will also support SLM activities to protect, develop, and regenerate pastoral ecosystems, especially those affected by climate change. Interventions will be developed on sites to restore the quality of pastures, rehabilitate degraded rangelands, maintain and improve soil fertility, increase biodiversity, and enhance the sequestration of soil organic carbon.⁴⁷ To support pastoralists during their mobility phase, and for pastoral institutions to improve their service provision, the Project will promote digital information services for accessing real-time data on pastoral resources and meteorology, as well as technical advice for herd management.
45. **At the regional level**, this subcomponent will facilitate analytical work and dialogue for more peaceful, fluid regional mobility, including transhumance. This dialogue will bring decentralized authorities and representatives of pastoralists from both sides of borders together to enhance land-use planning, negotiate transhumance

⁴⁷ In line with the joint World Bank–WOCAT guidelines developed in 2019 under the TerrAfrica Partnership on Sustainable Rangeland Management in Africa. See <https://www.wocat.net/library/media/174/>.



reception zones, and agree on transhumance calendars. This subcomponent will also finance the strengthening of the Regional Pastoral Information System (SRIP) to provide relevant information to key stakeholders, facilitating peaceful cross-border transhumance.

46. **Subcomponent 2.2: Sustainable management of infrastructure for access to water.** To ensure that pastoralists have sustainable access to new grazing areas and forage resources, and to improve the capacity to adapt to climate change by reducing water stress and expanding the area of available rangeland, Subcomponent 2.2 will finance the construction of pastoral water points in rangelands with no or limited access to water, using the social engineering approach promoted by PRAPS-1.⁴⁸ The main activities will include the design, construction, or rehabilitation of wells, boreholes, and the corresponding surface equipment (drinking troughs), as well as surface water structures such as ponds, water pans/reservoirs, and riverbanks. Water-user management committees will be established, and their capacity will be developed to manage these resources sustainably, using a social engineering approach based on studies to determine the best strategies in each context to avoid conflicts linked to water infrastructure. In accordance with the Sustainable Livestock Guidelines,⁴⁹ PRAPS-2 will promote manure, nutrient, and waste management around pastoral water points to reduce methane and other GHGs and mitigate climate change.
47. **At the regional level,** this subcomponent will further support the review and/or finalization of national pastoral water management strategies and the preparation of a regional pastoral water management strategy to better identify investment opportunities for PRAPS-2 (and beyond). Regional efforts will also support technical studies on geomapping of pastoral water points and development of technical and economic reference guides for Sahel countries; and promote the exchange of knowledge and innovations in the management and maintenance of water infrastructure.
48. **Subcomponent 2.3: Fodder production.** Under Subcomponent 2.3, the Project will aim to increase the availability of and access to cultivated fodder to complement fodder supplied from rangelands and pastures, and to improve livestock feeding practices, thereby increasing resilience to climate change during the dry season and climate shocks. The Project will finance technical and socio-economic feasibility studies to determine the most appropriate crops, production systems, and agro-ecological techniques for fodder production in each participating country. It will also finance studies assessing the impact and sustainability of previous fodder interventions in pastoral areas and their distribution to (agro)pastoralists. Based on the results, the Project will support: (i) the development and equipment of fodder production sites; (ii) the climate-proof construction and operationalization of fodder storage warehouses; and (iii) experiential and participatory farmer training (for instance, through agro-pastoral field schools) on agro-ecological fodder production techniques and on improved livestock feeding practices (which support adaptation and reduce enteric methane emissions). Climate-proofing will be informed by climate and weather data and documented impacts of climate change on infrastructure. Gaps in climate adaptation measures (past and present) will be assessed with a view to planning adaptation for the future. (Note that as a complementary activity, Subcomponent 3.3 will use MGs to finance feed production, transformation, and storage by private entrepreneurs supporting the feed VC.) During implementation, the Project will work closely with POs producing fodder and animal feed.
49. **At the regional level,** countries will be supported in developing and institutionalizing capacity to measure feed availability (including forage and fodder), based on FAO's improved feed balance methodology and guidelines. The feed balance methodology is a tool for anticipating and addressing potential deficits in feed resources, based on a comparison of livestock feed availability (assessed from satellite and field data) and feed needs. Use of this

⁴⁸ Described in Box A2.1, Annex 2.

⁴⁹ See <https://www.sustainablelivestockguide.org/project-in-formulation>.



tool will enhance feed investment planning and targeting under Subcomponents 2.1 and 2.2⁵⁰ and increase the resilience of pastoral communities, particularly in the dry season.

Component 3: Livestock value chain improvement (total cost US\$58.2 million equivalent, of which US\$54.9 million IDA, US\$3.2 million Beneficiaries and US\$0 million Government)

50. The outcome of Component 3 will be improved pastoral livestock VCs, the facilitation of regional livestock trade, and better regional market integration. Building on the achievements of PRAPS-1, the proposed Project will continue to fill gaps in strategic market infrastructure along regional trade routes (Subcomponent 3.1), strengthen the capacities of national and regional POs (Subcomponent 3.2), and support innovative solutions for developing livestock VCs through subproject financing (Subcomponent 3.3). Activities under Subcomponents 3.1 and 3.3 will be prioritized along key regional trade routes⁵¹ where animals convoyed by foot move across borders to supply growing demand from markets in coastal countries.
51. **Subcomponent 3.1: Strategic market infrastructure development for regional trade.** The Project will rehabilitate and/or construct small-scale market infrastructure (livestock markets, rest areas) along strategic regional trade routes and establish sound governance mechanisms for that infrastructure, using the social engineering approach adopted for Subcomponent 2.2. The additional shade, water, and feed provided with this infrastructure will enhance the resilience of pastoralists and herds to climate change. These structures, apart from being adapted to the climate, will inherently have low emissions because of their small scale, and wherever possible the Project will seek to further reduce emissions through energy efficiency and use of renewables. This subcomponent will also increase the scope and digitization of market information systems developed under PRAPS-1, expanding the user base by incorporating new features (for instance, animal feed prices) and connecting these systems with other digital information solutions (see Component 2). This subcomponent will be implemented through the Ministries in charge of Livestock, in partnership with local authorities and municipalities. POs and their federations will also be closely involved through the social engineering approach.
52. **At the regional level,** this subcomponent will concomitantly facilitate improvements in market intelligence and knowledge related to cross-border trade. It will support the enhanced collection and monitoring of regional trade flows and barriers to trade⁵² in pastoral products; carry out studies projecting supply and demand for livestock products and examining the potential competitiveness of VCs for pastoral products in the Sahel Region; and support the enhancement and sustainability of market information systems for livestock (SIM-B). In conjunction with Component 5, it will support market assessments for agro-pastoral products in the CILSS/ECOWAS area.
53. **Subcomponent 3.2: Capacity development of national and regional pastoral POs.** This subcomponent will support a comprehensive participatory assessment of capacity in pastoral POs at the national level to carry out their mandates effectively with a view to prepare strategic actions plans for strengthening pastoral PO capacities. This assessment will be used to prepare strategic action plans to be co-financed by PRAPS-2. Activities to be financed include support on: (i) organizational management and governance (including closing the gender gap in PO governance structures); (ii) business management; (iii) understanding climate change and risks related to livestock, as well as adaptive measures and low carbon strategies; (iv) policy dialogue and engagement in the formulation of strategies and regulations concerning animal health, access to and protection of pastoral resources, and trade; (v) peaceful transhumance and conflict resolution; and (vi) marketing/commercialization of feed and livestock products. The POs will also be sensitized to the importance of nutritional awareness

⁵⁰ Feed balances are also essential tools for EWS and climate adaptation (see Component 5).

⁵¹ An ongoing regional study supported by CIRAD is expected to refine the mapping of regional trade and transhumance routes.

⁵² In complementarity with the FARM-TRAC (Family Farming, Regional Markets and Cross-Border Trade Corridors) project managed by CILSS.



programs in pastoral communities, including nutrition education and behavior change communication. The Project will also promote the use of digital finance solutions such as mobile money by POs, to lower the cost of monetary transactions and improve financial inclusion.

54. **At the regional level**, this subcomponent will strengthen the capacity of regional and apex POs to play a more active role in facilitating regional trade, in collaboration with other regional programs from ECOWAS, WAEMU, and CILSS. Activities will aim to improve knowledge of regulations, provide digital communication platforms, support transborder concertation meetings with authorities, and collect relevant data to support advocacy. Exchanges with other regions will be held for experience sharing and cross-fertilization.
55. **Subcomponent 3.3: Value-chain development and subproject financing.** This subcomponent will aim to increase the productivity and commercialization of livestock products by POs and private investors by: (i) improving their access to inputs, equipment, productive infrastructure, and technical assistance; and (ii) increasing their linkages with national and regional markets. These actions will increase the incomes of pastoralists as well as their capacity to withstand climate-related and other shocks. Criteria will be developed for selecting subprojects, including (among others) the prioritization of climate-smart livestock and agriculture investments (for both adaptation and mitigation), contributions to positive environmental externalities, the local provision of productive services, and contributions to improved human nutrition. Critical climate interventions to strengthen resilience with climate mitigation co-benefits will include: (i) diversification—specifically, the inclusion of a wider set of options to increase the livelihood, (agro)pastoral, and environmental management portfolios of pastoralists as a risk management strategy; (ii) enhancing robustness through specific interventions that make key stages of the VC more climate-resilient and provide livelihood and resilience benefits to pastoralists; and (iii) improving VC efficiencies through measures such as waste reduction and inventory management, which will not only increase efficiency but deliver higher profitability (and hence higher adaptive capacity) to pastoralists in the VC and generate mitigation co-benefits.
56. Initiatives led by POs or private investors (with specific attention to youth and women) will be financed through the MG scheme. The list of eligible subprojects and the mechanisms and criteria for subproject approval (including climate change considerations) will be described in the Project Implementation Manual (PIM) of each participating country. The Project will finance public information campaigns, calls for subproject proposals, coaching on preparing subproject business plans, and technical support during subproject implementation. The Project will also contract with providers of business development service to support the preparation and implementation of subprojects. Examples of potential subprojects include: (i) feed production (including cultivated fodder); (ii) hide and skin processing; (iii) red meat processing; (iv) milk collection and processing; (iv) small ruminant fattening; and (v) climate-smart initiatives such as improved manure management and biogas production, often using solar systems as the main energy source. To make livestock VCs more inclusive, women and youth (young women in particular) will specifically be supported to participate and will have priority access to business development opportunities. Climate adaptation and resilience building will be an integral part of the technical assistance provided to POs and private investors during subproject implementation.
57. **At the regional level**, in complementarity with Subcomponent 3.1, PRAPS-2 will support the harmonization of feed quality standards in the region through an analytical study.

Component 4: Social and economic inclusion improvement, women and youth (total cost US\$48.3 million equivalent, of which US\$47.1 million IDA, US\$1.2 million beneficiaries, and US\$0 million government)

58. The outcome of Component 4 will be increased resilience as a result of expanding the socio-economic inclusion of pastoralists, particularly women and youth. PRAPS-1 successfully supported inclusion by improving access to skills training and technical and vocational training, and through direct support for the development of income-



generating activities (IGAs). The proposed Project will provide continuity for these interventions by expanding access to technical and vocational training (Subcomponent 4.1) and IGAs (Subcomponent 4.3), focusing on a more structured approach for targeting young people and women. PRAPS-2 will also open a new area of work to promote the inclusion of pastoral populations in social and civil registries (Subcomponent 4.2).

59. **Subcomponent 4.1: Access to vocational and technical training.** This subcomponent will specifically target the social and economic inclusion of vulnerable women⁵³ and youth⁵⁴ from pastoral households through efforts to reduce their particular vulnerability to climate change and enhance their resilience to future shocks. It will aim to enhance beneficiaries' understanding of key climate risks and equip them with the skills required to use climate-smart (agro)pastoral options. To that end, Subcomponent 4.1 will finance and deliver a mix of the following services, depending on the respective needs of each group (youth and women): (i) carrying out of diagnostic studies to assess training needs and identify eligible candidates; (ii) provision of demand driven technical skills training, functional literacy training, including awareness of climate change, interventions to reduce impacts, and digital literacy, counseling and mentoring, and business and life skills training to prepare for IGAs, including basic financial literacy. The Project will also support selected candidates participating in said training programs through stipends, and finance the development of training materials. Participating training centers will receive funding to customize and deliver their offerings to the specific circumstances of the targeted beneficiaries, as needed. The economic inclusion program will aim to close existing gender and age gaps. It is expected that at the regional level at least 55 percent of beneficiaries will be women, and 90 percent will be young (of which at least 60 percent will belong to the 18–24 age group).
60. **At the regional level,** CILSS will mobilize regional stakeholders specialized in vocational training⁵⁵ to deliver tailored technical assistance to participating countries and adequately document and disseminate experiences and lessons learned from PRAPS-2.
61. **Subcomponent 4.2: Improved access to social and civil registries.** Better access to social registries and programs as well as civil registries and rights is necessary to enhance climate resilience, and it remains a strong demand of pastoralist organizations in the Sahel Region. Support from the World Bank for rapid consolidation of extensive social registries across the Sahel—as well as participation in the social transfer programs that rely on these registries—represents a key opportunity, not only to strengthen the resilience of the most vulnerable pastoralists but to support climate mitigation through enhanced tracking and traceability of mitigation activities. Social registries can be used to target interventions supporting climate resilience, such as cash transfers to populations that are vulnerable to climate change risks, EWS for climate-related disasters, the implementation of initiatives to support and diversify livelihoods, and initiatives that raise awareness and change behavior to prevent risks related to climate change.
62. Accordingly, this subcomponent will finance activities to advance the enrollment of (agro)pastoralists in social registries, giving particular attention to promoting the participation of vulnerable pastoralist households, in partnership with the relevant administrations and programs to extend registration to pastoral areas. More specifically, it will finance: (i) diagnostic studies on the status of inclusion of vulnerable pastoralist populations in social registries in PRAPS-2 countries; (ii) technical assistance and process facilitation for the adaptation of social registry tools and methods; and (iii) the costs of expanding social registries in selected pastoral areas and increasing inclusion.

⁵³ Where possible, the proposed Project will make use of the social registry to check the eligibility of youth and women applicants.

⁵⁴ Defined as young adults between 18 and 35 or 40 years of age, with a particular focus on those ages 18–24.

⁵⁵ The Platform of Expertise in Vocational Training (Pefop), at <https://pefop.iiep.unesco.org/>.



63. At the same time, this subcomponent will facilitate the registration of pastoral populations in the civil registries of five of the six PRAPS-2 countries by financing: (i) communication campaigns in pastoral areas reinforcing the importance of civil registration and the practical steps involved; (ii) the mobilization of POs for communication and community mobilization, including in hard-to-reach areas; and (iii) operating expenditures for administrations in charge of civil registration.
64. **At the regional level**, CILSS will (i) support regional POs in their advocacy for including pastoral populations in civil and social registries; and (ii) commission a capitalization report that will highlight achievements and best practices for making civil and social registries more inclusive.
65. **Subcomponent 4.3: Income-generating activities.** Self-employment that diversifies sources of income is one of the most secure and effective ways of building climate resilience in pastoral areas, because it enables individuals to earn more stable and higher incomes. Under this subcomponent, PRAPS-2 will expand income-generating opportunities offered to vulnerable women and youth, taking advantage of the options opened by the use of mobile technologies and the development of social registries. This subcomponent, while targeted to women and youth, will mostly benefit young women in all countries. It is expected that at the regional level at least 75 percent of beneficiaries will be women and 96 percent will be young.
66. Using criteria that include climate considerations (both adaptation and mitigation), PRAPS-2 will finance a set of subproject interventions, including: (i) local processes for selecting beneficiaries (exploring the possibilities of using social registries); (ii) the mobilization of field-level mentorship, including short technical training events, assistance in the preparation of subprojects, and coaching and psycho-social support (life skills); and (iii) organizational support for IGAs with a collective dimension, as well as functional literacy training as needed. Each beneficiary will receive a small grant (US\$450 on average) to cover the start-up costs of the IGA. Eligible activities will be defined in the PIM. They could include (for example) investments in fodder production or small-scale processing of milk, hides, skins, and other pastoral products, with adaptation and mitigation co-benefits. Other criteria for targeting interventions will include improved human nutrition and scaling-up time-saving technologies for tasks performed by women.
67. **At the regional level**, CILSS will: (i) commission a study estimating the sustainability and impacts (additional income) of IGAs supported by PRAPS-1 and PRAPS-2 for youth and women from pastoral areas; and (ii) prepare a capitalization report on the achievements of PRAPS-2 in the development of IGAs for youth and women from pastoral areas.

Component 5: Project coordination, institutional strengthening, crisis prevention and response (total cost US\$83.4 million equivalent, of which US\$73.3 million IDA, US\$0 million Beneficiaries, and US\$10.1 million Government)

68. **Subcomponent 5.1: Project coordination.** As under PRAPS-1, CILSS will host the PRAPS Regional Project Coordination Unit (R-PCU) and coordinate the implementation of all components at regional level, including Component 1, to be implemented by RAHC and OIE. Line ministries responsible for implementing the Project in beneficiary countries will each host a National Project Coordination Unit (N-PCU). Subcomponent 5.1 will support costs associated with the PCUs, including staff salaries, equipment, operating costs, M&E, procurement, financial management (FM), social and environmental safeguard implementation, as well as communication activities. It will also support the operational costs of the Steering and Technical Committees.
69. As part of its overall coordination role, the R-PCU will contribute to provide oversight and guidance to N-PCU operations, support selected M&E activities to harmonize approaches, review and consolidate country M&E data, monitor safeguard implementation issues in countries, support and monitor progress on implementation



of gender-related activities, advise on activity planning, and identify needs for support to countries. Beyond their regular missions in PRAPS-2 countries, regional staff will participate as observers in World Bank implementation support missions (ISM) in countries.

70. **Subcomponent 5.2: Institutional strengthening.** Under this subcomponent, PRAPS-2 will support the capacity of participating countries and regional institutions to close critical gaps in skills, data, and knowledge and fulfill their mandates to develop sound policies and strategies related to (agro)pastoral livestock at national and regional levels. This effort will complement other capacity-building interventions under other components of PRAPS-2. It will also further strengthen preparedness for pastoral crises.
71. Under this subcomponent, young professionals will receive support to pursue master's degrees on pastoralism (developed under PRAPS-1 at CILSS/Agrhymet CRA) and undertake relevant PhD research linked to various Project components, including research on climate change mitigation and adaptation. This effort will prepare a new generation to support the development of pastoralism in the region for many years to come.
72. This subcomponent will also finance technical and analytical studies using global reference tools, such as the Livestock Sector Investment and Policy Toolkit (LSIPT, designed to develop livestock master plans and sector analysis), the Global Livestock Environmental Assessment Model-interactive (GLEAM-*i*, which estimates the environmental footprint of livestock investments), and the FAO improved feed balance methodology (which incorporates satellite data to estimate feed availability). The studies will generate useful data and knowledge on the social, economic, and ecological importance of pastoralism at the national and regional level. Results will be disseminated widely and help guide and calibrate future strategies and investments, including the development of livestock sector investment roadmaps or livestock master plans. CILSS and participating countries (including Ministries of Livestock) will receive support to learn to use these global reference tools.
73. Finally, the Project will further strengthen the EWS and pastoral crisis prevention activities initiated under PRAPS-1, which are linked to climate stresses (especially drought) on pastoral systems. This effort, which makes it possible to plan for adaptive responses, will include support for collecting harmonized data in countries on indicators related to pastoralism and integrating that data in the *Cadre Harmonisé* and bulletins; training *Cadre Harmonisé*'s Technical Committee members on management of pastoral crises; and learning and knowledge sharing events on pastoralism during *Cadre Harmonisé* annual meetings. To improve preparedness for pastoral crises, the Project will also equip each country with a roster of accredited LEGS experts and updated, improved contingency plans for pastoral crises, including those related to climatic events, that better target affected populations.
74. **Subcomponent 5.3: Contingent emergency response (CERC).** The PIM prepared in each country will define operational procedures acceptable to the World Bank for implementing the CERC in the event of an eligible emergency or crisis. All CERC expenditures will comply with paragraphs 11, 12, and 13 of the World Bank Investment Project Financing (IPF) Policy. They will be appraised and reviewed to determine if they are acceptable to the World Bank before any disbursement is made. Disbursements will be made against an approved list of goods, works, and services required to support pastoral crisis mitigation, response, recovery, and reconstruction. If this component is to be implemented based on the prevailing conditions defined in the Financing Agreement (FA), the due diligence on a positive list of CERC-eligible activities will be assessed against those specified in the PIM to confirm that CERC activities are covered in the Environmental and Social Management Framework (ESMF). No withdrawal shall be made under this component unless and until all safeguard documents required for said activities are prepared and disclosed and any actions required to be taken under those safeguard documents are fulfilled.



C. Project Beneficiaries

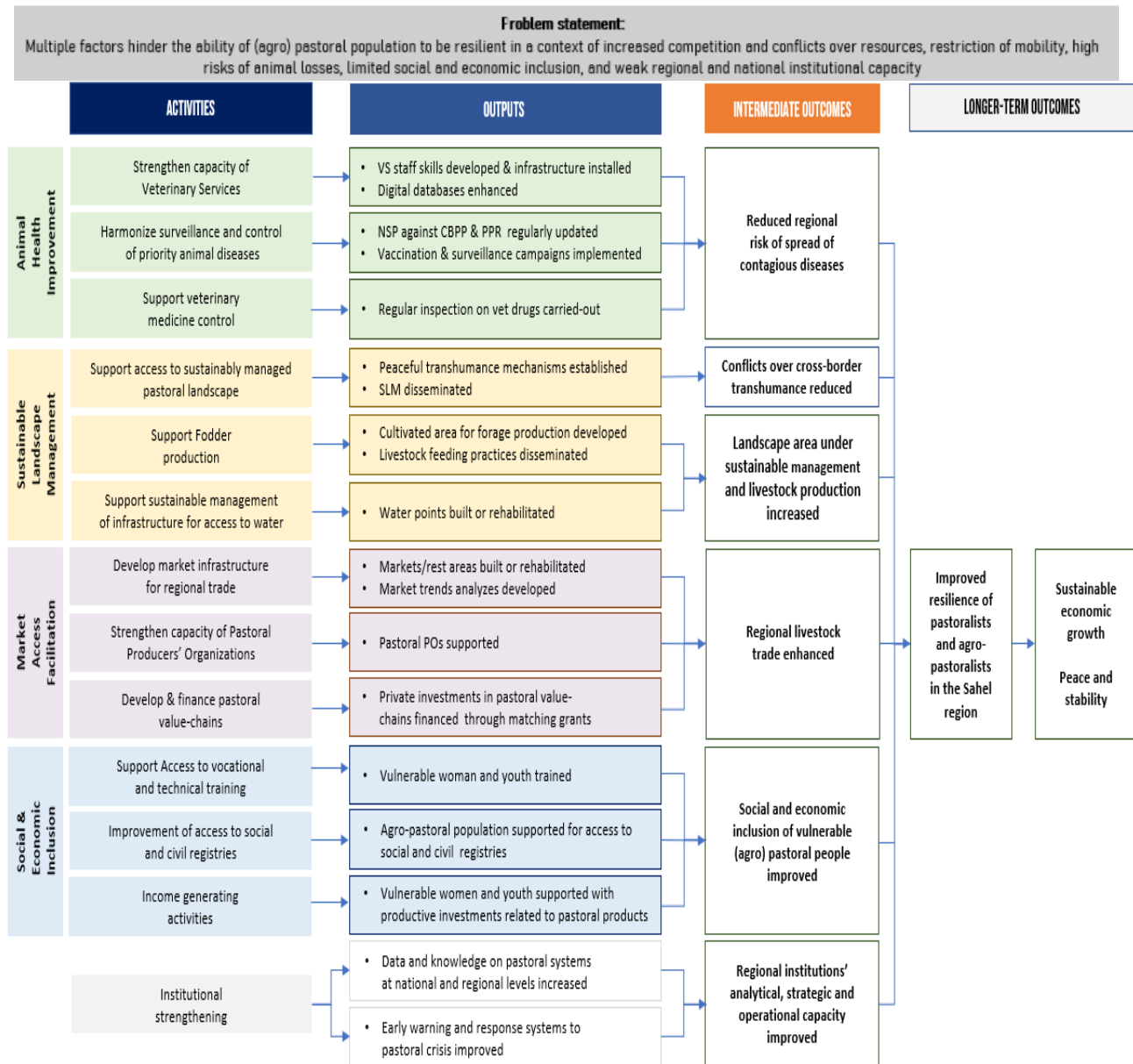
75. Beneficiaries will primarily be (agro)pastoral households from the six beneficiary countries, which will directly benefit from improved animal health services, access to better secured and managed natural resources, livestock market and other livestock VC infrastructure, as well as opportunities to generate more income from activities related to (agro)pastoral livestock. They will also benefit from a wealth of cross-sectoral actions rolled out at the local, national, and subregional (West Africa) level—including increased coordination, enhanced governance, knowledge generation, and data collection and analysis—which will facilitate mobility, reduce conflict, and support and inform strategies for future investments in the sector. Owing to the inherent vulnerability of the majority of (agro)pastoralists, PRAPS-2 will devote particular attention to the most vulnerable groups, particularly women and youth from (agro)pastoral households, who will benefit from tailored approaches and investments that increase their social and economic inclusion. It is estimated that the proposed Project will reach at least 13 million beneficiaries, of whom at least 30 percent will be women.⁵⁶
76. Secondary beneficiaries include the wide range of actors in the region linked to (agro)pastoral VCs, as well as the national and regional institutions (namely CILSS and RAHC, in collaboration with others) that will be strengthened to deliver selected strategic programs more efficiently. Lastly, herders throughout the participating countries and in the wider region will benefit from improvements in the capacity of VS and animal health, as well as improved conditions for access to natural resources and markets in the region.

D. Results Chain

77. The Theory of Change (ToC) (Figure 1) highlights key national and regional outputs and outcomes that will contribute to achieving the Project's objectives. Key assumptions to achieve PRAPS-2 development outcomes include the absence of covariant shocks (generalized armed conflict, severe drought or flood), the progressive recovery from COVID-19, a relatively stable macro-economic environment and growth, and regional and national political stability. Section VI provides more detail on risks that could affect achievement of the PDO, along with mitigation measures. In addition, building on lessons from PRAPS-1, it is expected that the synergies between the components and their implementation in a regionally coordinated, harmonized, and facilitated manner will enhance the overall impact of the Project (see Annex 2).

⁵⁶ The breakdown by country is included in the Results Framework.

Figure 1: Theory of Change, PRAPS-2



E. Rationale for World Bank Involvement and Role of Partners

78. The World Bank has been instrumental in restoring pastoralism to the development agenda in West Africa with PRAPS-1, following the Nouakchott High Level Forum in October 2013. This engagement was leveraged with other donors and partners, including the European Union (EU), African Development Bank (AfDB), and bilateral donors—the French Development Agency (Agence Française de Développement, AFD), Swiss Cooperation, and the United States Agency for International Development (USAID). The World Bank commitment to further support (agro)pastoral populations sends a strong signal to regional institutions and countries, as well as to development partners, that continued investments in this sector are strategically important, owing to their wide impacts on food security, climate adaptation, women and youth empowerment, conflict prevention, and



regional integration, among others. These investments also support the broader FCV strategy of the World Bank, which aims to increase the scale and pace of its support in the Sahel to foster greater resilience, and the agendas of multilateral partnerships to increase resilience and stability in the region.

79. The World Bank is a critical actor in the Sahel and collaborates closely with partners in the region, in the framework of the Sahel Alliance and the G5-Sahel⁵⁷ to better coordinate interventions for more and faster impact. The Sahel Risk and Resilience Assessment (2019) highlights strategic considerations to guide interventions toward greater resilience: (i) the dynamics of exclusion and perceived or real injustice; (ii) a crisis of confidence in state institutions, especially among groups that feel marginalized; and (iii) increased competition for natural resources, aggravated by climate change and population growth. Notably, PRAPS-2 will address these considerations jointly with other complementary interventions. PRAPS-2 is expected to remain a flagship project of the Sahel Alliance, owing to its holistic approach, large scale, and regional dimension. The proposed Project will operate along the principles established by the World Bank and its partners, nationally and regionally: (i) ensure complementarity and synergy; (ii) build on respective strengths; and (iii) communicate and collaborate. At the regional level, this collaboration will include the EU-funded PREDIP,⁵⁸ AFD-funded PEPISAO⁵⁹ and “Three Frontiers” projects, the FIDA-funded FARM-TRAC,⁶⁰ and the AfDB-funded P2RS⁶¹ projects, and these same principles will guide collaboration at the national level. PRAPS-2 will also directly benefit from and add to the impact of other national and regional programs financed by the World Bank, including but not limited to the West Africa Food System Resilience Program, the Community-Based Recovery and Stabilization Project for the Sahel (P173830), the Lake Chad Region Recovery and Development Project (P161706), the Sahel and West Africa Program in Support of the GGW Initiative, the Sahel Digital Transformation Project (P171532), the Sahel Adaptive Social Protection Program, and various youth employability projects.
80. The World Bank is well placed and uniquely equipped to address regional challenges through large-scale regional interventions that integrate mutually reinforcing national and regional investments. Into the foreseeable future, PRAPS-2 is expected to remain the main financier focusing on (agro)pastoralism in the region, and it will use its convening power to foster strategic high-level dialogues to establish the common ground and vision for future pastoral development, coordinate action and build synergies, and help to develop and share the solid analytical work, data, and knowledge that technical staff, decision makers, and regional and national partners require to align interventions and fill investments gaps.

F. Lessons Learned and Reflected in the Project Design

81. The Project design incorporates operational and technical lessons from five years of implementation of PRAPS-1, enriched with experiences from FAO and other experts who are intensively involved in pastoral development in the region. PRAPS-1 will generate additional lessons in its final stage of implementation, which can be used, if needed, to adjust approaches adopted for PRAPS-2. The design of PRAPS-2 also embeds recommendations from the Sahel Risk and Resilience Assessment (2019). Collectively, the lessons and recommendations guiding the design of PRAPS-2 can be grouped into three categories: (i) strategic; (ii) operational; and (iii) technical, summarized next.⁶²

⁵⁷ The G5-Sahel comprises Burkina Faso, Chad, Mali, Mauritania, and Niger.

⁵⁸ Regional Dialogue and Investment Program for Pastoralism and Transhumance in the Sahel and the Coastal Countries of West Africa (Euro 25 million, 2018–2023).

⁵⁹ Integrated and Secured Pastoralism and Livestock Farming in West Africa (Euro 5 million, 2018–2022).

⁶⁰ Family Farming, Regional Markets, and Cross-Border Trade Corridors in the Sahel (US\$3.5 million, 2019–2022).

⁶¹ Regional Program for Strengthening Resilience to Food and Nutrition Insecurity in the Sahel (US\$235 million, 2015–2035, in four phases).

⁶² This summary is not exhaustive but rather highlights the major considerations.



82. Strategic lessons and recommendations include:

- **The need to strengthen inclusion.** Inclusion has a key role in propelling conflicts in the Sahel as well as in forestalling and resolving them. Although PRAPS-1 recognized that the lack of social inclusion significantly affected pastoral populations, it did not include interventions to address the issue. PRAPS-2 will build more solid evidence and foster linkages with other programs focused on social inclusion to ensure that vulnerable pastoral populations are adequately included (mainly under Component 4). It will also continue to foster inclusiveness in governance initiatives to manage landscapes, productive assets, or infrastructure; protect and secure access to critical natural resources by pastoralists; and facilitate their movements within and across countries (mainly under Components 2 and 3).
- **The need to consolidate and strengthen institutions.** It is deemed critical for the future of the Sahelian States to strengthen institutions and the management of public financial and human resources at all levels of governance, and in particular to ensure that these resources are more equitably deployed across their territories to improve the provision of services at the local level. PRAPS-2 will continue to prioritize interventions in areas that lack essential services for (agro)pastoral populations, including through the provision of animal health services, access to water, access to knowledge and relevant information tailored to the targeted population, and communication. It will also ensure that pastoral populations can voice their concerns and needs and take a more active part in the decisions that impact them.
- **The need to resolve—not aggravate—competition for resources.** Agricultural and rural development policies should promote reasoned and shared land use that encompasses the different types of land use, including pastoral land use, giving attention to the risk of exclusion from land and access to water. PRAPS-2 places stronger emphasis on pastoral land security and governance in order to cover the entire spectrum of issues affecting access to resources (Component 2).
- **The need to support mechanisms to prevent and manage conflicts between farmers, between pastoralists, and between pastoralists and farmers.** An important strategy for preventing such conflicts is to arrange consultations in areas where transhumance corridors are needed and to mark those corridors. These efforts were initiated under PRAPS-1; they will be scaled up under PRAPS-2 and constitute core actions under Component 2. This effort will take advantage of a large body of experience in preventing conflicts over pastoral land rights and access to natural resources, extending from appropriate laws and strategies at the higher level to social engineering, the establishment of concertation frameworks, and the implementation of conflict-sensitive approaches and tools for investment at the local level.
- **The role of women’s empowerment in community resilience.** A PRAPS-1 Gender Review identified key strategies that worked well to reach women and formulated specific recommendations to enhance women’s visibility, economic empowerment, and access to animal health within the PRAPS framework: increase women’s visibility in Sahelian pastoral communities, support women’s empowerment by enabling participation and decision-making at the community (and national) level, and invest sustainably in IGAs for women (agro)pastoralists.

83. Technical and operational lessons from PRAPS-1, augmented by experiences with other initiatives and research have been consolidated in a report covering each PRAPS-1 focus area. Table 2 presents the main lessons and issues and the solutions integrated into the design of PRAPS-2. Key recommendations include:

- **The need to rely on decentralized services.** It is important to mobilize technical expertise in national institutions to conduct technical studies (including feasibility studies) and to support community planning, management, and monitoring of subprojects. Such efforts increase the expertise of technical personnel and their deployment throughout the territory, in addition to developing their legitimacy in the eyes of local communities and authorities. Activities under PRAPS-2, as in PRAPS-1, will be implemented with the relevant



government agencies (down to the lowest administrative level), with support of technical experts to strengthen their capacity to perform their mandated responsibilities.

- **The need to adopt more flexible operational approaches in contexts of insecurity.** While PRAPS-2 will not prioritize high-risk security zones, it will nevertheless intervene in numerous areas where security is volatile and risks are substantial. Building on PRAPS-1, PRAPS-2 will adopt procurement approaches proven to be more effective in such contexts (resorting to local firms and labor, adjusting timelines and costs, and so on). Throughout Project areas, PRAPS-2 will use real-time, geolocated data collection and monitoring mechanisms with pictures and videos.

Table 2: Specific lessons learned from PRAPS-1

Issues under PRAPS-1	Solutions for PRAPS-2
Financial and procurement (see also Annex 3)	
<ul style="list-style-type: none"> • Low experience and capacity of PCUs in financial and procurement management • Cases of ineligible expenditures (Chad) • Delays in procurement, especially related to works 	<ul style="list-style-type: none"> • Tailored mitigation measures, including recruitment of additional support staff, additional audits, and more frequent supervisions, are proposed, based on fiduciary assessments during PRAPS-2 preparation, capacities in the respective PCUs, and issues faced during PRAPS-1. • For procurement of works, infrastructure specialists will be recruited in some countries to support the procurement specialist by improving the preparation of bidding documents, analysis of bids, and monitoring of contracts.
M&E	
<ul style="list-style-type: none"> • Unreliable reporting of certain complex indicators (timing, compliance with methodology) • Low capacity of field-based staff involved in M&E • Limited use of the potential of data collected through KBT 	<ul style="list-style-type: none"> • For collecting data on the most complex indicators, countries will be supported by the regional level. For example, the PDO indicator on increase of revenues will be managed by CILSS; other indicators will be verified by the regional level. • To increase the reliability of data collected and reported from the field, some countries will directly recruit M&E specialists based in the N-PCUs (instead of relying on persons appointed by the government). • Collection and analysis of data through KBT will be enhanced, to allow close to real-time availability of information from the field.
Safeguards (more details in the Environmental and Social Review Summary (ESRS) and section D)	
<ul style="list-style-type: none"> • Limited experience and capacity in safeguard instruments, and poor understanding of convergence between social safeguards and social engineering approaches, resulted in long implementation delays • Lack of harmonization in the implementation of safeguard instruments between countries 	<ul style="list-style-type: none"> • With the preparation of new instruments under the Environmental and Social Framework (ESF), PCUs, together with the World Bank, have ensured the complementarity of approaches, without compromising ESF implementation. • Adapted, continuous training on the ESF will be provided. • CILSS will recruit an environmental and social (E&S) specialist to help monitor and support countries to implement activities in compliance with PRAPS-2 safeguard documents, facilitating harmonization and experience sharing.
Institutional arrangements	
<ul style="list-style-type: none"> • Lack of commitment from certain governmental partners involved (e.g., other ministries) • Lack of commitment from government agencies in the field (decentralized units involved) 	<ul style="list-style-type: none"> • In countries that delegated responsibilities to other ministries to carry out selected Project activities and encountered issues with long delays and noncompliance with expected results (e.g., the Ministry of Hydraulics/Water was delegated to build water points), PRAPS-2 will work through competitive processes to select competent firms. • Where local support for Project implementation was not provided as expected owing to lack of motivation/commitment from local civil servants, PCUs will recruit other entities (e.g., non-governmental organizations (NGO)) to provide monitoring support and report progress on the ground.
Technical implementation	
<ul style="list-style-type: none"> • The implementation of activities (especially works) has commonly been disrupted in insecure areas • Infrastructure costs underestimated, impacting countries' ability to reach certain targets 	<ul style="list-style-type: none"> • The PCU will undertake careful preliminary selection of sites and types of infrastructure to be built or rehabilitated, adapted to the context. • Procurement procedures will be adapted as needed with simpler procedures, simpler works, recruitment of local firms, longer implementation timelines, and adapted costs (for increased flexibility, as mentioned in Annex 3). • Relocation of works will be envisaged when no other feasible option is identified. • Budgets include adjusted, more realistic costs.



III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

84. **The institutional arrangements for PRAPS-2 will essentially mirror those for PRAPS-1, which have been effective and will allow a smooth transition between Project phases.** Based on the experience gained and weaknesses identified during the first phase, including those reflected in fiduciary assessments, minor adjustments will be made in some countries. At the regional level, PRAPS-2 will involve new entities—the RAHC and Regional Agency for Agriculture and Food (*Agence Regionale pour l’Agriculture et l’Alimentation*, ARAA)—under Component 1. A transition process has been defined for each country and CILSS which will allow for a smooth transition between PRAPS-1 and PRAPS-2.
85. **The proposed Project will operate at multiple levels.** Countries will implement PRAPS-2 from the central to local level, and they have prepared respective documents detailing Project activities, budgets, and implementation arrangements. At the regional level, specialized institutions will implement regional activities with the dual purpose of supporting regional integration beyond PRAPS-2 beneficiary countries, in accordance with their core mandates, as well as supporting the harmonization and improved quality of PRAPS-2 implementation in the six beneficiary countries. A regional document has been prepared detailing Project activities, budgets, and implementation arrangements.
86. **Regional level.** Under the political leadership of and in agreement with ECOWAS and WAEMU, CILSS will retain the role of regional implementing agency, with primary responsibility for: (i) regional coordination; (ii) implementation of activities in support of regional integration; and (iii) tailored technical assistance to PRAPS-2 beneficiary countries. CILSS will delegate operational responsibility related to Component 1 to two specialized institutions with animal health mandates: RAHC will carry out activities related to regional integration, while OIE will provide tailored technical assistance to the six beneficiary countries, in continuity with the work initiated under PRAPS-1. Considering the absence of permanent fiduciary staff in RAHC and the time required to establish such capacity, ARAA will support RAHC by carrying out procurement and FM for PRAPS-2 activities implemented by RAHC. CILSS will sign two subsidiary agreements establishing roles and responsibilities under the Project: one with ECOWAS (on behalf of both RAHC and ARAA, the latter retaining the sole responsibility for fiduciary measures) and a second with OIE.
87. Regional activities will be guided by decisions of the current Regional Steering Committee (*Comité Régional de Pilotage*, RSC) for CILSS Projects and Programs, to which the R-PCU will report, and they will be carried out under the aegis of the Regional Technical Committee (RTC). Given the specific requirements of Component 1, however, a dedicated RTC on animal health, comprising representatives of other relevant specialized agencies and partners involved in animal health activities in the region, will be established and meet twice per year. These meetings ideally will be held back-to-back with meetings of the RVC (comprising all national Chief Veterinary Officers of the region) and supported by the Project as part of the regional integration activities. The composition of these committees will be updated from PRAPS-1 and detailed in the PIM.
88. The R-PCU for PRAPS-2 will be set up, retaining several staff from PRAPS-1 and recruiting additional specialists based on identified needs. It will be located in one of CILSS’s institutions. RAHC and OIE staff in charge of PRAPS-2 technical implementation on animal health will be based in Bamako, Mali, while the fiduciary management of OIE and RAHC will be carried out respectively by OIE Headquarters (Paris, France) and ARAA (based in Lome, Togo). The R-PCU will be attached to the Regional Support Program for Natural Resources Management, Climate Change (PRA/GRN-CC) of CILSS. The Management Support Unit – Administration, Finance and Accounting of CILSS will be responsible for managing PRAPS-2 funds. The R-PCU will be staffed with technical and fiduciary



- specialists as well as support staff. To implement regional activities, the R-PCU will establish conventions with agencies⁶³ that will be entrusted with pre-identified roles and responsibilities over the life of the Project, owing to their specific field of expertise and comparative advantages. The R-PCU will interact with the N-PCUs of PRAPS-2 beneficiary countries with respect to planning, harmonizing approaches, providing tailored technical assistance, and carrying out M&E, communication, and reporting. The N-PCUs will also contribute to shaping the R-PCU program through their participation in the RTC. For details, see Annex 1.
89. *Financial management.* The R-PCU will operate with two Designated Accounts (DA): (i) one to receive funds from the regional International Development Association (IDA) Grant, which primarily finances coordination activities in addition to regional integration activities; and (ii) one to receive funds from PRAPS-2 beneficiary countries, each of which will allocate 4 percent of their PRAPS-2 budget to the R-PCU, primarily to finance tailored technical assistance. As under PRAPS-1, a subsidiary agreement will be signed between CILSS and the respective PRAPS-2 beneficiary countries to that effect. To carry out PRAPS-2 regional activities under Component 1, CILSS will channel the Project funds to: (i) ARAA, which will manage funds related to the implementation of RAHC activities under the Project; and (ii) OIE, which will manage funds for its activities along the same principles as under PRAPS-1. CILSS accounts will be subject to internal and external audits. For details, see Annex 3.
90. *Procurement.* CILSS will carry out procurement for all regional activities except those related to Component 1, to be implemented by ARAA (for RAHC activities) and OIE, under the conditions laid down in the respective agreements. For details, see Annex 3.
91. *Reporting.* The R-PCU will submit to the World Bank consolidated six-monthly and annual technical reports, as well as six-monthly unaudited interim financial reports (IFRs) incorporating reports from RAHC/ARAA and OIE. An external financial audit will be carried out annually.
92. **National level.** As under PRAPS-1, National Steering Committees (NSCs) and National Technical Committees (NTCs) will provide strategic guidance and operational oversight to the respective N-PCUs.
93. Each PRAPS-2 beneficiary country will retain the PRAPS-1 N-PCU attached to the Ministry in charge of Livestock under its General Secretariat. The N-PCU will comprise one central unit as well as decentralized units to allow closer monitoring of activities implemented on the ground and interactions with the local authorities, decentralized government agencies, partners, and contractors involved. The N-PCUs will be adequately staffed and dedicated to Project implementation. Countries will retain several staff from PRAPS-1 and recruit additional specialists based on identified needs, to be financed under IDA and the government's own budget. Most support staff will be appointed and paid from the government's own budget (counterpart funds). Core staff will include a Project Coordinator (contractor or civil servant), supported by technical specialists in charge of each component at the central level, as well as fiduciary, safeguards, gender, M&E, and communication specialists. The N-PCUs will establish conventions with government agencies involved in implementing parts of the Project, as well as national and international organizations (such as FAO) and institutions mandated to perform selected activities.
94. One lesson from PRAPS-1 is that some countries faced bottlenecks in implementing activities delegated to other government agencies with limited capacity or commitment. Under PRAPS-2, private firms or NGOs are favored to perform such activities, under contracts awarded following competitive selection. For details, see Annex 1.

⁶³ For instance, FAO on LSIPT, GLEAM-i, FBS, and Agropastoral Field Schools.



95. *Financial management.* Each N-PCU will manage Project funds in accordance with World Bank guidelines and procedures. As noted, to support regional tailored technical assistance, each beneficiary country will transfer 4 percent of its IDA allocation to the regional level, to be managed by the R-PCU. A DA will be opened in each country, and subnational accounts will be opened to allow decentralized N-PCU units to manage day-to-day operations. For details, see Annex 3.
96. *Procurement.* Each N-PCU will be responsible for procurement activities under the Project in each country, in compliance with World Bank procedures. All procurement processes will be managed through the World Bank Systematic Tracking of Exchanges in Procurement (STEP) application. For details, see Annex 3.
97. *Reporting.* Each N-PCU will provide six-monthly and annual technical progress reports, as well as unaudited quarterly or six-monthly financial reports, as agreed between the countries and the World Bank. External financial audits will be carried out annually. For details, see Annex 3.
98. **Conditions of effectiveness for PRAPS-2** include: (i) the adoption of an updated version of the PRAPS-1 PIM, reflecting new or adjusted operational procedures for PRAPS-2; the Regional PIM will incorporate specific arrangements with OIE and ECOWAS (ARAA and RAHC); (ii) the signature of a subsidiary agreement between each country and CILSS, as well as between ECOWAS and CILSS, and OIE and CILSS; (iii) the authorization or ratification of the subsidiary agreements; and (iv) other specific effectiveness conditions related to FM and procurement included in Annex 3.⁶⁴
99. **Dated legal covenants** include: (i) the appointment of N-PCU staff as required with qualifications and under terms of reference satisfactory to the World Bank (three months after Project effectiveness);⁶⁵ (ii) the recruitment of staff required for PRAPS-2 PCUs (three month after Project effectiveness); (iii) the acquisition and installation or reconfiguration, as need be, of a computerized accounting system with technical specifications satisfactory to the World Bank (five months after Project effectiveness); and (iv) the appointment of an external auditor for the Project,⁶⁶ in accordance with the provisions of the Procurement Regulations (six months after Project effectiveness).
100. Additional details on each country and implementing agency are provided in Annexes 1 and 3.

B. Results Monitoring and Evaluation Arrangements

101. **The main instruments for M&E and results-based management in PRAPS-2 are: (i) the ToC, illustrating the causal pathway from interventions to results (Section II.D); and (ii) the Results Framework and M&E plan (Section VII).** The Results Framework and M&E plan, which include common indicators for all PRAPS-2 countries and indicators specifically related to regional integration, describe the PDO, intermediate results (IR) and SMART indicators,⁶⁷ their baselines (corresponding to PRAPS-1 achievements at the time of PRAPS-2 preparation, to

⁶⁴ Additional conditions for (i) Chad include: (a) the refund of PRAPS-1 ineligible expenditures to the World Bank, and (b) the appointment of a procurement specialist and a financial management specialist with qualifications, experience and under terms of reference satisfactory to the World Bank; and (ii) Niger, the appointment of a procurement specialist to the N-PCU with qualifications and under terms of reference satisfactory to the World Bank

⁶⁵ Two months in Burkina Faso.

⁶⁶ As well as an internal auditor in Niger. Additional covenant for CILSS include the update of the terms of reference of its internal auditor to include activities under the Project, in accordance with the PIM (two months after Project effectiveness).

⁶⁷ To the extent possible. As under PRAPS-1, some indicators on animal health, for example, will not be specific to PRAPS-2, as they will reflect achievements of National Strategic Plan objectives and results, to which other sources of funding will contribute.



facilitate comparisons of common indicators between the two phases)⁶⁸ and targets, data sources, frequency of data collection, and data collection methods. The M&E system for PRAPS-2 will be an enhanced version of the system established under PRAPS-1. It will reflect lessons from PRAPS-1 on the need to develop detailed, harmonized methodologies and provide continuous support to countries to increase the quality and comparability of data. It will also reflect the approach for monitoring the “enhanced resilience” of beneficiaries introduced in the PDO of PRAPS-2, and provide results for selected new interventions supported by PRAPS-2—especially for innovations (in forage production, for example), subprojects to develop VCs, and activities to promote social inclusion. PDO indicators (except for indicators on the increase in revenues) will also reflect regional-level results.

- 102. M&E will be undertaken at the regional level by CILSS (in collaboration with RAHC and supported by OIE for Component 1) and at the national level by all PRAPS-2 countries.** The Results Framework indicates whether the designated M&E units in the beneficiary countries are responsible for collecting data on a given indicator or whether the responsibility rests with CILSS. The N-PCUs have overall responsibility for M&E in their respective countries, and they will work with relevant government agencies, stakeholders, and implementers to monitor and report on Project indicators. Where necessary, the Project will finance the development of M&E capacity of these partners, particularly with respect to the innovative digital technologies mentioned below.
- 103. Subcomponent 5.1 will finance M&E.** The PCUs will be staffed with qualified M&E specialists and assistants at the central and field level, who will manage the day-to-day M&E activities. The PRAPS-1 M&E Manual will be updated for PRAPS-2 and attached to the PIM. It will describe the M&E system and detail the requirements at the regional level and for all countries to carry out M&E activities, from data collection to data management and reporting. Particular emphasis will be placed on developing and implementing a consistent methodology across participating countries to allow comparability and aggregation at the regional level. The Project will finance a mid-term evaluation and an impact assessment⁶⁹ linked to the PDO indicator on increased revenues across all countries. CILSS will take the lead in monitoring the revenue indicator, based on a methodology developed and piloted with the International Center for Cooperation in Agricultural Research for Development (*Centre de Coopération Internationale en Recherche Agronomique pour le Développement*, CIRAD) during PRAPS-1, which makes it possible to view trends across both phases of PRAPS. In addition, CILSS will provide technical backstopping in M&E to countries and support cross-country knowledge sharing. Given the mobility of beneficiaries and the complexity of collecting data in pastoral systems, to the extent possible PRAPS-2 will rely on digital technologies such as KBT, satellite imagery, and Geographic Information System (GIS) mapping to monitor results. As under PRAPS-1, the regional level will consolidate and regularly update all geo-localized achievements using KBT through a webmapping platform, including photographs, to visualize progress even in remote areas that are hard to reach (including for security reasons).
- 104. Beneficiary countries and CILSS will be required to prepare and submit to the World Bank a bi-annual progress reports** on achievement against Project objectives at the PDO and IR levels, as well the state of implementation of annual work plans and budgets (AWPBs). The progress report will contain information on progress by component based on data for the corresponding indicators, a populated Results Framework, data on disbursement and use of funds, a summary of the implementation challenges encountered, and the measures proposed to counteract them. These progress reports will be used for decision making and for rating the Project in Implementation Status and Results Reports (ISRs).

⁶⁸ The final data on PRAPS-1 achievements at closing in December 2021 will be incorporated at the first restructuring of PRAPS-2, considering that PRAPS-2 approval will pre-date PRAPS-1 closing.

⁶⁹ The detailed methodology (use of control groups, variables, geographic focus, as so on) will be developed during a workshop organized by CILSS, with the participation of CIRAD, in January 2021.



C. Sustainability

105. **The sustainability of investments is incorporated in the Project design, and it will be influenced by a range of institutional (including legal and governance), technical, and operational factors.** The Project will support the foundations of longer-term, sustainable development of pastoralism, including the development and implementation of improved national and regional strategies, policies, and regulations, based on a more inclusive and informed dialogue that draws on science-based data and knowledge. The Project responds directly to the need to build more robust technical capacities at all levels—in institutions, government, research agencies, POs, and civil society—and to fill critical data gaps, especially on the economic, social, and environmental dimensions of pastoralism. These capacities, data, and knowledge are the building blocks for stakeholders to maintain achievements, as well as to increase and better target future interventions on pastoralism after PRAPS-2 ends.
106. **The regional activities envisioned under PRAPS-2 will provide a broad platform to foster exchanges, advocacy, and communication.** This platform will continue to create a network of specialists from administrative institutions and POs and reinforce technical collaboration between countries to tackle evolving (often common) challenges efficiently, as witnessed under PRAPS-1. The network will be strengthened by the inclusion of a younger generation of experts in the region, particularly those who pursue dedicated training related to pastoralism with support from PRAPS (master’s and doctoral degrees, veterinary qualifications). These skilled, interconnected human resources will be essential to comprehend the multisectoral dimensions, complexity, and importance of pastoral systems and use that knowledge to inform and adapt policies and investments.
107. **Natural resources play a critical role in sustaining Project achievements.** PRAPS-2 will consolidate the innovative governance mechanisms established under PRAPS-1 to manage natural resources—pastoral landscapes and water resources—in addition to market infrastructure. But while the proposed Project seeks to expand the area under SLM, it will also continue to accompany and monitor the implementation of territorial plans and the operations of management committees developed under PRAPS-1, because that experience will directly inform PRAPS-2 interventions in new areas, making it possible to tailor and adjust technical assistance as needed to increase their sustainability.
108. **The Project will also analyze and consider all available options to ensure the longer-term financing of certain costs without external support,** by making better use of digital technologies and taking advantage of the private sector’s interest and capacity to generate data (such as market price information), avoiding duplication of effort and saving resources. The Project will also reduce support for certain recurrent activities expected to be financed through regular government budgets, such as crisis prevention activities, with the collection of information on pastoral indicators feeding into broader EWSs. Support will be provided to VCs with a view to sustainability by implementing a rigorous selection process for MGs and using effective tools to assess the economic and financial viability of the businesses to be supported.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic, and Financial Analysis

109. **Project interventions are expected to result in a number of measurable impacts.** Examples include: (i) a significant increase in vaccination coverage for two regional priority animal diseases (CBPP and PPR) and a national improvement in animal health status through investments in VS infrastructure, equipment, and human capital, in addition to the implementation of regulatory frameworks for VMPs, including quality control; (ii) an increase in the area where sustainable rangeland management is adopted, leading to enhanced livestock mobility, improved access to feed (forage) and water, fewer conflicts over access to resources, and increased ecosystem health; (iii) an increase in incomes of (agro)pastoralist households, generated by more sustained production of livestock products, increased livestock productivity, and better access to markets; (iv) an accrued resilience to climate and sanitary risks, leading to more stable incomes and assets and contributing to increased food security and nutrition; and (v) greater social and economic inclusion of pastoralists, in particular women and youth, through targeted technical and vocational training, skills training, and IGAs, together with assistance to obtain a civil status document and enroll in social registries.
110. **The Economic and Financial Analysis (EFA) focuses on all six beneficiary countries and uses cost-benefit analysis to evaluate the economic justification for PRAPS-2.** As livestock production is the dominant livelihood and economic activity in the areas targeted by the Project, preservation of these capital assets is the key to resilience among pastoral and agropastoral communities. To model livestock herd dynamics under extensive pastoral production systems and estimate their benefits and costs under scenarios “with” and “without” the proposed Project, the EFA relies on the “EcoRum” module of LSIPT. The resulting models of different livestock production outputs and financial outputs under these scenarios make it possible to calculate internal rates of return (IRRs) and net present values (NPVs) and assess the overall viability of the proposed Project. The full EFA is presented in Annex 4.
111. **The analysis indicates that PRAPS-2 interventions as a whole are economically justified.** The proposed Project generates an NPV of US\$528.7 million (at 6 percent discount rate)⁷⁰ and an economic internal rate of return (EIRR) of 20.7 percent (over a 20-year period), not accounting for net positive environmental externalities. These economic results are even more encouraging when considered alongside other Project benefits that are likely to be substantial but cannot be quantified for this analysis, such as better public services for the livestock sector, increased human capital, and spillover effects outside the core intervention areas. The results remain robust under various sensitivity scenarios, including reduced animal vaccination coverage, delays in Project implementation, and Project cost overruns. **Disaggregated by country, the economic results are equally encouraging: all participating countries exhibit EIRRs higher than 6 percent and positive and significant NPVs, summarized in Table 3.**

Table 3: Economic results of PRAPS-2

Economic results		Burkina Faso	Chad	Mali	Mauritania	Niger	Senegal	Regional
NPV @ 6%, 20-y	US\$ mn	50.7	191.7	90.3	44.1	72.2	79.5	528.7
EIRR	(%)	18.4%	25.2%	18.8%	17.5%	18.0%	22.3%	20.7%

112. **The valuation of environmental externalities offers further evidence that PRAPS-2 is economically justifiable.** The Project is projected to marginally increase GHG emissions from livestock production by an estimated 0.1 percent, or 284,502 tons of CO₂ equivalent (tCO₂eq) per year, but sustainable rangeland

⁷⁰ In line with the “Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects.”



management promoted by the Project will lead to the sequestration of 484,330 tCO₂eq per year. Thus, the Project net emissions are negative, representing a carbon sink of -399,828 tCO₂eq per year. When these environmental benefits are valued at the social price of carbon,⁷¹ the overall economic results for the Project increase to an NPV of US\$694.9 million and EIRR of 24.4 percent (at the lower carbon price) and an NPV of US\$860.8 million and EIRR of 27.8 percent (at the higher carbon price).

B. Fiduciary

Financial Management

113. **As part of Project preparation, a preliminary FM assessment was conducted for the national and regional implementing entities.** The assessment thus encompassed Burkina Faso, Chad, CILSS, Mali, Mauritania, Niger, and Senegal, in addition to OIE and ARAA (as, through specific subsidiary agreements, CILSS will formally delegate responsibility to OIE and ARAA to fulfill regional FM commitments under Component 1). The objective of the assessment was to determine whether the FM arrangements of the respective implementing entities are adequate to ensure that: (i) Project funds will be used for purposes intended in an efficient and economical way; (ii) Project financial reports will be prepared in an accurate, reliable, and timely manner; (iii) Project assets will be safeguarded; and (iv) the Project is subjected to a satisfactory auditing process.
114. **From the FM perspective, the Project implementation arrangements do not feature the establishment of new institutions but rather rely on the national and regional institutions in place under PRAPS-1; the only new entity that will bear fiduciary responsibilities under PRAPS-2 will be ARAA.** At the national level, the Project will be implemented by the following entities, which will have fiduciary responsibilities under the Project: (i) Ministry of Animal Resources and Fisheries (*Ministère des Ressources Animales et Halieutiques*, MRAH) for Burkina Faso; (ii) Ministry of Livestock and Animal Production (*Ministère de l'Élevage et des Productions Animales*, MEPA) for Chad; (iii) Ministry in charge of Livestock for Mali; (iv) Ministry of Rural Development (*Ministère du Développement Rural*, MDR) for Mauritania; (v) Ministry in charge of Livestock for Niger; and (vi) Ministry of Livestock and Animal Production (*Ministère de l'Élevage et des Productions Animales*, MEPA) for Senegal. Responsibility for FM at the regional level is assumed by CILSS, with the exception of fiduciary responsibilities formally delegated to ARAA and OIE for regional activities under Component 1. All seven agencies have previous experience with the implementation of World Bank–financed investment projects, including PRAPS-1, although additional expert support will be provided where and when needed. All of these agencies are audited under PRAPS-1 each year. No significant audit findings have been reported, with exception of Chad, where external auditors identified ineligible expenditures in the amount of XAF 554 million (equivalent to US\$1.028 million).
115. **Conclusion.** The preliminary FM assessment finds that all implementing entities have basic FM arrangements in place, although it is critical to strengthen those arrangement to comply with minimum requirements under World Bank Policy and Procedures for IPF operations. The overall residual FM risk for the Project is **Substantial**. At implementing agency level, this risk is deemed **Moderate** for Mali, Mauritania, and Senegal. It is deemed **Substantial** for Burkina Faso, CILSS, and Niger, mainly owing to the Project’s complexity—specifically, its regional design (including ARAA, which has no experience in managing World Bank–financed projects), numbers of stakeholders, the dysfunction of some subnational committees, and limited capacity at the subnational and community level. Finally, the residual FM risk is **High** for Chad, mainly due to the ineligible expenditures identified by external auditors, which have not yet been refunded to IDA by the Government of Chad.

⁷¹ Based on the World Bank “Guidance Note on Shadow Price of Carbon in Economic Analysis” (November 2017).



116. To mitigate the fiduciary risk to the extent possible, the following actions need to be implemented: (i) update the FM manuals of procedures for the six countries and CILSS to reflect the specificities of this new Project; (ii) migrate the current computerized accounting systems for the six countries, CILSS, OIE, and ARAA to handle transactions under the proposed Project; (iii) agree upon the IFR format for the Project's semi-annual reports; (iv) submit for World Bank no-objection the terms of reference (ToRs) for, and subsequently recruit and maintain, external auditors for Burkina Faso, Chad, Mali, Mauritania, Niger, Senegal, and CILSS; the ToRs for the external auditor for CILSS will include specific provisions to cover OIE and ARAA; and (v) strengthen the FM arrangements in Chad with the recruitment of a senior Financial Management Specialist (FMS) and an international audit firm to provide internal audit services.

Procurement

117. **For all implementing agencies in the various countries, procurement under the proposed Project will be carried out in accordance with World Bank procedures:** (i) the World Bank Procurement Regulations (PR) for IPF Borrowers, dated July 2016 (revised November 2017, August 2018, and November 2020); (ii) "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants," dated October 15, 2006 (revised January 2011 and as of July 1, 2016); and (iii) other provisions stipulated in the FAs, using the Standard Procurement Documents (SPD) accompanying the Regulations.

118. **All procuring entities, bidders, and service providers (suppliers, contractors, and consultants) shall observe the highest standard of ethics during the procurement and execution of contracts financed under the Project,** in accordance with paragraph 3.32 and Annex IV of the PR. When procurement is done in the national market, as agreed in the Procurement Plan, the country's own procurement procedures may be used with the requirements set forth or referred to in paragraphs 5.3–5.6 related to National Procurement Procedures. For all works contracts, procurements that apply SPDs will adopt World Bank provisions related to environmental, social (including sexual exploitation and abuse (SEA) and GBV), health, and safety (ESHS) risks and impacts, including codes of conduct that prohibit sexual harassment (SH).

119. **Project Procurement Strategies for Development (PPSDs) and draft Procurement Plans.** All implementing agencies have submitted PPSDs, which have been reviewed and approved by the World Bank. The most sensitive issue is the procurement of works, given that the Project expects to finance small works in many dispersed locations. Open national competition is generally the preferred option for procuring such works, but in some areas the market and security might lead to other options, based on the recommendations of the PPSD. Alongside each PPSD, a detailed Procurement Plan for at least the first 18 months of implementation has been reviewed and approved during negotiations. During implementation, the Procurement Plans will be updated as required and at least annually, to reflect actual implementation needs and improvements in institutional capacity. The PPSDs are summarized in Annex 3.

120. **Special procurement considerations.** Given that insecurity and fragility affect considerable areas in the Sahelian countries where the Project will operate (notably in Burkina Faso, Chad, Mali, and Niger), the Project will apply the flexibilities described in the World Bank Guidance on Procurement Procedures in Situations of Urgent Need of Assistance or Capacity Constraints (March 7, 2019). These measures include use of the Borrower's national procurement, provided the arrangements are consistent with World Bank Core Procurement Principles. Other key measures to fast-track procurement include: (i) use of UN agencies, NGOs, Direct Selection and/or Limited Competition, and Request for Quotations with identified manufacturers and suppliers for other urgent items; and (ii) an increased threshold for Request for Quotations to US\$0.5 million for goods and US\$1 million for works. Bid Securing Declaration may be used instead of the bid security. Advance payment may be increased to 40 percent, while secured with the advance payment guarantee. The time for



submission of bids/proposal can be shortened to 15 days in competitive national and international procedures, and to 3 days for the Request for Quotations, although if bidders request an extension, it should be granted. Other measures include the use of Borrower's national procurement, provided the arrangements are consistent with World Bank Core Procurement Principles. The simplified procurement arrangements will be detailed in the procurement section of the PIM.

121. **Procurement capacity assessments.** Consistent with the above procurement arrangements, procurement assessments were done for the seven implementing agencies in the Project countries during preparation, in accordance with the World Bank Procurement Risk Assessment and Management System. The procurement activities carried out for PRAPS-2 by ARAA (a newcomer to PRAPS, including procurement) and OIE are expected to be simple and similar to their own procurement activities. The assessment of the two institutions revealed no major concerns except with respect to: (i) compliance with the provisions of the World Bank anti-corruption policy; (ii) the World Bank right to sanction; and (iii) the World Bank inspection and audit rights; thus the procurement documents of ARAA and OIE (bidding documents, Requests for Quotations, contracts) shall contain these provisions. At the national level (Burkina Faso, MRAH; Chad, MEPA; Mali, Ministry in charge of Livestock; Mauritania, MDR; Niger, Ministry in charge of Livestock; and Senegal, MEPA) the procurement capacity assessment was carried out as required for any implementing agency for an IPF. Annex 3 contains a full summary of the completed procurement assessments and suggested measures to address the inadequacies and risks identified. Briefly, however: (i) procurement staff with experience to implement procurement actions effectively, on time, and in line with World Bank procurement policies and procedures are insufficient; (ii) administrative routines may result in procurement delays, potentially affecting Project implementation; (iii) procurement in fragile areas with few bidders can restrict competition and possibly increase prices and collusion risks; (iv) insufficient capacity can lead to poor contract management and administration of big contracts; and (v) poor filing of documents may lead to loss of documents.
122. **Systematic Tracking of Exchanges in Procurement (STEP).** The Project will be implemented using STEP, a planning and tracking system, in accordance with clause 5.9 of the PR. Procurement Plans, their updates, and requests for prior review will be sent to the World Bank for clearance through STEP. Procurement activities not requiring World Bank prior review will be recorded in STEP as well. It is agreed that for Component 1, CILSS will be the only World Bank interface in STEP. CILSS will create all procurement activities of ARAA and OIE in STEP and will be responsible to archive their procurement documentation in STEP. However, once the OIE and ARAA Procurement Plan is approved in STEP, both organizations will be responsible for their own procurement activities, consulting the World Bank for advice and guidance whenever necessary.
123. **Conclusion.** Overall procurement risk is **Substantial**, but after implementation of the proposed mitigation measures, the risk will be **Moderate**. The proposed mitigation measures for each designated implementing agency include: (i) retaining or hiring on a competitive basis, a procurement specialist experienced and familiar with World Bank procurement procedures and policies, to be located in each implementing agency; (ii) training all Project staff involved in procurement in the World Bank PR; (iii) developing a section on procurement procedures as part of the PIM to clarify roles for each team member involved in the procurement process, define the maximum delay for each procurement stage (specifically with regard to review and approval systems, and the signing of contracts), and define measures to fast-track procurement in eligible countries; (iv) developing contract management plans for prior review contracts; and (v) improving the filing system to ensure compliance with the World Bank procurement filing manual.



C. Legal Operational Policies

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

D. Environmental and Social

124. All six PRAPS-2 countries have prepared Environmental and Social Commitment Plans (ESCPs). They have also prepared and disclosed Stakeholder Engagement Plans (SEPs) on February 5, 2021 (Burkina Faso, Niger, and Senegal) and February 6, 2021 (Chad, Mali, and Mauritania).

125. Environmental and Social Standard (ESS1): Assessment and Management of E&S Risks and Impacts. The Project will result in a range of E&S risks and impacts in the six countries, all of which need to be mitigated. While these impacts may be varied, no irreversible impacts are expected. Potential risks and impacts are associated with the handling, management, transportation, and storage of drugs, chemicals, specimens, and vaccines. Key environmental concerns are related to potential risks and impacts from the construction of pastoral infrastructure. Potential impacts can be related to: (i) water quality; (ii) disposal of building/construction wastes and management of VMPs; (iii) occupational health and safety (OHS) of workers; and (iv) nuisances related to air and noise emissions. While the Project does not involve activities with high potential to harm the population and it is not expected to exacerbate social risks, it will be carried out in a context of fragility, insecurity, and growing tension within communities about NRM.

126. The findings of the ESMF and the World Bank SEA/SH Risk Assessment Tool guided the identification of GBV risks and development of mitigation plans. An initial assessment of the potential risks of GBV using the World Bank GBV Risk Assessment Tool determined the potential risk as substantial in some Project countries (Niger, Mali), and the Project subsequently adopted a Substantial risk level for SEA/SH. Drivers of risk include context-specific risks, such as high rates of child marriage, high prevalence of sexual violence and harassment of girls in school, high regional averages of female circumcision, general social acceptability of GBV, high risks of human trafficking, and limitations of SH legislation (for example, prohibiting harassment in the work space but not in public or education spaces). Aligned with the requirements outlined in the SEA/SH Good Practice Note, the ESF requirements, and a survivor-centered approach, the Project will further assess risks of GBV/SEA/SH as part of the Environmental and Social Impact Assessment and reflect them in key safeguard instruments, contractual obligations, and other key documents regulating Project implementation. The Borrowers will map GBV services in areas of implementation and will develop a response protocol for the timely, safe, and ethical referral of all survivors that may disclose GBV/SEA/SH incidents to the Project. In addition, the Borrower will design and implement a GBV/SEA/SH-sensitive grievance mechanism (GM) to ensure the safe and confidential documentation, response, and management of GBV/SEA/SH complaints and will include targeted and regular involvement of women and other groups at-risk in stakeholder engagement. Awareness-raising activities on Project-related risks of GBV/SEA/SH and mitigation strategies are included in the SEP and will target communities and Project workers, while contractual obligations in terms of GBV/SEA/SH mitigation will be enforced through the integration of specific provisions on codes of conduct addressing GBV/SEA/SH and training of workers. The ESCPs clearly set out responsibilities for the management of GBV/SEA/SH risks. The Borrowers have developed a GBV/SEA/SH Action Plan with a budget as part of the ESMF and will include necessary provisions in the Environmental and Social Management Plans (ESMPs), outlining the Project’s prevention strategies, response



protocol, and accountability mechanisms. The Borrowers’ supervision capacity will be strengthened throughout implementation by adding GBV skills and tasks as part of key responsibilities and background requirements for the social safeguard experts of the implementing agencies and supervision consultants.

127. **Key social concerns relate to civil works.** They include concerns linked to community health and safety as a result of traffic movements and concerns linked to the presence of workers (leading to GBV/SEA/SH and disease transmission). Working conditions of those employed to undertake civil works need to be managed to protect the workforce and meet Good International Industry Practices (GIIP) in relation to OHS. Mitigation measures for site-specific impacts will be managed through the implementation of required E&S risk management documents that have been prepared and disclosed both in-country and on the World Bank external website (Table 4).

Table 4: Disclosure of PRAPS-2 E&S documents

Country	Instrument	Date of in-country disclosure	Date of disclosure on World Bank external website
Burkina Faso	ESMF (including GBV Action Plan)/RPF/SEP	02.05.21	02.06.21 (RPF on 02.07.21)
	ESCP	03.08.21	03.08.21
Chad	ESMF (including GBV Action Plan)/RPF/SEP	02.06.21	02.06.21 (RPF on 02.07.21)
	ESCP	03.04.21	03.08.21
Mali	ESMF (including GBV action plan)/RPF/SEP	02.06.21	02.06.21 (RPF on 02.07.21)
	ESCP	03.05.21	03.08.21
Mauritania	ESMF (including GBV Action Plan)/RPF/SEP	02.06.21	02.06.21 (RPF on 02.07.21)
	ESCP	03.03.21	03.08.21
Niger	ESMF (including GBV Action Plan)/RPF/SEP	02.05.21	02.06.21 (RPF on 02.07.21)
	ESCP	03.03.21	03.08.21
Senegal	ESMF (including GBV Action Plan)/RPF/SEP	02.05.21	02.06.21 (RPF on 02.07.21)
	ESCP	03.02.21	03.08.21

128. *Environmental and Social Management System (ESMS).* Due to the multi-country nature of the Project and limited existing frameworks, reliance on the E&S Framework of the Borrowers/Recipients is not considered appropriate.

129. *E&S Assessment.* To manage potential risks and impacts, each participating country has prepared and consulted upon an ESMF for Project activities, given that their exact location cannot be known at present.

130. *Environmental and Social Commitment Plan (ESCP).* The required E&S instruments, along with the timing for their preparation, are captured in the ESCP prepared and disclosed by each participating country (Table 4). To help CILSS monitor E&S compliance at the regional level, a synthesis of country ESCPs will be prepared at the regional level and disclosed. The ESCPs summarizes the measures (including the preparation of E&S instruments) and actions to address potential E&S risks and impacts of the Project, as well as targeted training and support provided to E&S specialists. The ESCPs will be updated to take into account findings of the subsequent E&S assessments, the World Bank E&S due diligence, and results of engagement with stakeholders. The ESCPs will also be updated to reflect any change in security risks. Although PRAPS-2 is not expected to be active in high-threat environments, the volatile security context may change and require changes in social and security risk management.

131. *Organizational capacity and competency.* Institutional and implementation arrangements of PRAPS-2 will resemble those for PRAPS-1, building on strengths (systematic E&S screening of activities, E&S clauses in bidding documents, and E&S specialists working throughout the first phase) and addressing weaknesses (lack of capacity). Participating countries have different levels of institutional capacity and experience in implementing



safeguard instruments under World Bank–financed projects, but they lack experience with the new ESF; PRAPS-2 is one of the first World Bank projects prepared within this framework. Given the recent addition and wider scope of the ESF, capacity building and training (for agencies, PCUs, local communities, and subcontractors) will be necessary throughout the life of the Project. The PCUs will work closely with contractors to ensure that Quality Control and OHS Plans are in place and meet World Bank requirements. World Bank specialists will also work closely with any recruited staff to strengthen their capacity.

132. *Monitoring and reporting.* The ESMF includes monitoring commitments. The ESMPs to be developed for contractors/subcontractors hired for civil works will also include monitoring commitments. The World Bank will require E&S monitoring performance reporting during implementation.
133. *Stakeholder engagement and information disclosure.* SEPs for each of the participating countries have been developed and disclosed (Table 4).
134. **ESS2 Labor and Working Conditions.** The project will rely mainly on current government employees within the six countries who will work under their current terms and conditions. Workers hired for the project as well as contractors employed for civil works will be subject to ESS2 requirements. Labor Management Procedures (LMPs) will be developed for each country, reflecting the types of workers that will be employed. The Project will also include a GM for labor complaints. These documents will be prepared, consulted upon, and disclosed before the start of Project activities.
135. *Occupational health and safety (OHS).* OHS will be considered during implementation in relation to civil works. Contractors will commit to a safe worksite. As part of the ESMP and Contractor–Environmental & Social Management Plan (C-ESMP), an OHS Plan will be developed with detailed requirements for the transport, handling, and disposal of infectious disease specimens, chemicals/reagents, and other hazardous materials. The OHS Plan will include procedures on incident investigation and reporting; recording and reporting non-compliance; emergency preparedness and response procedures; and continuous worker training and awareness.
136. *Child labor/forced labor and minimum age.* Contractors, primary suppliers of drugs/vaccines, and subcontractors must commit to not using child labor or forced labor. This commitment will be explained to affected communities.
137. *Contracted workers/workers engaged by third parties.* Contractor and subcontractor recruitment plans will be critical to ensure transparency in local hiring and in meeting Project labor procedure requirements.
138. **ESS3 Resource Efficiency and Pollution Prevention and Management.** During civil works, mitigation measures will include standard pollution prevention and control measures in accordance with the mitigation hierarchy. They will include: (i) solid and hazardous waste handling and disposal; (ii) wastewater treatment; (iii) storage and handling of hazardous materials; (iv) housekeeping; (v) control of erosion and storm water runoff; and (vi) noise, vibrations, and dust abatement measures; among others.
139. *Management of hazardous and nonhazardous waste.* The main risks are associated with disposal of animal health care waste and chemical and hazardous waste, and transportation of samples. Each country will prepare a Hazardous Waste and Pest Management Plan (HWPMP), taking into account World Bank Environmental, Health, and Safety guidance, as well as GIIP. Additionally, the ESMF and site-specific instruments will include: (i) guidance related to transportation and management of expired chemical drugs and vaccines during emergency interventions; and (ii) management of waste during civil works. The Project will identify certified health care waste handlers or other acceptable systems no later than three months after effectiveness and prior to starting



- activities, and E&S mitigation measures will be outlined in agreements with participating laboratories and veterinary units. HWMPs will be prepared, consulted upon, and disclosed before the start of project activities.
140. *Water consumption, energy use, and raw material use.* Civil works are likely to consume scarce water and energy resources and generate waste in Project areas. Contractors will be encouraged to do more with less water and energy. In addition, civil works will include emergency/fire management and energy consumption and wastewater treatment.
141. *Management of pesticides.* Specifications for managing pesticides are included in the PMP for any subproject involving pest or vector management issues (such as disease vector control).
142. **ESS4 Community Exposure to Health Issues and Workplace Safety.** Risks and impacts related to community health and safety may result from civil works and the transportation of samples, chemicals, and other materials. Adequate mitigation measures are presented in the ESMF and will be included in the HWMP. As noted, the Project has undertaken GBV/SEA assessments in each country and prepared measures to address risks, including a GM. Contractors and subcontractors will be required to prepare OHS Plans 30 days before starting work and to commit to worksite safety. Since the Project will not operate in high-threat environments, security risks will be examined as part of E&S assessments and addressed in the ESCPs.
143. *Traffic and road safety.* Access to sites of civil works will be restricted during construction phases.
144. **ESS5 Land Acquisition, Restriction on Land Use, and Involuntary Resettlement.** New pastoral infrastructure will be constructed in areas covered by the Project, and transhumance corridors will be marked. Land ownership and use will be confirmed during sub-project preparation, and if land is to be acquired or used for economic activities, it could lead to the development of a Resettlement Action Plan (RAP). As locations are not yet known at this stage of the Project, Resettlement Policy Frameworks (RPF) have been prepared in the six participating countries, clearly indicating the procedural framework to be followed for land acquisition and land donation, should it be necessary. The Project will document any process related to voluntary land donation in cases where land users propose to donate land to the Project without full compensation, in accordance with the provisions contained in the RPF, following the Guideline of ESS5. Therefore, the Project will keep a transparent record of all consultations and agreements reached. These RPF documents will guide the implementation of investments that will enable the Project to be implemented in a socially sustainable manner. They take into account laws in the six countries and relevant World Bank ESSs.
145. **ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources.** Potential impacts on biodiversity are captured in the ESMF to ensure that any impacts during the implementation of Project activities are minimized.
146. **ESS7 Indigenous Peoples/SSA Historically Underserved Traditional Local Communities.** There are no known indigenous peoples or sub-Saharan historically underserved traditional local communities in the Project area. If any people in the Project area appear to belong to these groups, the Project will undertake a social screening and, where relevant, implement appropriate measures per the requirements of the ESF.
147. **ESS8 Cultural Heritage.** Impacts on cultural heritage associated with the excavation works are expected to be minimal. Measures to mitigate this risk, notably a chance finds procedure that sets out how chance finds associated with the project will be managed, are captured in the ESMF.
148. **ESS10 Stakeholder Engagement and Information Disclosure.** To ensure that views and interests of all stakeholders, including local communities, are taken into consideration throughout the Project, the participating countries have developed and disclosed SEPs. PRAPS-1 already had a GM in place in accordance with E&S



safeguard procedures in the six participating countries. The GM of PRAPS-2 incorporates improvements based on an evaluation of the PRAPS-1 GM. The evaluation was conducted during preparation of the E&S documents through participatory consultations with stakeholders at the local level.

149. It is important to include citizens in the preparation, elaboration, implementation, and M&E of projects like PRAPS-2, as their advocacy will help to ensure that public institutions are more transparent, effective, and accountable. Citizens' involvement will also improve community ownership, the social and environmental performance of the Project, and its sustainability. PRAPS-2 was designed and prepared after several consultations were undertaken in each participating country; similarly, SEPs were developed for each country after extensive consultation with the Governments and other partners, including non-governmental and faith-based organizations. The SEPs and E&S instruments for each country were validated and publicly disclosed to ensure broad public engagement. With respect to Project implementation, each country is establishing a Project Steering Committee, which will review the workplan and budget each year and provide guidance to the PCUs. Consultation and participation are an iterative process that will occur throughout the life of the Project. The PIM will include a specific section on citizen engagement that will reflect how such engagement is tailored to each component and specific activities (for example, using the social engineering approach – see Box A2.1, Annex 2).

V. GRIEVANCE REDRESS SERVICES

Communities and individuals who believe that they are adversely affected by a 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.

VI. KEY RISKS

150. **The Overall Residual risk is rated as “Substantial,” owing to the protracted conflict, insecurity, and fragile governance context, in addition to the impact of the COVID-19 pandemic.** Four of six PRAPS-2 countries are now listed as FCV States. This new Project builds on successful implementation of a first phase (PRAPS-1) over 2015–21, and key lessons are incorporated into its design, particularly in terms of risk management. For those reasons, residual risks related to “Sector Strategies and Policies” and “Technical Design of Project” are rated Moderate. An added consideration is that the leadership of regional organizations in implementing the proposed Project and the strong ownership of Project objectives by the individual countries should limit the likelihood that a major risk materializing in a given country would jeopardize the entire regional operation.
151. **Political and Governance risk is also rated “Substantial,” owing to the potential for political uncertainty, fragility, and instability to delay implementation.** The Sahel Region faces a multi-dimensional crisis characterized by violent conflict, political instability, large-scale displacement, and deep fragility. All G5-Sahel countries are either actively in conflict or dealing with its impact (including internally displaced persons and



refugees). Initially led by the presence of violent extremist groups, the conflict has become more localized. Inter-community tensions now drive fragility in areas previously unaffected by violence, with increasingly fluid distinctions between extremism, violent insurrections, community self-defense dynamics, and banditry. Since independence, 19 successful coups d'état have taken place in the Sahel, including five in the last ten years. The latest occurred in Mali, where violent protests following contested legislative elections led to a coup on August 18, 2020. While the transitional government's roadmap includes the organization of elections within the next 18 months, the political outlook remains uncertain. In Senegal, a vibrant democracy has provided the country with relative political stability, yet the country faces important challenges in maintaining this trajectory, including challenges related to reducing different forms of inequality, strengthening governance, and building human capital. The potential recurrence of the conflict in Casamance (where military operations took place in January 2021) and risks of conflict spilling over from Mali are taken seriously by the Senegalese Government. COVID-19 has only added to the region's challenges and potential domestic tensions, putting enormous strains on already limited resources. Deteriorating security, the spread of violence in neighboring countries, political instability, and increasing tensions between herders and farmers heighten the risk to achieving the PDO of this Project, which is implemented largely in remote pastoral areas with a limited State presence.

152. *Mitigation.* Mitigating these risks will involve a combination of policy dialogue, partnerships and flexibility in Project design and implementation, and the establishment of local conflict management and prevention committees to address competition between herders and farmers over access to natural resources. Continuous dialogue between the World Bank Country Management Units, Project team, and governmental and international partners will be key to inform any adaptations required in Project activities and priorities. Partnerships and close dialogue with regional organizations and stakeholders that are involved in security, mediation, and diplomatic efforts will be key to maintaining a sound understanding of regional challenges and to mitigate related risks, at both the regional and country level, when they arise.

153. **Macroeconomic risk is rated “Substantial.”** The macroeconomic situation in the broader Sahel Region remains fragile and is worsening during the pandemic. Negative per capita income growth and increased poverty rates are projected in all Sahelian countries in 2020 as a result of the economic effects of the pandemic. Domestic and external shocks and policy slippages constitute substantial sources of risk in the region, especially in a context of transition of power in Mali. Higher expenses related to security,⁷² COVID-19, and the humanitarian crisis provoked by rising flows of internally displaced people could divert resources from other priority needs, limiting national efforts and capacity to sustainably implement planned reforms.⁷³ The region is also vulnerable to adverse external shocks. A larger than expected decline in the price of cotton, gold, or any other major export commodity, or an increase in oil prices, could put more pressure on the region's macroeconomic framework. This would translate into a further slowdown in growth, reduced fiscal revenues, larger outlays, and larger fiscal and current account deficits, putting at risk the funding of the broader agriculture sector, and more specifically the livestock sector. Given the current uncertainty on the duration of the COVID-19 pandemic and the subsequent contraction of all economies in the region, the residual risk is considered “Substantial,” as it may further constrain fiscal space for rural development activities in one or more countries of the proposed Project.

154. *Mitigation.* In all PRAPS-2 countries, the World Bank is providing support through Development Policy Financing (DPF) to accelerate economic growth inclusively and sustainably and mitigate the above-mentioned

⁷² In 2019, on average, security spending amounted to 3.3 percent of GDP. Tax revenue losses related to insecurity exert additional pressure on public finances.

⁷³ Since 2012, public debt in the G5-Sahel countries has increased from 32 percent to 51 percent of GDP. Non-security spending is at risk of being crowded out. Increases in non-security spending in the first part of the 2010s are being reversed in recent years. Post-COVID, it is likely that public finances will need to be consolidated. With security spending needs likely to persist, risks of crowding out non-security spending are set to become acute.



risks. For instance, emergency COVID-19 crisis response DPFs have been prepared in Chad, Burkina Faso, Mauritania, Mali, and Senegal, although the CPF in Mali latter had to be suspended owing to the August 2020 coup. These DPFs are under implementation in Mauritania and Senegal. Other programmatic DPFs, such as the one supporting gender and other structural reforms in Niger, have been adapted to include a COVID-19 response to protect lives, livelihoods, and future resilience. In the context of the PRA, Burkina Faso, Chad, Mali, and Niger are preparing strategies to address basic infrastructure deficits and drivers of conflict in conflict-affected regions, including by supporting pastoralism and the living conditions of pastoral communities, with a view to improving resilience.

155. **Institutional Capacity for Implementation and Sustainability risks are rated “Substantial.”** This new operation builds on the successful implementation arrangements of PRAPS-1, with CILSS retaining the role of regional implementing agency and PCUs in each country being reconstituted. CILSS will delegate regional operational responsibility related to Component 1 to two specialized institutions with animal health mandates: (i) ECOWASRAHC will carry out activities related to regional integration; and (ii) OIE will carry out the provision of tailored technical assistance to beneficiary countries, in continuity with work initiated under PRAPS-1. The institutional capacity risk is rated “Substantial,” however, due to a lack of technical and fiduciary capacity and leadership in RAHC during Project preparation, combined with weak human resource capacity and limited cooperation between the two organizations.
156. *Mitigation.* Fiduciary responsibilities of RAHC will be devolved to ARAA, which has fiduciary experience, until RAHC is equipped with a permanent fiduciary team. The recruitment and appointment of a permanent Executive Director of RAHC by ECOWAS as well as a Program officer should provide more solid ground to support strengthening of this institution, in coordination with other projects and donors involved (such as the World Bank–financed REDISSE, EU–financed PREDIP, Swiss Cooperation, and USAID-financed operations). Improved collaboration will be fostered through the specialized Regional Technical Committee on Animal Health to be established under PRAPS-2.
157. **Fiduciary risk is rated “Substantial.”** Sector and technical features associated with PRAPS-2 will require flows of additional fiduciary support to ensure strong, transparent FM and procurement processes. All ministries and the regional organizations involved have built some capacity in managing World Bank–financed operations, except for ARAA/RAHC, which will be participating in the PRAPS for the first time. The overall FM residual risk is “Substantial,” mainly owing to limited capacity at national, subnational, and local levels in Burkina Faso and Niger. Furthermore, the residual risk is deemed “High” for Chad due to the significant increase in the allocation to Chad, combined with recurrent issues under PRAPS-1 (including ineligible expenditures). For procurement, the overall residual risk is “Moderate.”
158. *Mitigation:* Detailed risk mitigation measures, based on lessons from PRAPS-1 and capacity assessments undertaken during Project preparation, are outlined in the financial and procurement sections of Section IV-B and Annex 3.
159. **Environmental and Social risk is rated “Substantial.”** The residual social risk is rated as “Substantial,” reflecting: (i) the social context (high fragility and numerous conflicts in areas where this Project will be implemented); (ii) sensitivities surrounding the rights of vulnerable pastoral groups; (iii) community health and safety issues; and (iv) labor inflows. Project-specific security requirements, as well as security risks to World Bank staff and consultants, Project contractors, and beneficiaries, have been included in the E&S Safeguard Assessment (Annex 7). The residual environmental risk rating is estimated to be “Moderate,” as potential risks and impacts on the environment are not expected to be irreversible. Key environmental concerns are related to potential risks and impacts from the construction of pastoral infrastructure, potentially including: (i) impacts on



water quality; (ii) disposal of building/construction waste and management of VMPs; (iii) OHS of workers (including COVID-19 health and safety concerns – see also Annex 8); and (iv) nuisances related to air and noise emissions.

160. *Mitigation.* Measures to mitigate these risks have been set out in the respective ESMF, RPF, SEP, and GBV/SEA/SH Action Plans prepared, consulted upon, approved and disclosed by appraisal, the ESCP prepared, consulted upon, approved and disclosed after project negotiations. The respective LMP and HWPMP will be prepared, consulted upon, approved and disclosed before the start of project activities. Commitments regarding these risks are captured in the ESCP that is part of the negotiation package.
161. **Stakeholder risk is rated “Substantial.”** Politicization may lead to the targeting of less vulnerable beneficiaries or areas, and possibly to imbalances between budget allocations that satisfy short-term interests versus long-term results. The overall limited capacity of the wide range of stakeholders involved remains a recurrent challenge that could affect the Project’s performance in terms of the quality and sustainability of investments.
162. *Mitigation.* PRAPS-2 will mitigate these risks through multipronged interventions. To reduce possible interference, it will first establish clear categories of beneficiaries and selection criteria, which will be included in the PIM approved by the World Bank. In addition, technical and institutional capacity building will be embedded into all components of the Project to overcome implementation constraints and contribute to sustainability.
163. **Other risk (security) risk is rated “High.”** Security risks may negatively affect implementation of the Project and achievement of its objectives and results. Terrorist incidents in the G5-Sahel rose by 65 percent in 2019 compared to 2018, and this trend intensified in 2020. The severity of the conflict varies greatly within the Sahel. Burkina Faso and Mali are most affected, while Mauritania has not suffered terrorist incidents in recent years, although some recent terrorist activities in Mali occurred close to its border. There is a risk that insecurity will spread southward. The security crisis has had severe social and humanitarian consequences.⁷⁴ Pastoralist communities are at the heart of current conflict dynamics, especially in the Central Sahel (Burkina Faso, Mali and Niger), and development activities in (agro)pastoral areas encounter serious security constraints. The conflict is continuously expanding across western Burkina Faso and Mali, which only increases the risk that Project activities may be delayed or disrupted as insecurity threatens access to affected regions for implementing partners, Project monitoring, and supervision. As such, managing security risks will be key to the achievement of the development outcomes of the Project.
164. *Mitigation:* Technical and operational lessons have been drawn from PRAPS-1 to help mitigate security risks (see Section II.F). First, the Project design emphasizes flexibility, especially in the selection of intervention areas and types of investments. Second, during Project implementation, recourse to third parties, whether UN agencies or NGOs, to execute or supervise selected activities in the most fragile areas will be contemplated. The Project will also use geo-enabled data and other digital tools for M&E to help ensure successful implementation. Third, regular, consistent dialogue with partners involved in security-related activities, including the G5-Sahel, the UN, key bilateral partners, and Sahel governments will occur to share information and to anticipate and mitigate risks, where possible. Finally, and perhaps most importantly, through its focus on pastoralism and pastoralist communities, the Project will help address the vulnerability of those communities to conflict and the underlying causes of fragility, including their perceived exclusion. Nevertheless, most security risks stemming

⁷⁴The G5-Sahel countries grapple with some 850,00 refugees and around 1.9 million internally displaced people, according to the Armed Conflict Location & Event Data Project (ACLED) and United Nations Office for the Coordination of Humanitarian Affairs (OCHA).



from ongoing conflict remain residual. See Annex 7, “Adaptations to Insecurity in Project Supervision and Implementation,” which has been developed specifically to provide further guidance.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Western Africa

Regional Sahel Pastoralism Support Project II

Project Development Objectives(s)

To improve the resilience of pastoralists and agro-pastoralists in selected areas in the Sahel region.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Sustained and maintained assets (livestock)								
Vaccination coverage rate for CBPP - Regional level (Percentage)		32.00	50.00	55.00	65.00	75.00	85.00	90.00
Burkina Faso (Percentage)		32.00	75.00	90.00	95.00	95.00	95.00	95.00
Chad (Percentage)		7.00	5.00	10.00	25.00	50.00	75.00	90.00
Mali (Percentage)		40.00	60.00	70.00	80.00	90.00	90.00	90.00
Mauritania (Percentage)		63.00	85.00	95.00	95.00	95.00	95.00	95.00
Niger (Percentage)		60.00	95.00	95.00	95.00	95.00	95.00	95.00
Senegal (Percentage)		41.00	55.00	65.00	85.00	90.00	95.00	95.00
Number of small ruminants vaccinated and marked against PPR - Regional level		10,500,000.00	94,400,000.00	151,400,000.00	230,900,000.00	318,400,000.00	405,300,000.00	469,300,000.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
(Number)								
Burkina Faso (Number)		4,400,000.00	18,400,000.00	28,400,000.00	39,900,000.00	51,900,000.00	63,900,000.00	71,900,000.00
Chad (Number)		0.00	6,000,000.00	16,000,000.00	36,000,000.00	66,000,000.00	101,000,000.00	131,000,000.00
Mali (Number)		0.00	13,000,000.00	23,000,000.00	43,000,000.00	63,000,000.00	83,000,000.00	95,200,000.00
Mauritania (Number)		0.00	9,000,000.00	15,000,000.00	23,000,000.00	31,000,000.00	39,000,000.00	44,100,000.00
Niger (Number)		0.00	32,000,000.00	46,000,000.00	60,000,000.00	74,000,000.00	82,400,000.00	91,100,000.00
Senegal (Number)		6,100,000.00	16,000,000.00	23,000,000.00	29,000,000.00	32,500,000.00	36,000,000.00	36,000,000.00
Sustained and maintained ecosystems								
Land area under sustainable landscape management practices (CRI, Hectare(Ha))		5,577,000.00	6,390,000.00	8,490,000.00	10,547,000.00	11,867,000.00	12,617,000.00	12,717,000.00
Burkina Faso (Hectare(Ha))		225,000.00	225,000.00	425,000.00	525,000.00	625,000.00	725,000.00	725,000.00
Chad (Hectare(Ha))		1,734,000.00	2,434,000.00	3,134,000.00	3,934,000.00	4,134,000.00	4,134,000.00	4,134,000.00
Mali (Hectare(Ha))		286,000.00	328,000.00	749,000.00	1,166,000.00	1,586,000.00	1,686,000.00	1,786,000.00
Mauritania (Hectare(Ha))		1,935,000.00	1,935,000.00	2,435,000.00	2,935,000.00	3,435,000.00	3,935,000.00	3,935,000.00
Niger (Hectare(Ha))		555,000.00	635,000.00	755,000.00	905,000.00	1,005,000.00	1,055,000.00	1,055,000.00
Senegal (Hectare(Ha))		842,000.00	842,000.00	992,000.00	1,082,000.00	1,082,000.00	1,082,000.00	1,082,000.00
Sustained and maintained means of making a living and generating income								
Income increase of pastoral households generated with the support of the Project -		0.00						0.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Regional level (Percentage)								
Burkina Faso (Percentage)		0.00			10.00			25.00
Chad (Percentage)		0.00			10.00			25.00
Mali (Percentage)		0.00			10.00			25.00
Mauritania (Percentage)		0.00			10.00			25.00
Niger (Percentage)		0.00			10.00			25.00
Senegal (Percentage)		0.00			10.00			25.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Component 1. Animal health improvement and veterinary medicine control								
Level of implementation of the National Strategic Plans (NSPs) for PPR and CBPP (Percentage)		35.00						80.00
Burkina Faso (Percentage)		35.00	60.00	70.00	75.00	80.00	85.00	90.00
Chad (Percentage)		30.00	60.00	70.00	75.00	80.00	85.00	90.00
Mali (Percentage)		35.00	60.00	70.00	75.00	80.00	85.00	90.00
Mauritania (Percentage)		40.00	60.00	70.00	75.00	80.00	85.00	90.00
Niger (Percentage)		40.00	60.00	70.00	75.00	80.00	85.00	90.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Senegal (Percentage)		25.00	60.00	70.00	75.00	80.00	85.00	90.00
Veterinary units built or rehabilitated by the Project and functional in the targeted areas - Regional level (Number)		125.00	130.00	220.00	303.00	333.00	344.00	344.00
Burkina Faso (Number)		25.00	25.00	40.00	60.00	60.00	60.00	60.00
Chad (Number)		2.00	2.00	28.00	48.00	58.00	58.00	58.00
Mali (Number)		41.00	41.00	60.00	78.00	85.00	91.00	91.00
Mauritania (Number)		19.00	19.00	19.00	29.00	43.00	39.00	39.00
Niger (Number)		21.00	21.00	41.00	51.00	59.00	59.00	59.00
Senegal (Number)		17.00	22.00	32.00	37.00	37.00	37.00	37.00
Vaccination pens built or rehabilitated by the Project in the targeted areas - Regional level (Number)		282.00	342.00	530.00	709.00	777.00	817.00	817.00
Burkina Faso (Number)		30.00	30.00	70.00	105.00	105.00	105.00	105.00
Chad (Number)		100.00	100.00	150.00	190.00	190.00	190.00	190.00
Mali (Number)		31.00	91.00	99.00	133.00	141.00	141.00	141.00
Mauritania (Number)		92.00	92.00	122.00	152.00	182.00	182.00	182.00
Niger (Number)		10.00	10.00	50.00	70.00	90.00	130.00	130.00
Senegal (Number)		19.00	19.00	39.00	59.00	69.00	69.00	69.00
Inspections dedicated to the control of veterinary medicines implemented through the Project (Number)		0.00	146.00	819.00	1,918.00	3,448.00	5,404.00	7,370.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Burkina Faso (Number)		0.00	0.00	80.00	160.00	240.00	320.00	320.00
Chad (Number)		0.00	0.00	10.00	30.00	60.00	100.00	140.00
Mali (Number)		0.00	0.00	366.00	1,098.00	2,196.00	3,660.00	5,124.00
Mauritania (Number)		0.00	10.00	30.00	60.00	100.00	140.00	190.00
Niger (Number)		0.00	0.00	42.00	114.00	226.00	378.00	580.00
Senegal (Number)		0.00	86.00	201.00	336.00	486.00	656.00	856.00
Regional Veterinary Committee operational (Number)		0.00	2.00	4.00	4.00	4.00	4.00	4.00
Component 2. Sustainable landscape management and governance enhancement								
Functional committees for the sustainable management of landscapes facilitating mobility established or supported by the Project - Regional level (Number)		141.00	181.00	323.00	552.00	743.00	826.00	854.00
Burkina Faso (Number)		67.00	76.00	147.00	248.00	330.00	330.00	330.00
Chad (Number)		8.00	39.00	39.00	74.00	109.00	129.00	129.00
Mali (Number)		14.00	14.00	37.00	67.00	91.00	111.00	114.00
Mauritania (Number)		11.00	11.00	11.00	36.00	71.00	101.00	126.00
Niger (Number)		13.00	13.00	51.00	82.00	96.00	109.00	109.00
Senegal (Number)		28.00	28.00	38.00	45.00	46.00	46.00	46.00
Functional water points accessible to (agro)pastoralists on livestock mobility routes		256.00	279.00	388.00	510.00	580.00	609.00	624.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
and on new transhumance routes supported by the Project - Regional level (Number)								
Burkina Faso (Number)		41.00	41.00	66.00	93.00	113.00	113.00	113.00
Chad (Number)		102.00	125.00	155.00	185.00	200.00	200.00	200.00
Mali (Number)		11.00	11.00	28.00	45.00	45.00	45.00	45.00
Mauritania (Number)		56.00	56.00	56.00	71.00	91.00	106.00	121.00
Niger (Number)		38.00	38.00	72.00	98.00	108.00	117.00	117.00
Senegal (Number)		8.00	8.00	11.00	18.00	23.00	28.00	28.00
Cultivated fodder produced and available to pastoralists and agro-pastoralists thanks to the Project - Regional level (Metric ton)		0.00	316.00	2,590.00	5,844.00	9,063.00	10,304.00	10,804.00
Burkina Faso (Metric ton)		0.00	0.00	400.00	600.00	800.00	1,000.00	1,000.00
Chad (Metric ton)		0.00	300.00	500.00	1,000.00	1,500.00	2,000.00	2,500.00
Mali (Metric ton)		0.00	0.00	300.00	600.00	900.00	1,200.00	1,200.00
Mauritania (Metric ton)		0.00	0.00	800.00	1,440.00	2,400.00	2,400.00	2,400.00
Niger (Metric ton)		0.00	0.00	400.00	1,600.00	2,400.00	2,400.00	2,400.00
Senegal (Metric ton)		0.00	16.00	190.00	604.00	1,063.00	1,304.00	1,304.00
Bilateral and multilateral agreements facilitating a peaceful transhumance established thanks to the Project (Number)		0.00	1.00	2.00	4.00	6.00	6.00	6.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Reduction rate of conflicts linked to mobile livestock systems in three transhumance and trade axes (West, Center, and East) in the Sahel and West Africa (Percentage)		0.00	5.00	10.00	15.00	20.00	25.00	30.00
Component 3. Livestock value chain improvement								
Operational markets according to defined criteria rehabilitated and built on regional routes thanks to the Project - Regional level (Number)		70.00	70.00	98.00	129.00	150.00	154.00	154.00
Burkina Faso (Number)		6.00	6.00	6.00	10.00	18.00	18.00	18.00
Chad (Number)		7.00	7.00	12.00	19.00	19.00	19.00	19.00
Mali (Number)		22.00	22.00	27.00	32.00	32.00	32.00	32.00
Mauritania (Number)		0.00	0.00	0.00	3.00	8.00	12.00	12.00
Niger (Number)		28.00	28.00	45.00	55.00	62.00	62.00	62.00
Senegal (Number)		7.00	7.00	8.00	10.00	11.00	11.00	11.00
Implementation rate of action plans developed by umbrella pastoral organizations (part supported by the Project) - Regional level (Percentage)		0.00						80.00
Burkina Faso (Percentage)		0.00	0.00	25.00	50.00	75.00	80.00	80.00
Chad (Percentage)		0.00	0.00	80.00	80.00	80.00	80.00	80.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Mali (Percentage)		0.00	0.00	70.00	80.00	90.00	90.00	90.00
Mauritania (Percentage)		0.00	0.00	80.00	80.00	90.00	90.00	90.00
Niger (Percentage)		0.00	0.00	80.00	80.00	80.00	80.00	80.00
Senegal (Percentage)		0.00	0.00	80.00	80.00	80.00	80.00	80.00
Direct beneficiaries of innovative sub-projects to valorize pastoral value chains promoted by the Project (Number)		0.00	650.00	2,750.00	5,150.00	7,200.00	8,100.00	8,700.00
Burkina Faso (Number)		0.00	50.00	250.00	300.00	300.00	300.00	300.00
Chad (Number)		0.00	0.00	900.00	1,800.00	2,400.00	2,400.00	2,400.00
Mali (Number)		0.00	0.00	75.00	225.00	300.00	300.00	300.00
Mauritania (Number)		0.00	0.00	150.00	300.00	600.00	900.00	900.00
Niger (Number)		0.00	600.00	1,200.00	1,800.00	2,300.00	2,300.00	2,300.00
Senegal (Number)		0.00	0.00	0.00	200.00	600.00	1,200.00	1,800.00
Of which young people 18 - 24 (regional) (Number)		0.00	195.00	842.00	1,617.00	2,425.00	2,734.00	2,794.00
Burkina Faso (Number)		0.00	15.00	75.00	90.00	90.00	90.00	90.00
Chad (Number)		0.00	0.00	172.00	322.00	645.00	774.00	774.00
Mali (Number)		0.00	0.00	175.00	525.00	700.00	700.00	700.00
Mauritania (Number)		0.00	0.00	60.00	120.00	240.00	360.00	360.00
Niger (Number)		0.00	180.00	360.00	540.00	690.00	690.00	690.00
Senegal (Number)		0.00	0.00	0.00	20.00	60.00	120.00	180.00
OF which young people		0.00	455.00	1,255.00	2,050.00	2,870.00	3,170.00	3,290.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
25 - 40 (regional) (Number)								
Burkina Faso (Number)	0.00	35.00	175.00	210.00	210.00	210.00	210.00	210.00
Chad (Number)	0.00	0.00	120.00	225.00	450.00	540.00	540.00	540.00
Mali (Number)	0.00	0.00	75.00	225.00	300.00	300.00	300.00	300.00
Mauritania (Number)	0.00	0.00	45.00	90.00	180.00	270.00	270.00	270.00
Niger (Number)	0.00	420.00	840.00	1,260.00	1,610.00	1,610.00	1,610.00	1,610.00
Senegal (Number)	0.00	0.00	0.00	40.00	120.00	240.00	360.00	360.00
Of which Female (regional) (Number)	0.00	255.00	1,095.00	2,220.00	3,207.00	3,747.00	4,137.00	4,137.00
Burkina Faso (Number)	0.00	15.00	75.00	90.00	90.00	90.00	90.00	90.00
Chad (Number)	0.00	0.00	265.00	530.00	707.00	707.00	707.00	707.00
Mali (Number)	0.00	0.00	200.00	600.00	800.00	800.00	800.00	800.00
Mauritania (Number)	0.00	0.00	75.00	150.00	300.00	450.00	450.00	450.00
Niger (Number)	0.00	240.00	480.00	720.00	920.00	920.00	920.00	920.00
Senegal (Number)	0.00	0.00	0.00	130.00	390.00	780.00	1,170.00	1,170.00
Trade barriers monitored on selected cross-border marketing areas and disseminated by the Project (Number)	0.00	1.00	2.00	3.00	3.00	3.00	3.00	3.00
Component 4. Social and economic inclusion improvement, women and youth								
Women and youth in the pastoral sector who have benefited from technical and vocational training programs or skills training	0.00	850.00	3,110.00	5,220.00	7,440.00	8,690.00	8,740.00	8,740.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
programs (Number)								
Burkina Faso (Number)	0.00	240.00	640.00	1,040.00	1,200.00	1,200.00	1,200.00	1,200.00
Chad (Number)	0.00	0.00	750.00	1,500.00	2,250.00	3,000.00	3,000.00	3,000.00
Mali (Number)	0.00	110.00	270.00	430.00	540.00	540.00	540.00	540.00
Mauritania (Number)	0.00	0.00	300.00	400.00	800.00	1,000.00	1,000.00	1,000.00
Niger (Number)	0.00	500.00	1,000.00	1,500.00	2,000.00	2,000.00	2,000.00	2,000.00
Senegal (Number)	0.00	0.00	150.00	350.00	650.00	950.00	1,000.00	1,000.00
Of which young people 18 - 24 (regional) (Number)	0.00	595.00	1,975.00	3,249.00	4,601.00	5,273.00	5,308.00	5,308.00
Burkina Faso (Number)	0.00	168.00	448.00	728.00	840.00	840.00	840.00	840.00
Chad (Number)	0.00	0.00	323.00	645.00	968.00	1,290.00	1,290.00	1,290.00
Mali (Number)	0.00	77.00	189.00	301.00	378.00	378.00	378.00	378.00
Mauritania (Number)	0.00	0.00	210.00	280.00	560.00	700.00	700.00	700.00
Niger (Number)	0.00	350.00	700.00	1,050.00	1,400.00	1,400.00	1,400.00	1,400.00
Senegal (Number)	0.00	0.00	105.00	245.00	455.00	665.00	700.00	700.00
Of which young people 25 - 40 (regional) (Number)	0.00	255.00	933.00	1,566.00	2,232.00	2,607.00	2,622.00	2,622.00
Burkina Faso (Number)	0.00	72.00	192.00	312.00	360.00	360.00	360.00	360.00
Chad (Number)	0.00	0.00	225.00	450.00	675.00	900.00	900.00	900.00
Mali (Number)	0.00	33.00	81.00	129.00	162.00	162.00	162.00	162.00
Mauritania (Number)	0.00	0.00	90.00	120.00	240.00	300.00	300.00	300.00
Niger (Number)	0.00	150.00	300.00	450.00	600.00	600.00	600.00	600.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Senegal (Number)		0.00	0.00	45.00	105.00	195.00	285.00	300.00
Of which Female (regional) (Number)		0.00	438.00	1,644.00	2,780.00	4,024.00	4,430.00	4,784.00
Burkina Faso (Number)		0.00	72.00	192.00	312.00	360.00	360.00	360.00
Chad (Number)		0.00	0.00	450.00	900.00	1,350.00	1,800.00	1,800.00
Mali (Number)		0.00	66.00	162.00	258.00	324.00	0.00	324.00
Mauritania (Number)		0.00	0.00	150.00	200.00	400.00	500.00	500.00
Niger (Number)		0.00	300.00	600.00	900.00	1,200.00	1,200.00	1,200.00
Senegal (Number)		0.00	0.00	90.00	210.00	390.00	570.00	600.00
Pastoralists and agropastoralists having obtained a civil status document or a registration in the social registry thanks to the Project (Number)		0.00	6,675.00	21,700.00	61,200.00	84,675.00	107,350.00	109,000.00
Burkina Faso (Number)		0.00	3,125.00	12,250.00	47,250.00	65,925.00	85,000.00	85,000.00
Chad (Number)		0.00	0.00	1,000.00	1,500.00	2,500.00	3,500.00	4,500.00
Mali (Number)		0.00	2,550.00	5,250.00	5,750.00	6,250.00	6,350.00	6,500.00
Mauritania (Number)		0.00	0.00	500.00	1,500.00	2,000.00	2,500.00	3,000.00
Niger (Number)		0.00	1,000.00	2,200.00	3,700.00	5,000.00	5,000.00	5,000.00
Senegal (Number)		0.00	0.00	500.00	1,500.00	3,000.00	5,000.00	5,000.00
Direct beneficiaries of income-generating activities promoted by the Project (Number)		25,839.00	26,894.00	31,299.00	36,604.00	42,209.00	47,059.00	47,059.00
Burkina Faso (Number)		718.00	718.00	918.00	1,518.00	2,218.00	2,718.00	2,718.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Chad (Number)		887.00	887.00	2,137.00	3,387.00	4,637.00	5,887.00	5,887.00
Mali (Number)		8,818.00	8,818.00	9,318.00	9,918.00	10,418.00	10,818.00	10,818.00
Mauritania (Number)		12,788.00	12,788.00	13,788.00	14,788.00	15,788.00	16,788.00	16,788.00
Niger (Number)		180.00	1,235.00	2,290.00	3,345.00	4,400.00	4,400.00	4,400.00
Senegal (Number)		2,448.00	2,248.00	2,848.00	3,648.00	4,848.00	6,448.00	6,448.00
Of which young people 18-24 (regional) (Number)		0.00	739.00	3,642.00	6,896.00	10,279.00	13,054.00	13,054.00
Burkina Faso (Number)		0.00	0.00	40.00	160.00	280.00	400.00	400.00
Chad (Number)		0.00	0.00	875.00	1,750.00	2,625.00	3,500.00	3,500.00
Mali (Number)		0.00	0.00	350.00	770.00	1,120.00	1,400.00	1,400.00
Mauritania (Number)		0.00	0.00	700.00	1,400.00	2,100.00	2,800.00	2,800.00
Niger (Number)		0.00	739.00	1,477.00	2,216.00	2,954.00	2,954.00	2,954.00
Senegal (Number)		0.00	0.00	200.00	600.00	1,200.00	2,000.00	2,000.00
Of which young people 25-40 (regional) (Number)		0.00	317.00	1,678.00	3,630.00	5,611.00	7,366.00	7,366.00
Burkina Faso (Number)		0.00	0.00	100.00	640.00	1,120.00	1,600.00	1,600.00
Chad (Number)		0.00	0.00	375.00	750.00	1,125.00	1,500.00	1,500.00
Mali (Number)		0.00	0.00	150.00	330.00	480.00	600.00	600.00
Mauritania (Number)		0.00	0.00	300.00	600.00	900.00	1,200.00	1,200.00
Niger (Number)		0.00	317.00	633.00	950.00	1,266.00	1,266.00	1,266.00
Senegal (Number)		0.00	0.00	120.00	360.00	720.00	1,200.00	1,200.00
Of which Female (regional) (Number)		22,622.00	23,466.00	26,890.00	30,914.00	35,098.00	38,598.00	38,598.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Burkina Faso (Number)		287.00	0.00	140.00	560.00	980.00	1,400.00	1,400.00
Chad (Number)		516.00	516.00	1,516.00	2,516.00	3,516.00	4,516.00	4,516.00
Mali (Number)		7,257.00	7,257.00	7,657.00	8,137.00	8,537.00	8,857.00	8,857.00
Mauritania (Number)		12,643.00	12,643.00	13,443.00	14,243.00	15,043.00	15,843.00	15,843.00
Niger (Number)		83.00	927.00	1,771.00	2,615.00	3,459.00	3,459.00	3,459.00
Senegal (Number)		1,836.00	1,836.00	2,076.00	2,556.00	3,276.00	4,236.00	4,236.00
Component 5. Project coordination, institutional strengthening, crisis prevention and response								
Technical and scientific executives trained in pastoralism (including diploma courses) (Number)		125.00	518.00	868.00	1,055.00	1,270.00	1,397.00	1,397.00
Burkina Faso (Number)		16.00	169.00	259.00	295.00	397.00	418.00	418.00
Chad (Number)		21.00	105.00	181.00	217.00	252.00	285.00	285.00
Mali (Number)		22.00	62.00	98.00	122.00	158.00	182.00	182.00
Mauritania (Number)		30.00	50.00	80.00	120.00	150.00	150.00	150.00
Niger (Number)		19.00	59.00	159.00	199.00	239.00	239.00	239.00
Senegal (Number)		17.00	73.00	91.00	102.00	114.00	123.00	123.00
Of which Female (regional) (Number)		27.00	182.00	335.00	419.00	512.00	561.00	561.00
Burkina Faso (Number)		1.00	47.00	74.00	85.00	103.00	122.00	122.00
Chad (Number)		4.00	46.00	84.00	102.00	120.00	136.00	136.00
Mali (Number)		7.00	27.00	45.00	57.00	75.00	87.00	87.00
Mauritania (Number)		2.00	12.00	27.00	47.00	62.00	62.00	62.00
Niger (Number)		5.00	25.00	75.00	95.00	115.00	115.00	115.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Senegal (Number)		8.00	25.00	30.00	34.00	37.00	40.00	40.00
Pastoralism-specific parameters sustained in the national early warning system (Yes/No)		No						Yes
Burkina Faso (Yes/No)		No	No	No	No	Yes	Yes	Yes
Chad (Yes/No)		No	No	No	No	Yes	Yes	Yes
Mali (Yes/No)		No	No	No	No	Yes	Yes	Yes
Mauritania (Yes/No)		No	No	No	No	Yes	Yes	Yes
Niger (Yes/No)		No	No	No	No	Yes	Yes	Yes
Senegal (Yes/No)		No	No	No	No	Yes	Yes	Yes
Management committees with at least 15% of women actively participating (Percentage)		0.00						70.00
Burkina Faso (Percentage)		0.00	40.00	50.00	70.00	70.00	70.00	70.00
Chad (Percentage)		0.00	40.00	50.00	70.00	70.00	70.00	70.00
Mauritania (Percentage)		0.00	40.00	50.00	70.00	70.00	70.00	70.00
Mali (Percentage)		0.00	40.00	50.00	70.00	70.00	70.00	70.00
Niger (Percentage)		0.00	40.00	50.00	70.00	70.00	70.00	70.00
Senegal (Percentage)		0.00	40.00	50.00	70.00	70.00	70.00	70.00
Women having received financial literacy training (Percentage)		0.00						80.00
Burkina Faso (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Chad (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00
Mauritania (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00
Mali (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00
Niger (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00
Senegal (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00
Senegal (Percentage)		0.00	40.00	80.00	80.00	80.00	80.00	80.00
Farmers having benefited from agricultural assets or services - Regional level (Number)		2,354,000.00	4,654,000.00	7,054,000.00	11,104,000.00	13,604,000.00	15,404,000.00	15,504,000.00
Burkina Faso (Number)		230,000.00	480,000.00	780,000.00	1,030,000.00	1,230,000.00	1,230,000.00	1,230,000.00
Chad (Number)		527,000.00	527,000.00	777,000.00	1,327,000.00	2,027,000.00	2,627,000.00	2,727,000.00
Mali (Number)		375,000.00	1,225,000.00	2,275,000.00	4,725,000.00	6,125,000.00	6,825,000.00	6,825,000.00
Mauritania (Number)		167,000.00	567,000.00	927,000.00	1,417,000.00	1,617,000.00	1,767,000.00	1,767,000.00
Niger (Number)		698,000.00	1,298,000.00	1,298,000.00	1,598,000.00	1,598,000.00	1,948,000.00	1,948,000.00
Senegal (Number)		356,000.00	556,000.00	956,000.00	1,006,000.00	1,006,000.00	1,006,000.00	1,006,000.00
Of which Female - Regional (Number)		767,000.00	1,457,000.00	2,177,000.00	3,392,000.00	4,142,000.00	4,682,000.00	4,712,000.00
Burkina Faso (Number)		99,133.00	75,000.00	165,000.00	240,000.00	300,000.00	300,000.00	300,000.00
Chad (Number)		179,120.00	0.00	75,000.00	240,000.00	450,000.00	630,000.00	660,000.00
Mali (Number)		127,579.00	255,000.00	570,000.00	1,305,000.00	1,725,000.00	1,935,000.00	1,935,000.00
Mauritania (Number)		48,516.00	120,000.00	240,000.00	375,000.00	435,000.00	480,000.00	480,000.00
Niger (Number)		202,463.00	180,000.00	180,000.00	270,000.00	270,000.00	375,000.00	375,000.00
Senegal (Number)		110,513.00	60,000.00	180,000.00	195,000.00	195,000.00	195,000.00	195,000.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Countries and regional institutional capacity built for climate-informed livestock policies and strategies (Number)		0.00	0.00	0.00	0.00	4.00	5.00	7.00
Regional capacity strengthened to conduct prospective analyzes on the livestock sector (Number)		0.00	0.00	2.00	2.00	4.00	4.00	6.00
Percentage of grievances addressed in line with timelines and protocols established (Percentage)		50.00	60.00	70.00	80.00	90.00	90.00	90.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Vaccination coverage rate for CBPP - Regional level	The indicator monitors the evolution of vaccination coverage of cattle against CBPP. Vaccination coverage is calculated by reporting the number of vaccinated animals in relation to the total animal population	Annual	KBT database Vaccination campaign plans Vaccination campaign reports	Vaccination coverage is determined at the end of each campaign / year, based on field reports. The data of the vaccination campaigns will preferably be entered in the KBT database. The data,	DVS, responsible staff for Component 1



estimated on the basis of the most recent available figures recorded in the updated National Strategic Plans.

The proportion of the eligible population within the total bovine herd is estimated by each country and is part of the basic assumptions of the NSPs (it is considered that this corresponds to animals over 6 months old).

Results at national level of the n/n+1 campaign will be imputed in the RF in year n+1, except in BF where the campaigns do not straddle 2 calendar years (in the BF, the results of year n are therefore counted in the same year).

The result at the regional level is calculated each year as the average of the results of the countries weighted by the ratio between the eligible herd of each country and the total eligible herd of the 6 countries.

The annual targets are those

which will have been verified and validated by the Directorate of Veterinary Services (DVS), will be sent via the PCU to the regional coordination of the animal health component (RAHC and OIE) for review and consolidation.



	<p>listed in the NSPs in effect at the time of the appraisal of the project.</p> <p>The baseline for CBPP corresponds to the vaccination coverage achieved during the 2019/2020 vaccination campaign (2019 for BF). If necessary, these targets and the baseline may be adjusted during the mid-term review of the project to take into account the regular revisions of the NSPs and the results of the 2020/2021 campaign (2021 for BF), which will constitute the true reference situation for PRAPS-2. This indicator will be monitored at the national level and will take into account all vaccinations performed, regardless of the funding sources involved.</p>				
Burkina Faso					
Chad					
Mali					



Mauritania					
Niger					
Senegal					
Number of small ruminants vaccinated and marked against PPR - Regional level	<p>The indicator monitors the evolution of the cumulative number of small ruminants vaccinated and marked against PPR.</p> <p>As for CBPP, the results achieved at the end of the year n/n+1 campaign will be imputed in the RF in year n+1 for all countries, except in BF where the campaigns do not straddle 2 calendar years (in BF, the results of year n are therefore counted in the same year). The annual targets were calculated on the basis of the NSPs in force at the time of the appraisal of the project.</p> <p>The baseline corresponds to the cumulative number of small ruminant vaccinated & marked reached at the end of the 2019/2020 vaccination campaign (2020 for BF).</p>	Annual	KBT database Vaccination campaign plans Vaccination campaign reports	<p>The number of vaccinated & marked small ruminants is determined at the end of each campaign/year, based on field reports, and added to the result achieved the previous year. The data of the vaccination campaigns will preferably be entered in the KBT database. The data, which will have been verified and validated by the DVS, will be sent via the PCU to the Regional Coordination of the Animal Health Component (RAHC and OIE) for review and consolidation.</p>	DVS, responsible staff for Component 1



	<p>The results achieved at the end of each campaign will therefore be the sum of the baseline and the total number of vaccinated & marked small ruminants cumulatively since the start of PRAPS-2.</p> <p>If necessary, these targets and the baseline may be adjusted during the mid-term review of the project to take into consideration the regular revisions of the NSPs and the results achieved at the end of the 2020/2021 campaign (2021 for BF), which will constitute the true baseline for PRAPS-2.</p> <p>This indicator will be monitored at the national level and will take into account all the vaccinations-markings carried out, regardless of the funding sources involved.</p>				
Burkina Faso					
Chad					
Mali					



Mauritania					
Niger					
Senegal					
Land area under sustainable landscape management practices	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a	Biannual	Activity reports Data Collection Sheets (KBT)	The indicator is calculated on the basis of the following elements which will be counted individually so as to be able to report the results in a disaggregated manner: - Pastoral areas identified in a participatory manner and secured by tools for collaborative management of natural resources (Pastoral Areas, Pastoral Charters, Pastoral Units, Pastoral Perimeters, Pastoral Associations etc.) and which are also subject to minimum development on all or part of the pastoral area. - Restored or reclaimed grazing areas (recovery	Regional branches, responsible staff for component 2



combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.

of degraded land, the *bourgou* fields) outside areas under collaborative management.

- Facilities: routes and tracks (transhumance, trade, access to markets, infrastructures, etc.) outside areas under collaborative management.
- Firewalls, deferred grazing areas, outside areas under collaborative management.

The different conventions/maps / pastoral perimeters, their GPS positioning and management methods will need to be approved and validated by the local authority to be accounted for in the results framework. The document will then have to be archived (at the Livestock



				<p>Directorate, at the level of Land Management, at the level of umbrella POs, Judiciary system). The Regional branches will monitor the achievements in KBT, to be validated and consolidated by the component 1 manager. The GIS and KBT bases will be used for the mapping of the areas. These areas will be reported in the results frameworks every six months and introduced in the regional webmapping platform. The baseline corresponds to PRAPS-1 achievements as of December 31, 2020, one year before closing.</p>	
Burkina Faso					
Chad					
Mali					
Mauritania					



Niger					
Senegal					
Income increase of pastoral households generated with the support of the Project - Regional level	<p>The indicator tracks the percentage increase in pastoral household income generated through project support.</p> <p>Household incomes are determined as aggregates of all cash, in-kind or service revenues received by the household. Household income is defined as the total benefits from all sources of activity (livestock, agriculture, diversification activities, employment, transfers, self-consumption as appropriate).</p> <p>Percentage increase = $100 * (\text{Income at time of survey} - \text{Income at baseline}) / (\text{Income at baseline})$</p> <p>In setting targets, the cumulative effect of inflation over 6 years must be taken into account (for example, annual inflation of</p>	A0 (baseline), A3 (RMP) and A6 (completion)	Survey	<p>The data collection and monitoring of the indicator is based on a survey method already used in PRAPS-1, with the support of CIRAD. This methodology will be used again for a study to determine changes in the income of pastoral and agro-pastoral households in the PRAPS-1 intervention zone. This study will make it possible to determine for each country the reference values of the indicator for PRAPS-2. Given the impossibility of following the same sample throughout the duration of the project, the study methodology will ensure that for each survey (A1, A3, A6) the groups have similar demographic and socio-economic</p>	Harmonized surveys managed by the Regional Coordinating Office (PRAPS-2/CILSS), in conjunction with country PCUs



	1.2% over 6 years could represent a 7.4% change in income).			characteristics and are representative of the target population in the project areas. Particularly at the start, the survey will focus on a characterization of the beneficiaries, and sampling will be carried out on the project's target beneficiaries (and not on the entire population).	
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Level of implementation of the National Strategic Plans (NSPs) for PPR and CBPP	A single weighted composite indicator, merged for the	Biannual	Activity reports of	The data will be shared with Component 1 and	DSV, responsible staff for



	<p>two diseases, was selected. In order to build on the experience gained by countries in reporting composite indicators in PRAPS-1, some critical points (sub-indicators) will be assessed separately and others jointly. The selected critical points are as follows:</p> <ul style="list-style-type: none">- Critical points evaluated separately for PPR and CBPP:<ol style="list-style-type: none">1. Monitoring and updating of NSPs2. PANVAC certification of vaccines3. Control of vaccine supply4. Monitoring vaccine quality5. Seromonitoring6. Marking of animals (only for PPR)7. Abattoir monitoring program (only for CBPP)8. Antibiotic resistance monitoring program (only for CBPP)- Critical points jointly assessed for both NSPs:<ol style="list-style-type: none">9. Stakeholder Awareness		<p>the agencies involved Databases (KTB)/M&E tools</p>	<p>M&E managers, who will complete the index calculation Excel file. Upon request, the OIE team in charge of tailored technical assistance will be able to provide methodological support on the use and rating of the various critical points.</p>	<p>Component 1</p>
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Program
10. Methodology for organizing campaigns
11. KBT Databases
12. PRAPS-2 training program
13. Supervision of vaccination campaigns by DVS

The weighting per year of the sub-indicators may be revised during the course of the project on the basis of the evolution of the NSPs, with the methodological support of the OIE team in charge of tailored technical assistance. A succinct user manual for this composite NSP indicator will be prepared and included in the M&E manual. The baseline corresponds to the rating of PRAPS-1 achievements as of December 31, 2020, i.e. one year before the closing of the project, according to the user manual adopted for PRAPS-2.



Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Veterinary units built or rehabilitated by the Project and functional in the targeted areas - Regional level	<p>The indicator tracks the number of veterinary units built or rehabilitated and functional, thanks to PRAPS-2.</p> <p>A unit built or rehabilitated by the project is a unit that has been the subject of construction work and acceptance. A functional veterinary unit is any veterinary station or communal/departamental/regional/border public or private service that has premises, equipment to carry out essential tasks (including storage facilities, equipment and products for veterinary care, and means of travel), and veterinary</p>	Biannual	<p>Receipt ticket, proof of staff assignment</p> <p>Identification form and data collection</p> <p>Registration in KBT/regional webmapping</p>	<p>The regional branches follow the work, reception, and functionality of the units, collect and transmit the data to the PCU, for validation and synthesis.</p>	<p>DVS, regional branches, responsible staff for component 1</p>



	<p>staff.</p> <p>Veterinary units already accounted for or received under PRAPS-1 should not be included in this indicator. The baseline corresponds to PRAPS-1 achievements as of December 31, 2020, one year before closing.</p>				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Vaccination pens built or rehabilitated by the Project in the targeted areas - Regional level	<p>The indicator tracks the number of vaccination pens built or rehabilitated through the PRAPS-2.</p> <p>A pen built or rehabilitated by the project is a pen that has been the subject of construction work and acceptance. It includes at least the following infrastructures: corridor of</p>	Biannual	<p>Reception report</p> <p>Identification form and data collection</p> <p>Registration in KBT/regional webmapping</p>	<p>The regional branches follow the work and reception of the pens, collect and transmit the data to the PCU, for validation and synthesis.</p>	<p>DVS, regional branches, responsible staff for component 1</p>



	<p>containment, waiting enclosure. It can be fixed or mobile and has to be adapted to both small and large ruminants.</p> <p>Vaccination pens already accounted for under PRAPS-1 should not be included in this indicator.</p> <p>The baseline corresponds to PRAPS-1 achievements as of December 31, 2020, one year before closing.</p>				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Inspections dedicated to the control of veterinary medicines implemented through the Project	<p>The indicator counts the number of inspections dedicated to the control of veterinary medicines implemented through the Project.</p> <p>An inspection is defined as a</p>	Biannual	Inspection report Quarterly/Semi-Annual Report KBT database	The DVS sends the reports and activity reports to the responsible staff of Component 1 who checks that the accounting conditions are met.	DVS, responsible staff for Component 1



	spot check on a point of sale/distribution/storage/manufacturing of veterinary medicines as part of a specific mission or a round comprising several inspections. In order to be counted, each inspection must be the subject of a report or a record of visit and findings and the costs of the inspection must be covered for the most part by the Project.				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Regional Veterinary Committee operational	This indicator will measure the number of meetings of the ECOWAS Regional Veterinary Committee led by the Regional Animal Health Center supported by the Project, contributing to the development of the	Biannual	Reports from the RAHC, including the monitoring of RVC recommendations and action plans.	The reports will be shared with the R-PCU M&E specialist.	RAHC



	regional harmonization and coordination of animal health policies, regulations, and programs.				
Functional committees for the sustainable management of landscapes facilitating mobility established or supported by the Project - Regional level	<p>The indicator tracks the creation/strengthening of sustainable landscape management committees (SMCs) facilitating mobility, the development of their tools, and their functionality/activities (social agreements signed, Pastoral Charters, SMCs for water points, complaint management mechanisms, fire brigades, and committees for developed areas). The annual and end-of-project targets will be cumulative, since the start of the project.</p> <p>Examples of sustainable and inclusive management rules: pastoral charters, local conventions, registration of collective land rights.</p>	Biannual	Action Plans Activity reports	Proximity monitoring by regional branches	regional branches, responsible staff for Component 2
Burkina Faso					
Chad					



Mali					
Mauritania					
Niger					
Senegal					
Functional water points accessible to (agro)pastoralists on livestock mobility routes and on new transhumance routes supported by the Project - Regional level	<p>The indicator tracks the number of water points constructed or rehabilitated by the project that have been assessed as functional. These may include a borehole, a pastoral well, a pumping station, constructed ponds, etc. The indicator tracks the number of water points constructed or rehabilitated by the project that have been assessed as functional.</p> <p>To be counted under this indicator, a water point must meet four criteria:</p> <ol style="list-style-type: none"> 1) Construction/rehabilitation financed mainly or entirely by the project 2) Localization on the axes of movement and on the new routes targeted by 	Biannual	<p>Identification sheet for each water point (including type, geolocalization, etc.)</p> <p>Acceptance of works report Post- Reception Follow-up Registration in KBT/regional webmapping</p>	<p>Identification sheet for each water point at the time of preparation of the dossier/technical study, at reception, and one year later (to verify functionality).</p>	<p>Regional branches, responsible staff for Component 2</p>



	<p>the project</p> <p>3) Acceptance of works</p> <p>4) Functionality (sub-criteria as in PRAPS-1: the water flow can be mobilized manually or mechanically by the transhumant herder; access is not subject to restrictions in accordance with the management and access modalities agreed by the Management Committee; the tracks and corridors allow herds access to this water point).</p> <p>Water points already included under PRAPS-1 should not be included in this indicator. Water points at the market level are also excluded from counting. The baseline corresponds to PRAPS-1 achievements as of December 31, 2020, one year before closing.</p>				
Burkina Faso					
Chad					



Mali					
Mauritania					
Niger					
Senegal					
Cultivated fodder produced and available to pastoralists and agro-pastoralists thanks to the Project - Regional level	The indicator tracks the quantity (in metric tons) of cultivated / artificial fodder produced through sub-projects, income-generating activities, and other initiatives supported by the project (fodder crops integrated into rain-fed agriculture systems or development of specialized irrigated or rainwater productions).	Biannual	Activity report of SC.2.3 Activity reports of sub-projects (SC 3.3)/ IGA (SC 4.3) Post-financing monitoring	Each initiative or sub-project will provide a business plan indicating the estimated quantities to be produced each semester. At the end of each semester, the activity reports (indicating the volumes produced) will be sent to the assistants for validation and consolidation. Ad-hoc verifications will be carried out by the regional branches. The final figures will be sent to the PCU (responsible staff for Component 2 and M&E) for validation and consolidation.	regional branches, responsible staff for component 2
Burkina Faso					



Chad					
Mali					
Mauritania					
Niger					
Senegal					
Bilateral and multilateral agreements facilitating a peaceful transhumance established thanks to the Project	This indicator will measure the number of agreements signed between countries or subnational regions facilitated by CILSS and/or ECOWAS related to the governance, management, and sharing of cross-border resources.	Annual	Agreements signed	CILSS and ECOWAS will compile all agreements signed as a result of their support	Data will be consolidated by the R-PCU M&E specialist
Reduction rate of conflicts linked to mobile livestock systems in three transhumance and trade axes (West, Center, and East) in the Sahel and West Africa	The indicator measures the evolution of violent conflicts related to access to and / or use of natural resources, linked to the mobility (local, national, cross-border) of herds at the level of 3 transhumance and trade corridors of the Sahel and West African space.	Annual	Registries of enforcement authorities, Technical Services (Water and Forests, Agriculture, Livestock, Fisheries), Land Commissions, Local Authorities, Professional	The various actors responsible for collecting information at the local level will be in particular: POs ; NGOs active in the identified areas ; Local authorities / municipalities ; Technical services in charge of agriculture and livestock. Data will be collected through KBT. Collection tools will be developed	RCUs of PRAPS-2, PREDIP and PEPISAO projects managed by CILSS and those of other projects that could be mobilized subsequently.



			Organizations, community leaders	by CILSS, ECOWAS and WAEMU jointly and will be co-validated with stakeholders (PREDIP, PCU / PRAPS-2 focal points, National pastoral projects managers, Departments in charge of security and pastoral development, POs, heads of National Transhumance Committees). At the regional level, a committee made up of experts from CILSS, ECOWAS, WAEMU, will consolidate, analyze, produce the report and disseminate information collected from the national level.	
Operational markets according to defined criteria rehabilitated and built on regional routes thanks to the Project - Regional level	The markets targeted to feed the indicator are those that have been constructed/rehabilitated by PRAPS-2 and that are managed by Committees established according to criteria defined in the	Biannual	Market identification form, drawn up upon provisional reception (with minutes) and	The regional branches prepare the identification sheets and collect the SMC reports and submit them to the PCU (responsible staff for Component 3 and	Regional branches , responsible staff for component 3



	<p>implementation manual. Markets already supported under PRAPS-1 should not be included in this indicator. The annual and end-of-project targets will be cumulative, since the start of the project.</p> <p>To be considered operational, each market will have to establish a Management Committee, which must include representatives of the main professional organizations present on the markets. Its establishment will have been the subject of an agreement/convention signed between all the stakeholders, including the professional organizations (including the breeders), the communal/territorial/decentralized administration, and the livestock services. The agreement/convention will specify the modalities of the day-to-day management of the market, the level of taxes levied, and their</p>		<p>the effective start of commercial activities SMC activity report Registration in KBT/regional webmapping</p>	<p>M&E) for validation and consolidation.</p>	
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	use/distribution. The baseline corresponds to PRAPS-1 achievements as of December 31, 2020, one year before closing.				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Implementation rate of action plans developed by umbrella pastoral organizations (part supported by the Project) - Regional level	The indicator monitors the implementation of activities supported by the project and included in the action plans of the umbrella pastoral organizations. "Umbrella pastoral organizations" include producer/pastoral organizations, but also inter-professional organizations.	Annual	Annual action plan for each organization Annual activity report for each organization Ad hoc audits	At the beginning of each year, organizations send their annual action plans, with the activities supported by the project clearly highlighted (physical quantities and budget). The Component 3 manager collects and validates the year's objectives (budget and quantities) in a	Organizations, Responsible staff for Component 3



				<p>consolidated database. These activities supported by the project are then included in the annual work plan and budget (AWPB) of the Project for the current year. At the end of each year, the organizations send their annual activity report and the Component 3 manager verifies the budgetary and physical execution of the activities supported by the project. The average between physical and budget executions is reported to M&E.</p>	
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					



Senegal					
Direct beneficiaries of innovative sub-projects to valorize pastoral value chains promoted by the Project	<p>The indicator counts the number of direct beneficiaries (people involved in the activity, owning the assets - e.g., infrastructure or equipment, and benefiting financially). The annual and end-of-project targets will be cumulative, since the start of the project.</p> <p>Business plans should include a detailed list of members, including their age and gender.</p> <p>A list of eligible activities and expenses will be drawn up at the start of the project, as part of the diagnosis, the development of the manual, and the setting up of the implementation mechanism.</p>	Biannual	Business Plans Post-financing follow-up (to validate participation) (collection form)	Each selection committee provides the PCU with the plans of all approved sub-projects. Recipients will be counted twice: at the planning and funding approval stage, and after implementation of the proposed investments. The final figures will be those recorded after funding.	Accompanying operators (if applicable), responsible staff Component 3
Burkina Faso					
Chad					
Mali					



Mauritania					
Niger					
Senegal					
Of which young people 18 - 24 (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
OF which young people 25 - 40 (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which Female (regional)					
Burkina Faso					



Chad					
Mali					
Mauritania					
Niger					
Senegal					
Trade barriers monitored on selected cross-border marketing areas and disseminated by the Project	This indicator will report on the number of newsletters and analyses produced quarterly on obstacles to livestock trade in selected cross-border marketing channels and disseminated (published) : Niger-Nigeria, Mauritania-Mali-Senegal, and Chad-Nigeria (the Bongor-Yagoua axis)	Biannual	Documents published	The responsible staff will provide data/reports to the R-PCU M&E specialist	Responsible staff for C3 in R-PCU
Women and youth in the pastoral sector who have benefited from technical and vocational training programs or skills training programs	This indicator tracks the number of pastoral people who have completed education and vocational training programs. Beneficiaries will be counted twice: at the planning and approval stage of participation in the programs/training, and after the training cycle. The final figures will be those	Biannual	Attendance and completion records for each training course financed mainly by PRAPS-2	Each training organizer provides the Chapters, responsible staff for Component 4, and M&E PCU with final lists of participants who have completed the training. The M&E PCU consolidates the list of individuals by type of training, gender, and age group.	Training organizers, responsible staff for component 4



	recorded afterwards.				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which young people 18 - 24 (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which young people 25 - 40 (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					



Niger					
Senegal					
Of which Female (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Pastoralists and agropastoralists having obtained a civil status document or a registration in the social registry thanks to the Project	The indicator counts the number of pastoralists and agro-pastoralists holding an official civil status document or registered in the national social registry thanks to the support of the project.	Biannual	<ul style="list-style-type: none"> • Registry of Civil Statuses • Unified Social Registry • Activity reports and lists 	<p>The civil registry provides the regional branches and PCU (responsible staff for Component 4 and M&E) with the list of beneficiaries.</p> <p>The M&E specialist consolidates the list of individuals by type of procedure, gender, and age group.</p> <p>The Unified Social Registry provides the list of newly registered persons in the PRAPS2 intervention zones who</p>	Regional branches, responsible staff for component 4



			of issuance of acts	meet the agro-pastoralists and pastoralists criteria.	
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Direct beneficiaries of income-generating activities promoted by the Project	<p>The indicator counts the number of direct beneficiaries (people involved in and benefiting financially from the activity) and tracks the participation of the target groups (women and youth). The annual and end-of-project targets will be cumulative, since the start of the project.</p> <p>Income-generating activities (IGA) business plans/proposals shall</p>	Biannual	Business plans/IGA proposals Post-financing follow-up (to validate participation) (collection form)	Each selection committee shall provide the PCU with plans of all approved IGAs and post-training installation kits (C4.1). Recipients will be counted twice: at the planning and funding approval stage, and after implementation of the proposed investments. The final figures will be those recorded after funding.	Operators in charge (if any), Responsible staff for component 4



	<p>include a detailed list of members, including their age and gender.</p> <p>Installation Kits after Technical and Professional Training and post-qualifying training are also accounted for.</p> <p>A list of eligible activities and expenses will be drawn up as part of the preparation of the implementation manual, and revised if necessary, on the basis of the diagnosis and the implementation mechanism at the start of the project.</p>				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which young people 18-24 (regional)					



Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which young people 25-40 (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which Female (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					



Senegal					
<p>Technical and scientific executives trained in pastoralism (including diploma courses)</p>	<p>This indicator tracks the number of national technical and scientific executives who have completed training on pastoralism (including diploma training). The annual and end-of-project targets will be cumulative, since the start of the project.</p> <p>Diploma courses include, for example:</p> <ul style="list-style-type: none"> - The Master in Pastoralism developed thanks to PRAPS-1; - Training of Veterinary Doctors; - Specialized training (veterinary public health, epidemiology); - The training of public and private veterinary service executive staff; - Specialized training received from the regional level for national technical and scientific executives, for example on the Livestock 	<p>Biannual</p>	<p>Attendance and completion records for each training course financed mainly by PRAPS-2</p>	<p>Each training organizer provides the PCU with the final lists of participants who have completed each training. The M&E responsible consolidates the list of the trained responsible and organizes it by type of training, gender, and age group.</p>	<p>Training organizers, the responsible of the component</p>



Sector Investment Policy Toolkit (LSIPT), the interactive model for the environmental assessment of global livestock (GLEAM-i), or training on feed balances based on the New FAO Guidelines.

The list of training topics included in the concept of “pastoralism”, the definition of “national technical and scientific frameworks” and the method for calculating beneficiaries will be further developed in the M&E manual.

Training should at least lead to a certificate, and last at least 3 days to be accounted for in this indicator.

Refresher training can also be accounted.

The M&E system will also translate the number of technical and scientific executives trained into equivalent men/day.

The baseline corresponds to



	PRAPS-1 achievements as of December 31, 2020, one year before closing (corresponding to veterinary doctorate/masters and masters in pastoralism).				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which Female (regional)					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Pastoralism-specific parameters sustained in the national early warning system	The integration of parameters specific to	Biannual	Monthly newsletters,	The authorized bodies will transmit the	Responsible for



	<p>pastoralism is an achievement of PRAPS-1. The results for integrating these parameters vary from 5 to 13 parameters depending on the country. The efforts to define the parameters - or even to integrate new parameters - will continue during PRAPS-2, in particular taking into account the new FAO guidelines (which will be disseminated within the framework of the Project with the targeted support of the regional level) for the feed assessment integrated into the national early warning system.</p> <p>For PRAPS-2, indicator # 15 will be used to measure whether the monitoring and use of these parameters specific to pastoralism are maintained in the national system without PRAPS-2 financial support (stopping funding in year 4 at the latest).</p>		<p>regular Early Warning System (SAP) reports, quarterly report</p>	<p>reports to the PCU. The responsible staff for M&E analyzes and counts the number of parameters each month.</p>	<p>Component 5</p>
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Countries are free to seek to perpetuate as many parameters as they wish (beyond 5) but must at least maintain the following 5 indicators (list proposed by CILSS).

- 1) State of pastures (biomass) / Forage balance;
- 2) Bush fires / Burnt area;
- 3) Access to water;
- 4) Animal health situation / epidemics;
- 5) Terms of trade for livestock / cereals (Goat / millet price ratio).

The sustainability analysis will be done bi-annually on the basis of the following outputs:

- existence and availability of data (mandatory)
- as well as: at least two analysis meeting reports on the data collected (including results of the analysis); or at least two pastoral bulletins published presenting an analysis of the data collected, or at least two



	notes to decision-makers presenting an analysis of the data collected.				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Management committees with at least 15% of women actively participating	<p>The indicator monitors the proportion of sustainable management committees in territories with at least 15% of women participating in their governance.</p> <p>Participation will be based on the grid “Determining the quality of women’s participation in Management Committees” (cf. Regional Study on Gender Gap “Addressing gender disparities” produced during the preparation of PRAPS-2). Only “active” and “very</p>	Biannual	List and detailed composition of each Committee supported by the Project disaggregated by sex Action plans Activity reports	Data collected as part of monitoring activities under Components 2 and 3 involving Management Committees.	Regional branches The Gender focal point will work jointly with staff responsible for components 2 and 3 and review, consolidate and share data with the M&E specialist.



	active” participation will be considered at the indicator level.				
Burkina Faso					
Chad					
Mauritania					
Mali					
Niger					
Senegal					
Women having received financial literacy training	The indicator tracks the proportion of women beneficiaries of sub-projects (SC3.3), technical and vocational training (SC4.1), and income-generating activities (SC4.3) who have received training in financial management adapted to their needs and capacities.	Biannual	Operators and entities involved in the implementation of components 3.3, 4.1. and 4.3. Action plans Activity reports	Data collected as part of monitoring activities under Components 3 and 4	Regional branches, responsible for component 5 Gender specialist jointly with staff responsible for components 3 and 4 to review, consolidate and share data with the M&E specialist
Burkina Faso					
Chad					
Mauritania					



Mali					
Niger					
Senegal					
Senegal					
Farmers having benefited from agricultural assets or services - Regional level	<p>The indicator counts the number of pastoralists, agro-pastoralists, and value chain actors who have benefited from agricultural assets or services as a result of the PRAPS-2.</p> <p>The annual targets have been estimated on the basis of forecasts for the CBPP and PPR vaccinations, which are expected to generate the greatest number of beneficiaries. However, for the report of achievements, all the activities will be taken into account.</p> <p>The categories of beneficiaries to be included in the calculation are:</p> <p>1) Vaccination beneficiaries (calculated on</p>	Biannual	Data collection forms Activity reports (component/sub-component)	The ES team maintains databases and tracks reports for all four categories of beneficiaries, while avoiding double counting to the extent possible.	Component Leads



the basis of the incremental number of animals vaccinated compared to data reported in PRAPS-1 using an adjusted methodology) (C1).

It should be noted that for all countries and for both CBPP and PPR, the beneficiaries of the n/n+1 immunization campaign will be counted in the RF in year n+1, except in BF where the campaigns do not straddle 2 calendar years (in BF, the results of year n are therefore counted in the same year).

2) Beneficiaries of infrastructure (water points, markets, slaughter areas, etc.) (C2-C3)

3) Beneficiaries of the training (related to animal husbandry, pastoralism, resource management, but also the more transversal training of C4.1 and C5)

4) Beneficiaries of economic (C3.3) and social (C4.3) sub-



projects.

To partially avoid double-counting, Groups 3) and 4) will be required to mention in their training registration or in this business plan/ IGA proposal if they have benefited from other PRAPS-2 interventions. This will not be an exclusion criterion for beneficiaries, but the total count of beneficiaries will exclude their double counting.

Alternatively, national teams can determine a priori whether there is a clearly expected double counting between the four categories. If so, country-specific M&E provisions will be adjusted accordingly.

Other project beneficiaries (or other benefit streams) will be accounted for through specific intermediate or additional indicators to be included in the M&E manual.



	The baseline corresponds to PRAPS-1 achievements as of December 31, 2020, one year before closing. It may be revised to take into account the results achieved as of December 31, 2021, which will constitute the true reference situation of PRAPS-2.				
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					
Of which Female - Regional					
Burkina Faso					
Chad					
Mali					
Mauritania					
Niger					
Senegal					



<p>Countries and regional institutional capacity built for climate-informed livestock policies and strategies</p>	<p>This indicator measures the number of beneficiary countries of PRAPS-2 and regional institutions (CILSS, Agrhymet) trained in the use of specific tools to consolidate, analyze and exploit data related to climate and climate. " livestock, including GLEAM-i and forage balances, to support the development of climate-aware strategies and decisions for adaptation and mitigation (short and long term), as well as reporting (including on NDCs).</p>	<p>Biannual</p>	<p>Activity reports Attendance and completion records for each training course financed by PRAPS-2. Training material and case studies.</p>	<p>Each PCU will collect the list of participants having completed the trainings.</p>	<p>Responsible staff for component 5 and M&E</p>
<p>Regional capacity strengthened to conduct prospective analyzes on the livestock sector</p>	<p>This indicator will measure the number of studies carried out under CILSS leadership jointly with countries, using state-of-the-art tools and methods (including LSIPT), improving their capacity to assess the livestock sector's contribution to poverty reduction, food security, and GDP, and perspective of evolution and competitiveness of the</p>	<p>Annual</p>	<p>Studies</p>	<p>Compilation of studies on the livestock sector led or supported by CILSS.</p>	<p>PCUs, and R-PCU, compiled by R-RPU M&E specialist</p>



	livestock-meat value chains (including form pastoral systems).				
Percentage of grievances addressed in line with timelines and protocols established	This indicator will monitor the compliance of N-PCUs in addressing the grievances related to the Project, in order to ensure that such grievances are promptly and adequately managed.	Annual	Records from PCUs.	Responsible staff in charge of grievance mechanisms in each country at N-PCU level will collect and share data according to a common template. Data will be consolidated at the regional level by R-PCU.	Responsible staff in charge of grievance mechanisms Responsible staff in charge of M&E

ANNEX 1: Implementation Arrangements and Support Plan

I- Implementation Arrangements

CILSS

1. Under the political leadership of and in agreement with ECOWAS and WAEMU, CILSS⁷⁵ will retain the role of regional implementing agency, with primary responsibility for: (i) regional coordination; (ii) implementation of activities in support to regional integration; and (iii) tailored technical assistance to PRAPS-2 beneficiary countries. CILSS will delegate the operational responsibility related to Component 1 to two specialized institutions with mandates on animal health: (i) RAHC⁷⁶ will carry out activities related to regional integration; and (ii) OIE⁷⁷ will carry out tailored technical assistance activities for the six PRAPS-2 beneficiary countries in continuity with the work initiated under PRAPS-1. Considering the absence of permanent fiduciary staff in RAHC and the time required to establish such capacity, it was agreed that ARAA⁷⁸ would support RAHC by carrying out procurement and FM for activities implemented by RAHC under this Project. Two subsidiary agreements will be signed: one between CILSS and ECOWAS on behalf of RAHC and ARAA, and one between CILSS and OIE.⁷⁹ A Memorandum of Understanding will be updated between ECOWAS/RAHC and OIE to clarify cooperation and coordination mechanisms under PRAPS-2. PRAPS-2 is determined to support even more strongly regional integration, and the strategic and political commitments of ECOWAS in this area. From this point of view, the mid-term review (MTR) of PRAPS-2 will allow to take stock and assess the capacities of the CRSA as well as the merits of reviewing its role in terms of implementation of the regional animal health component under the Project.

2. Regional activities will be guided by the decisions of the current RSC for CILSS Projects and Programs, to which the Regional Project Coordination Unit (R-PCU) will report and carried out under the aegis of the Regional Technical Committee (RTC). The RSC is chaired by the ECOWAS Commissioner on Agriculture,

⁷⁵ CILSS, created in 1973, is mandated to "invest in research on food security and the fight against the effects of drought and desertification, in order to achieve a new ecological balance in the Sahel." The CILSS Secretariat is based in Ouagadougou, Burkina Faso, and the Committee has two specialized technical institutions: the AGRHYMET Regional Center in Niamey, Niger, responsible for information, research, and training, and the Sahel Institute (INSAH) based in Bamako, Mali, responsible for coordinating agro-socio-economic research and action research.

⁷⁶ RAHC is the ECOWAS Specialized Agency for Animal Health, in conformity with the decision of ECOWAS Heads of State - Supplementary Act n° A/SA-20/02/12. The ECOWAS Commission operationalized RAHC in 2018. Its mandate is to coordinate actions that contribute to food and nutritional security, improving livelihoods by improving animal health and welfare, and developing animal resources by ensuring the formulation of a relevant framework for the coordination of prevention and control actions for transboundary diseases and zoonoses. To achieve and effectively implement its mandate, RAHC coordinates actions in ECOWAS Member States (the main stakeholders), creates relevant partnerships, and mobilizes resources. RAHC is based in Bamako, Mali.

⁷⁷ OIE is an intergovernmental organization setting standards on animal health. It is subject to the authority and control of a Committee composed of National Delegates from its 182 Member Countries. In the context of programs funded by donors, management of procurement is placed under the responsibility of the following senior staff members at the OIE Headquarters: the Director General, the Director of Administration, the Head of the Engagement and Investment Department, the Procurement Officer, and the Head of the Budget Unit; in addition, the Head of Legal Affairs and the Internal Control Officer (internal audit and procedural matters) are also involved. OIE is headquartered in Paris, France, and its regional representation for Africa is located in Bamako, Mali, next to RAHC, where the staff in charge of PRAPS-2 will also be based, as under PRAPS-1.

⁷⁸ ARAA is an ECOWAS specialized agency mandated to "ensure the technical execution of regional investment programs and plans contributing to the operationalization of the regional ECOWAS agricultural policy by relying on regional institutions, organizations and actors with proven skills." Its mission is to: (i) strengthen the technical intervention and action capacities of the Department of Agriculture, Environment and Water Resources of ECOWAS in the implementation of investment programs to enable the Department to fully play its sovereign role (strategic orientation, regulation, management and monitoring-evaluation, strategic watch, etc.); (ii) coordinate, with a view to rationalization, the activities and fields of intervention of technical institutions specializing in agriculture and agro-food; and (iii) contribute to building the capacities of regional and national actors in the preparation of projects, the implementation and monitoring of activities. This agency comprises a dedicated permanent fiduciary staff and has experience in managing projects (EU, AFD, USAID, and others) but has not yet been in charge of World Bank-financed operations.

⁷⁹ An agreement signed between CILSS and OIE under PRAPS-1 will serve as reference.

Environment, and Water Resources (or representative) and includes, among others, a WAEMU representative acting as vice-president, the Executive Secretary of CILSS acting as secretary, CILSS/Agrhymet, CILSS/INSAH, representatives of each Member State of ECOWAS and WAEMU, two permanent secretaries of CONACILSS, and representatives of donor agencies and POs. The RSC is responsible for ensuring alignment of the Project with the overarching regional strategies and programs, and it also validates the AWPB that will be prepared and submitted by CILSS to the World Bank, integrating respective AWPBs from OIE and RAHC. The RTC will monitor progress and provide recommendations for the efficient implementation of the Project. The AWPB will be submitted in draft form to the World Bank for review by the end of November, each year, to be approved by the end of January of the corresponding year. The RSC will be held at least once per year, and the RTC at least twice per year. Additional ad hoc sessions may be convened if needed. Considering the specificities of the animal health component of the proposed project, a dedicated RTC for animal health, comprising relevant specialized agencies and partners involved in animal health activities in the region, will be held twice each year, ideally back-to-back with meetings of the RVC (comprising all national Chief Veterinary Officers of the region). The composition of these committees will be detailed in the PIM. See also Figures A1.1 and A1.2.

3. A Regional Coordination Unit (R-PCU) will be set up, retaining several staff from PRAPS-1 and recruiting additional specialists based on identified needs (evolution of job profiles). The R-PCU will be located in one of CILSS's institutions.⁸⁰ RAHC and OIE staff in charge of PRAPS-2 implementation on animal health will be based in Bamako, Mali, while the fiduciary management of OIE and RAHC will be carried out respectively by OIE Headquarters (Paris, France) and ARAA (Lomé, Togo). The R-PCU will be attached to the Regional Support Program for Natural Resources Management, Climate Change (PRA/GRN-CC) of CILSS. The Management Support Unit—Administration, Finance and Accounting of CILSS will be responsible for managing the Project funds. The R-PCU will be staffed with specialists responsible for the coordination of technical activities, as well as an FM specialist, an accountant, a procurement specialist, a gender and GBV specialist, an E&S safeguard specialist, a communication specialist, and support staff. More detail is provided in Figure A1.3. All staff to be recruited will be selected competitively according to ToR that will be included in the PIM. To implement regional activities, the R-PCU will establish conventions/contracts with agencies that will be entrusted with pre-identified roles and responsibilities over the Project lifetime, such as FAO, CIRAD, the Institute for Research and Application of Development Methods (IRAM), the International Livestock Research Institute (ILRI), the West African Council for Agricultural Research and Development (*Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles*, CORAF), the Association for the Promotion of Livestock Production in the Sahel and Savannah (*Association pour la Promotion de l'Élevage au Sahel et en Savanne*, APESS), and Billital Maroobé Network (*Réseau Billital Maroobè*, RBM). The R-PCU will interact with N-PCUs of PRAPS-2 beneficiary countries for planning, harmonization of approaches, provision of tailored technical assistance, M&E, communication, and reporting. The N-PCUs will also contribute to shape the R-PCU program through their participation in the RTC and based on the identified needs for tailored technical assistance.

⁸⁰ PRAPS-1 R-PCU is based at CILSS Headquarters in Ouagadougou, Burkina Faso; the recent reform of CILSS envisages to relocate Project Coordination Units at one of CILSS's technical institutions, Aghymet, in Niger; relocation of R-PCU will have to be approved by the World Bank, taking into account conditions that will allow the R-PCU to operate efficiently and without causing any disruption detrimental to the regional Project coordination operations.

Figure A1.1: Links between regional and national institutional arrangements, PRAPS-2

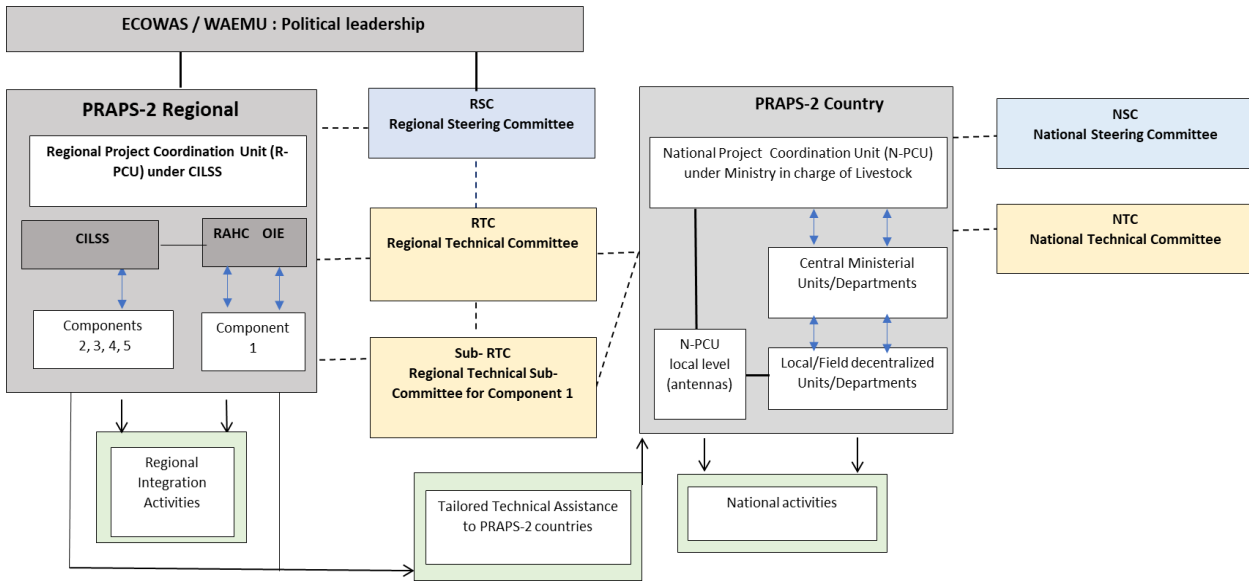


Figure A1.2: The R-PCU of PRAPS-2 within the CILSS organigram

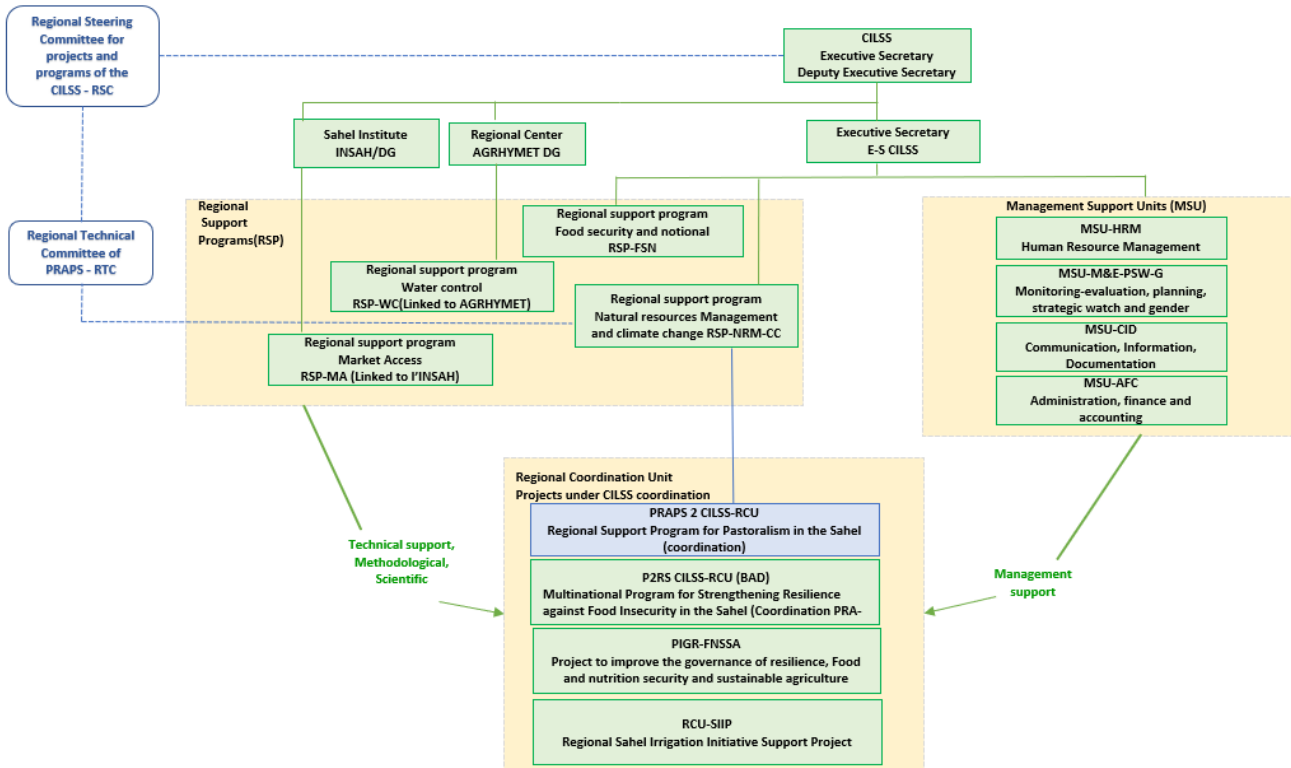


Figure A1.3: Regional institutional arrangements for PRAPS-2—CILSS

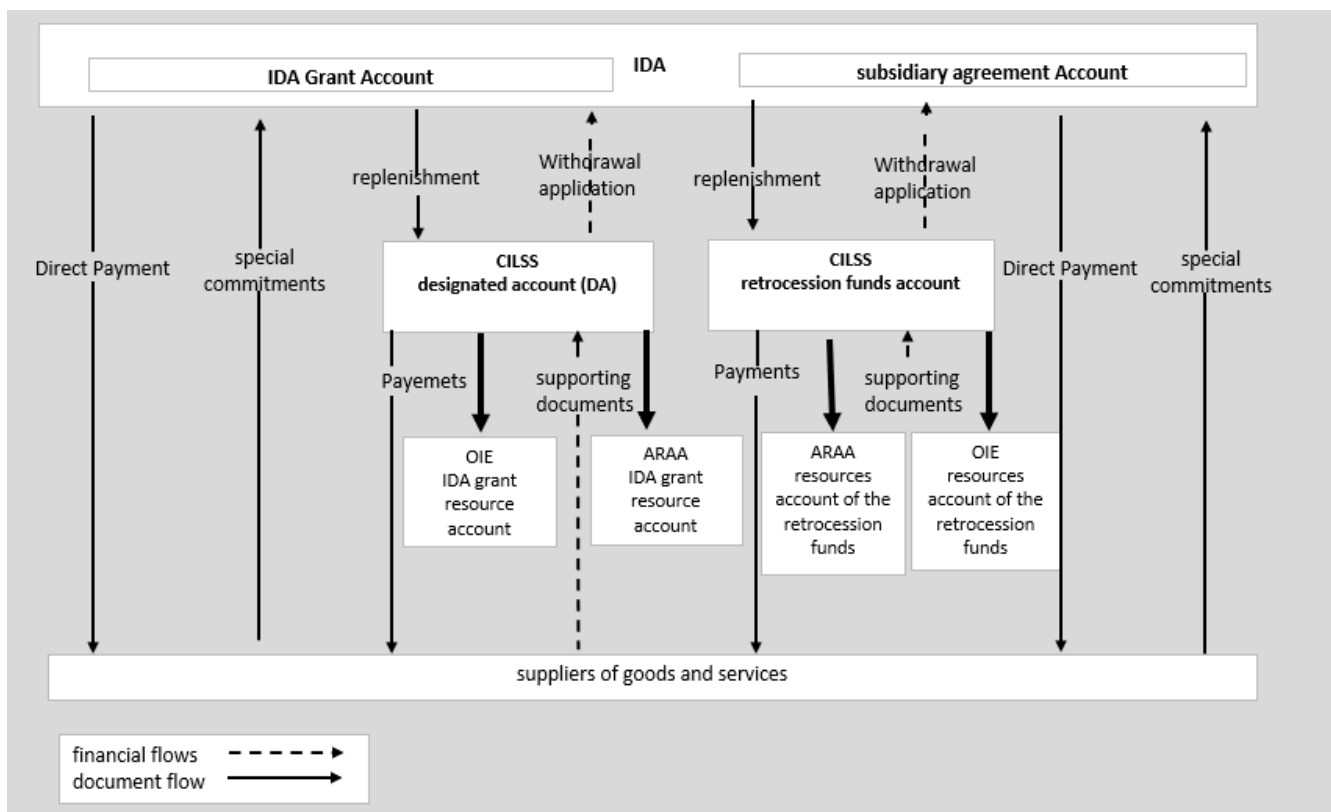
<p>REGIONAL STEERING COMMITTEE OF CILSS PROJECTS AND PROGRAMS (RSC/CRP)</p>	<p>Exchange and Guidance Body. Chaired by ECOWAS and WAEMU, with CILSS as Secretariat, it includes donors, representatives of CILSS member countries and Professional Organizations. Composition can evolve. Meeting frequency: At least once a year</p>
<p>REGIONAL TECHNICAL COMMITTEE (RTC/CTR)</p>	<p>Implementation Monitoring Body. Chaired by CILSS Executive Secretary (or representative); includes the Regional PRAPS Coordinator and all National PRAPS Coordinators, representatives of regional implementation agencies (such as OIE/CRSA), select regional and international organizations, regional pastoralist organizations, regional Civil Society Organizations, regional academic and research institutions.</p>
<p>REGIONAL PROJECT COORDINATION UNIT FOR PRAPS-2-CILSS (R-PCU)</p> <p>Technical Financial Management Procurement Monitoring & Evaluation Safeguards, Gender, Communication</p>	<p>In charge of day-to-day management of the implementation of PRAPS-2-CILSS activities. The R-PCU will comprise the following (all contractors): A Regional Coordinator A Natural Resources Management Expert A Value Chains Expert A Knowledge Management Expert A Social Development and Pastoral Crisis Expert An M&E Expert A Gender Expert A Social and Environmental Safeguards Expert A Communication Expert A Financial Management Expert and an Accountant A Procurement Expert On Component 1: 2 Technical Experts in RAHC (and 1 Accountant in ARAA), 3 Technical Experts in OIE Support staff (IT Assistance in CILSS, Administrative Assistants, Drivers)</p>
<p>Implementation Stakeholders Component 1</p>	<p>Regional Animal Health Center – RAHC World Organization for Animal Health – OIE Partnerships with EISMV, UEMOA, CIRAD, ILRI, FAO Relation with other actors involved and relevant regional projects</p>
<p>Implementation Stakeholders Component 2</p>	<p>CILSS/PRA-GRN-CC/AGRHYMET Partnerships with FAO, CIRAD, IRAM, CORAF, ILRI, Regional professional organizations (APESS, RBM) Relation with other professional organizations, other relevant regional projects</p>
<p>Implementation Stakeholders Component 3</p>	<p>CILSS/PRA- Accès aux Marchés Partnerships with FAO, CIRAD, CORAF, ILRI, Regional professional organizations (RBM, APESS, ROPPA, COFENABVI) Relation with FAO, PAM, FEWNET, RESIMAO, national SIM; other relevant regional projects</p>
<p>Implementation Stakeholders Component 4</p>	<p>CILSS/INSAH Contracting with specialized training expertise centers Relation with other relevant regional projects</p>
<p>Implementation Stakeholders Component 5</p>	<p>CILSS/PRA-GRN-CC/AGRHYMET Partnership with FAO Relation with Committee on Pastoralism (CILSS, FAO, Oxfam, PAM, FEWSNET, ACF, Save the Children, etc.) Coordination with other relevant regional projects (PAGR-SANAD, PREDIP, P2RS, PEPISAO, etc.)</p>

4. **Financial management.** Figure A1.4 shows the flow of funds from the regional level. The R-PCU will function with a DA receiving funds from the regional IDA grant, which will primarily finance coordination activities as well as regional integration activities. In addition, the R-PCU will open another DA to receive funds from PRAPS-2 beneficiary countries, each of which will allocate 4 percent of their PRAPS-2 IDA budget to the R-PCU, primarily to finance tailored technical assistance. As under PRAPS-1, under PRAPS-2 a subsidiary agreement will be signed between CILSS and the respective PRAPS-2 beneficiary countries to that effect. CILSS accounts will be subject to internal and external audits. External financial audits of CILSS will be carried out once per year, and reports will be submitted to the World Bank for review and approval. (See details in Annex 3).

5. **Procurement.** CILSS will carry out procurement for all activities except those related to Component 1, for which procurement will be implemented by ARAA (for RAHC activities) and OIE. The conditions for these arrangements will be laid down in the respective agreements. (See details in Annex 3).

6. **Reporting.** The R-PCU will submit consolidated six-monthly and annual technical reports, as well as six-monthly unaudited IFRs.

Figure A1.4: Regional flow of funds, PRAPS-2

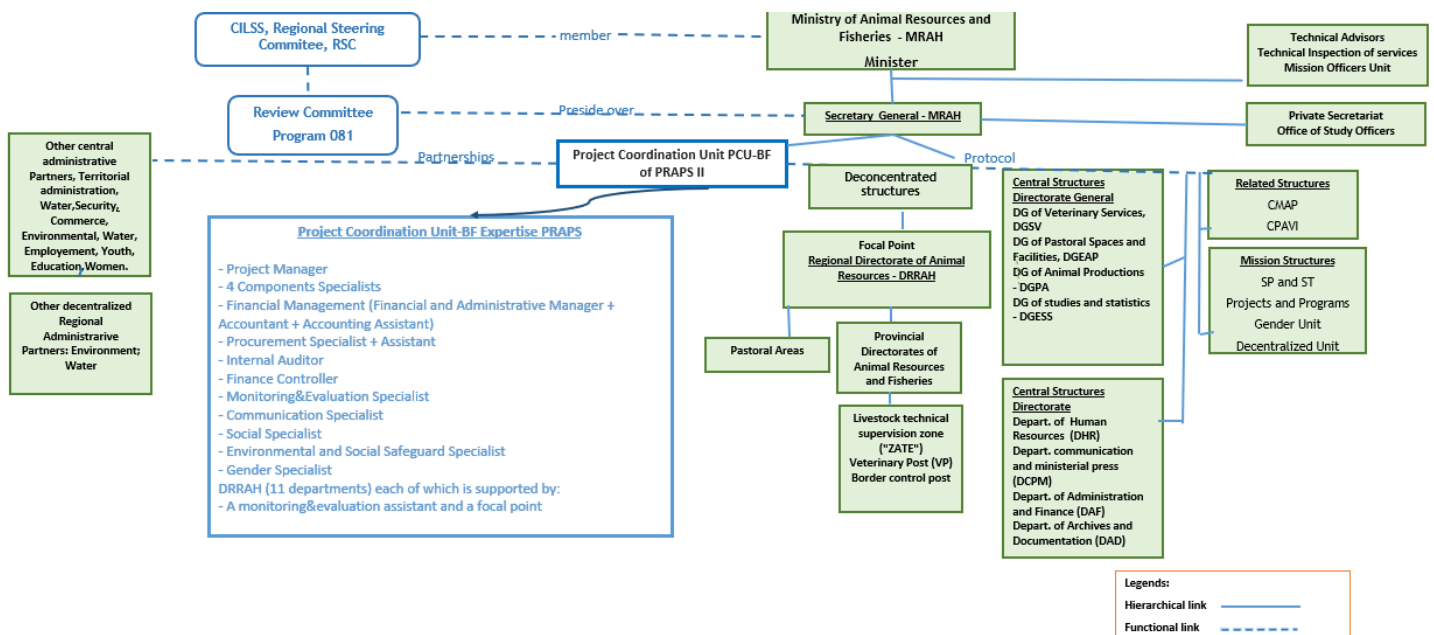


Burkina Faso

7. PRAPS-2 Burkina Faso (PRAPS-2-BF) will be placed under the technical oversight of the Ministry of Animal Resources and Fisheries (MRAH) and financial oversight of the Ministry in charge of Finance. Its steering and guidance body will be the Review Committee (RC) of projects under the budget program 081, of which PRAPS-2-BF is a part. The composition and functioning of the RC have been determined by Decree N°2018-0092/PRES/PM/MINEFID of February 15, 2018,⁸¹ which provides the general regulations for development projects and programs implemented in Burkina Faso. The RC will be chaired by the Secretary General of MRAH and will meet twice a year.⁸²

8. PRAPS-2-BF will be implemented by a multi-disciplinary team headed by a National Project Coordinator, supported by a Project Manager, who will report to him/her. The Project Manager (contractual staff) will be assisted by a technical and fiduciary team comprising all relevant disciplines (FM, procurement, M&E, gender, E&S safeguards, communication) as well as four technical experts to cover Components 1–4. To implement the Project at the subnational level, agreements (conventions) will be signed with 11 Regional Directorates of Animal Resources and Fisheries (DRRAH) covering the Project regions, which will be supported by 11 M&E assistants and appointed focal points. Detailed institutional arrangements are shown in Figures A1.5 and A1.6.

Figure A1.5: PRAPS-2-BF institutional and implementation arrangements (organigram)



⁸¹ According to said Article 52 of this decree, the person responsible for the budget program concerned is the Coordinator of the PCU.

⁸² The first session takes place at the end of July at the latest to review and approve physical and financial execution of year N of the Project. The second session takes place no later than December of each year to review and adopt the AWPB of year N+1.

Figure A1.6: PRAPS-2-BF institutional and implementation arrangements

<p>REVIEW COMMITTEE (RC)</p>	<p>Steering and Guidance Body. Chaired by the SG of MRAH assisted by a technical secretary in charge of budget program "Securing and Sustainable Management of Pastoral Resources". Other members include: DGESS-MRAH, SP/CVEL, PRAPS-2 BF, PDPS, Senior Technical Advisor of ReVaP, two (2) Regional Directors of MRAH in areas targeted by the Project, DMP, AMBF, Ministry of Hydraulics: DG of Water Resources, Ministry in charge of Finance - MINEFID: DGC, DGEP, DGTCP, Ministry of Land Administration: DPGC, Ministry of Environment, Ministry in charge of Youth and Jobs, POs (2). Observers: IsDB, World Bank, LuxDev, GGW country focal point. Twice a year.</p>
<p>PROJECT COORDINATION UNIT FOR PRAPS-2-BF (BF-PCU)</p> <p>Technical Financial Management Procurement Monitoring & Evaluation Gender Environment and Social Safeguards Communication</p>	<p>In charge of day-to-day management of PRAPS-2 BF activities. The BF-PCU will comprise the following: A Project Manager (contractual staff) An Animal Health Specialist (contractual staff) A Management and Land Governance Specialist (contractual staff) A Value Chain Development Specialist (contractual staff) A Social and Economic Inclusion Specialist (contractual staff) An Administrative & Financial Management Expert (contractual staff), an Accountant (contractual staff), and an Accounting Assistant (contractual staff) A Procurement Specialist (contractual staff) and a Procurement Assistant (contractual staff) An M&E Expert (contractual staff) An Internal Auditor (contractual staff) A Financial Controller (contractual staff) A Gender Specialist (contractual staff) An Environment Safeguard Specialist (contractual staff) A Social Safeguard Specialist (including GBV) (contractual staff) A Communication Specialist (contractual staff) Support staff (IT Specialist, Executive Assistant, Technical Support Assistant, Drivers, Liaison Agent, Guards)</p>
<p>IMPLEMENTATION ARRANGEMENTS IN THE ELEVEN REGIONS COVERED BY THE PROJECT Eleven (11) Regional Directorate of Animal Resources and Fisheries (DRRAH) through Agreements (<i>conventions</i>), headed by the Regional Director (civil servant) Eleven (11) M&E Assistants (contractual staff) Focal points (appointed civil servants); Support staff (Drivers, Liaison Agent, Guards, etc.)</p>	
<p>Implementation Stakeholders Component 1</p>	<p>DGSV Partners: POs, Central and sub-national state services in charge of animal health, Private veterinarians, para-professional veterinarians and animal health auxiliaries, veterinary and livestock research institutes, livestock job training schools, projects/programs (PADEL-B), Inter-State School of Veterinary Science and Medicine – EISMV</p>
<p>Implementation Stakeholders Component 2</p>	<p>DGEAP (for pastoral schemes) and DGPA (for fodder crop and agro-industrial sub-products) Partners: Research institutes, NGOs and associations, central and local administrative authorities, Ministries in charge of Water, Environment and Agriculture, Agrhymet, CILSS, private operators.</p>
<p>Implementation Stakeholders Component 3</p>	<p>DGPA Partners: POs, actors in cattle/meat and milk value chains, local administrative authorities, central and sub-national technical services in charge of livestock and trade, Public or Private Support and Advisory Service Operators. For SIM-B, General Directorate for Studies and Sector Statistics (DGESS) of MRA and General Directorate for the Promotion of Rural Economy (DGPÉR) of the Ministry of Agriculture</p>
<p>Implementation Stakeholders Component 4</p>	<p>DRH Partners: Ministry in charge of Women and Social Action via its subnational entities and in partnership with Ministries in charge of Education, Jobs and Youth, Professional Training, local administration, (women) pastoral POs</p>
<p>Implementation Stakeholders Component 5</p>	<p>BF-PCU Partners: SE-CNSA, SAP, CTA, CTSP, RVC, SP-CVEL</p>

Note: AMBF: Association des Municipalités du Burkina Faso ; ASE: Assistant Suivi-Evaluation ; CMAP: Centre national de Multiplication des Animaux Performants ; CPAVI: Centre de Promotion de l'Aviculture Villageoise ; CTSP: Comité Technique de Suivi de la situation Pastorale ; DGC: Direction Générale de la Coopération ; DGEP: Direction Générale de l'Economie et de la Planification ; DGTCP: Direction Générale du Trésor et de la Comptabilité Publique ; DGESS: Direction Générale des Etudes et des Statistiques Sectorielles ; DGPÉR: Direction Générale de la Promotion de l'Economie Rurale ; DGSV: Direction Générale des Services Vétérinaires ; DGEAP: Direction Générale des Espaces et des Aménagements Pastoraux ; DGPA: Direction Générale des Productions Animales ; DMP: Direction des Marchés Publics ; DRRAH: Direction Régionale des Ressources Animales et Halieutiques ; DRH: Direction des Ressources Humaines ; MINEFID: Ministère des Finances, de l'Economie et du Développement ; PDPS: Programme de Développement durable des exploitations Pastorales du Sahel-Burkina ; ReVaP: Récupération et Valorisation des espaces Pastoraux ; RVC: Relais de Veille Communautaire ; SP/CVEL: Secrétariat Permanent en charge de la gestion des Crises et Vulnérabilités en Elevage ; SE-CNSA: Secrétariat exécutif du Conseil National de Sécurité Alimentaire ; SAP: Système d'Alerte Précoce ; SP: Secrétariats Permanents ; ST: Secrétariats Techniques

Chad

9. PRAPS-2-Chad (PRAPS-2-TD) will broadly adopt the PRAPS-1-TD institutional and implementation arrangements, with a few changes based on lessons from the first phase. PRAPS-2-TD will be anchored at the General Directorate of the Ministry of Livestock and Animal Production (DG-MEPA). The National Steering Committee (CNP) set up during phase 1 and maintained in phase 2 will be responsible for: (i) the annual programming of Project activities and approval of the AWPB; (ii) monitoring implementation and results, in particular the analysis and approval of activity reports and financial and operational audits; and (iii) recommending corrective measures that may be necessary. The CNP will comprise the Directors General of the sectoral ministries involved in rural development (Agriculture, Environment, Water, Transport, and so on) and the Ministry of Planning and International Cooperation, development partners, and representatives of POs and other civil society organizations. To monitor PRAPS-2-TD implementation, the Technical Steering Committee (CTO) established for PRAPS-1, comprising all relevant technical ministerial departments, will be maintained and chaired by the Director General of MEPA. A ministerial *arrêté* will adapt the composition of the CNP and CTO to operate under PRAPS-2 as needed.

10. The PCU for PRAPS-2-TD will be responsible for overall Project coordination. A National Coordinator reporting to the DG-MEPA will head the PCU, assisted by a technical team comprising all relevant disciplines (operations, FM, procurement, M&E, gender, safeguards, and communication). At the central level, the technical directorates of MEPA involved in implementing the Project will work under the coordination of the National Coordinator. At the provincial level, the main change in the implementation arrangements compared to PRAPS-1-TD is that NGOs will be recruited as service providers to coordinate selected Project activities in lieu of the regional offices (*Antennes Régionales*) that performed that task in the first phase. PRAPS-2-TD will establish five provincial units to cover the targeted operating areas of the Project. Deconcentrated branches of MEPA will be responsible for Project monitoring at the provincial level. Figures A1.7 and A1.8 depict the detailed institutional and implementation arrangements.

Figure A1.7: PRAPS-2-TD institutional and implementation arrangements (organigram)

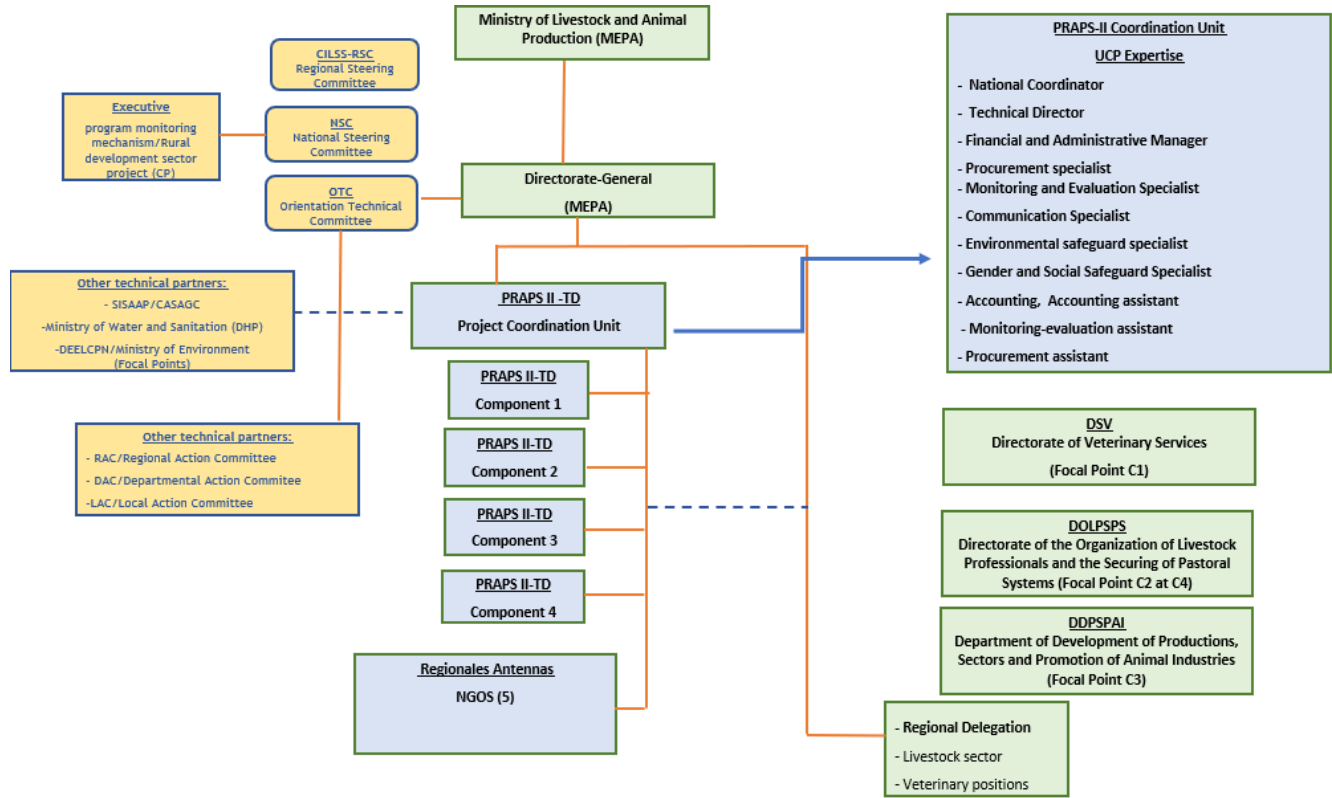


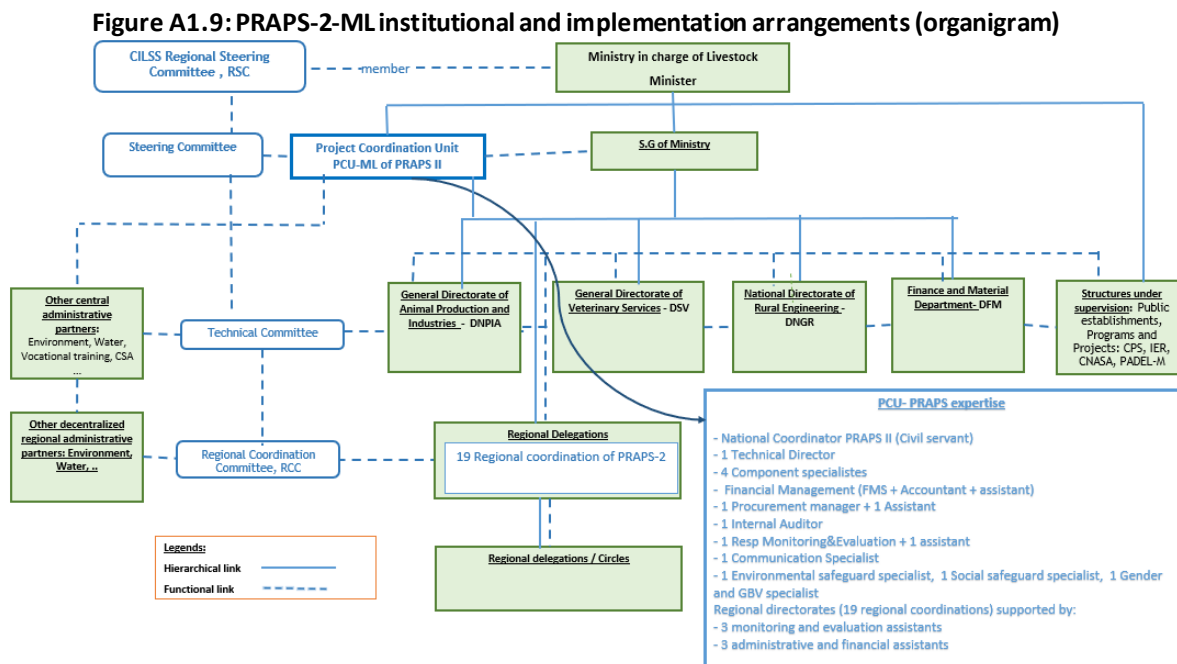
Figure A1.8: PRAPS-2-TD institutional and implementation arrangements

<p>NATIONAL STEERING COMMITTEE (CNP)</p>	<p>Exchange and Guidance Body. Co-chaired by a representative from the Ministry of Economy and Planning and Director General from a sectoral ministry, and comprising DG-Min of Livestock, DG Min of Agriculture, DG- Min of Water, DG-Min of Environment, DG- Min of Equipment, DG-Min of Finance and Budget, PO representatives, civil society organization representatives, CILSS representative, GW country focal point. Meeting frequency: twice a year.</p>
<p>ORIENTATION TECHNICAL COMMITTEE (CTO)</p>	<p>Implementation Monitoring Body. Chaired by the DG of MEPA (Secretariat by National Coordinator) and comprising representatives of Technical Directorates, livestock organizations, NGOs, POs (CONFIFET, CONFENET, CONORET, CNRPT), research organizations and universities, and of SAP, SIPSA, CAS, SIM-B, etc., and pastoralism support projects. Meeting frequency: twice a year</p>
<p>PROJECT COORDINATION UNIT FOR PRAPS-2-TD (TD-PCU) Technical Financial Management Procurement Monitoring & Evaluation Gender Environment and Social Safeguards Communication</p>	<p>In charge of day-to-day management of PRAPS-2-TD activities. The TD-PCU will comprise the following: A National Coordinator (civil servant) A Technical Director (contractor) An Administrative & Financial Management Expert, an Accountant, and two Accountant Assistants (contractors) A Procurement Expert (contractor) and two Procurement Assistants (contractors) An M&E Expert and Assistant M&E (contractors) An Environment Safeguard Expert (contractor) A Social Safeguard Expert (contractor) A Gender & GBV expert (contractor) A Communication Expert (contractor) An Internal Auditor (contractor) A Hydraulic and Civil Engineer (contractor) One expert (contractor) for each Component 1–4, plus support from technical staff from DSV, DSSP, DDFA, DOPEFE, and DESPA Support Staff (Assistants, Drivers, Guards, etc.)</p>
<p>IMPLEMENTATION ARRANGEMENTS IN TARGETED REGIONS Five (5) Provincial Units will be established at the provincial level NGOs will be contracted as service providers to coordinate and monitor implementation of activities at provincial level</p>	
<p>Implementation Stakeholders Component 1</p>	<p>Direction des Services Vétérinaires (DSV) Director and Technical Staff /Regional Delegations POs</p>
<p>Implementation Stakeholders Component 2</p>	<p>Direction de l'Organisation des Professionnels de l'Elevage et de la Sécurisation des Systèmes Pastoraux (DOPESSP) (Point Focal C2 et C4) DHP Regional Delegations Partnerships with POs, NGOs, Pastoral Platform</p>
<p>Implementation Stakeholders Component 3</p>	<p>Direction du Développement des Productions, des Filières et de la Promotion des Industries Animales DDPFPIA (Director and Technical Staff), Regional Delegations Partnerships with POs, traders, unions, federations, local interprofessions, NGOs, Pastoral Platform</p>
<p>Implementation Stakeholders Component 4</p>	<p>DOPESSP Ministère de l'Administration du Territoire et des Collectivités Autonomes, Ministère de la Justice chargé des droits humains pour l'accès aux registres sociaux et d'état civil Ministère de la formation professionnelle et des Métiers Ministère de la femme et de la Protection de la petite enfance pour l'Accès à la formation professionnelle et technique Ministère de l'Action Sociale pour les Activités génératrices de revenus</p>
<p>Implementation Stakeholders Component 5</p>	<p>National and subregional institutions (PREGEC, CONACILSS, DNLPC, CASAGC, SISAAP, SIPSA, Bureau Permanent MEPA) Crisis support NGOs (OCHA, ACF, OXFAM, FEWSNET) National NGOs (ADRB, AIDER, APIDEL, ADIS, PDR-WF, BAIP, BAP, AEN)</p>

Note: ADIS: Action pour le Développement Intégré du Sahel; ADRB: Association pour le Développement Régional du Batha ; AIDER : Association d'Appui aux Initiatives de Développement ; APIDEL: Agir pour la Promotion des Initiatives de Développement Local ; AEN: Association des Eleveurs Nomades ; BAIP: Bureau d'Appui aux Initiatives et Projet ; BAPE: Bureau d'Appui à la Protection de l'Environnement ; CASAGC: Comité d'Action pour la Sécurité Alimentaire et la Gestion des Crises ; DHP: Direction de l'Hydraulique Pastorale (Ministère de l'Hydraulique Urbaine et Rurale) ; DEELCPN: Direction des Evaluations Environnementales et de Lutte Contre les Pollutions et Nuisances (Ministère de l'Environnement et de la Pêche); PDR-WF : Programme de Développement Rural du Wadi Fira ; SISAAP: Système d'Information durable sur la Sécurité alimentaire et d'Alerte précoce: SIPSA: Svstème d'Information sur le pastoralisme au Sahel.

11. **PRAPS-2-Mali (PRAPS-2-ML) will be anchored at the Secretariat General of the Ministry in charge of Livestock.** A Steering Committee (COP), its composition to be established by Decision of the Ministry in charge of Livestock, will be chaired by the Minister in charge of Livestock and serve as a policy support, exchange, and guidance body at the national level. The COP will meet at least once per year. To monitor PRAPS-2-ML implementation, a Technical Committee (CT) comprising all relevant technical stakeholders will also be established by a Decision of the Ministry in charge of Livestock, and chaired by the General Secretary of the same Ministry. The CT will meet at least twice a year.

12. The ML-PCU will be headed by a National Coordinator (civil servant), who will report to the Secretary General of the Ministry in charge of Livestock. The National Coordinator will be assisted by a technical team comprising the experts in charge of the Project Components 1–4 and all other relevant disciplines: FM, procurement, M&E, gender, safeguards (including GBV), and communication. National Focal Points will be appointed in the technical departments involved⁸³ (DNPIA, DNSV, DNAT, DNA, DNGR, DNH, DNEF, DNCT, DNACPN, CNASA, LCV, OVM, IER, APCAM, OMA, pastoral livestock PO representative, other livestock projects/programs, research and education, and soon) to facilitate PRAPS-2-ML implementation. At the subnational level, 19 subnational coordination units (UCR-ML) will be established through Decisions or *arrêtés* issued by regional governors. Located within the Regional Directorates of Production and Animal Industries (DRPIA), and supported by the Regional Directorates for Veterinary Services (DRSV), these units will assist PRAPS-2-ML implementation in the targeted areas. To monitor PRAPS-2-ML implementation, 19 Regional Coordination Committees (CRCs) will be established. Figures A1.9 and A1.10 depict the detailed institutional arrangements.



⁸³ APEJ (Agence pour la Promotion de l'Emploi des Jeunes), CNASA (Centre National d'Appui à la Santé Animale), CPS/SDR (Cellule de la Planification et de la Statistique du Secteur du Développement Rural), CSA (Commissariat à la Sécurité Alimentaire), DFM (Direction des finances et du Matériel), DNA (Direction Nationale de l'Agriculture), DNACPN (Direction Nationale de l'Assainissement du Contrôle des Pollutions et des Nuisances), DNAT (Direction Nationale de l'Aménagement du Territoire), DNCC (Direction nationale du Commerce et de Concurrence), DNEF (Direction Nationale des Eaux et Forêts), DNGR (Direction Nationale du Génie Rural), DNH (Direction Nationale de l'Hydraulique), DNPIA (Direction Nationale des Productions et des Industries Animales), DNPFF (Direction Nationale de la Promotion de la Femme et de la Famille), DNSV (Direction Nationale des Services Vétérinaires), FAFPA (Fonds d'Appui à la Formation Professionnelle et à l'Apprentissage), LCV (Laboratoire Central Vétérinaire), OVM (Ordre des Vétérinaires du Mali), SAP (Système d'Alerte Précoce), UCP (Unité de Coordination du Projet), URC (Unité Régionale de Coordination).

Figure A.1.10: PRAPS-2-ML institutional and implementation arrangements

<p>GUIDANCE STEERING COMMITTEE (COP)</p>	<p>Exchange and Guidance Body. Chaired by the Minister in charge of Livestock; will include representatives of Ministries in charge of Hydraulics, Environment, Economy/Finance, Trade, Land Administration and Decentralization, Security, Territory Management and Planning, Women/Children and Family, Food Security Commissariat, High Council of Local Communities, and a representative of the Agriculture Chambers Permanent Assembly (APCAM). Observers include (inter alia) the GGW country focal point. Meeting frequency: At least once a year.</p>
<p>TECHNICAL COMMITTEE (CTO)</p>	<p>Implementation Monitoring Body. Chaired by the Secretary General of the Ministry in charge of Livestock and comprising implementation partner representatives (CPS/SDR, DNPIA, DNSV, DNA, DNH, DNPIA, DNGR, DNACPN, DNAT, DNCT, DNEF, CNASA, LCV, DFM, SAP, OMA, Promotion de la Femme et de Famille , etc.), OVM, and representatives of pastoral livestock POs, other livestock projects/programs, research and education, plus other contracted service providers, pastoral livestock project/programs of development partners. Meeting frequency: At least twice a year.</p>
<p>PROJECT COORDINATION UNIT FOR PRAPS-2-ML (ML-PCU)</p> <p>Technical Financial Management Procurement Monitoring & Evaluation Gender Environment and Social Safeguards Communication</p>	<p>In charge of day-to-day management of PRAPS-2-ML activities. The ML-PCU will comprise the following: A National Coordinator (civil servant) A Technical Director (contractor) An Animal Health Specialist (contractor) An NRM Specialist (contractor) A Market Access Specialist (contractor) A Social Inclusion/Development Specialist (contractor) An Administrative & Financial Management Expert (contractor), one Accountant and one Accountant assistant (contractors) An Internal Auditor (contractor) A Procurement Expert (contractor) and a Procurement Assistant (contractor) An M&E Expert and an M&E Assistant (contractors) A Gender & GBV Expert (contractor) An Environment Safeguard Expert (contractor) A Social Safeguard Expert (contractor) A Communication Expert (contractor) Support Staff (IT Specialist, Executive Assistants, Drivers, Guards, etc.)</p>
<p>IMPLEMENTATION ARRANGEMENTS IN TARGETED REGIONS (in association with Regional Coordination Committees for activity guidance) 19 Regional Coordination Units (UCRs) will be established within the Regional Directorates of Production and Animal Industries (DRPIA) and led by a Regional Coordinator (civil servant). These UCRs will be supported by 3 M&E Assistants (contractors) and 3 Administrative and Financial Assistants (contractors) Support Staff (Executive Assistants, Drivers, Guards, etc.)</p>	
<p>Implementation Stakeholders Component 1</p>	<p>DNSV (Director and Technical Staff) Regional, Local and Communal Veterinary Services, OPE, NGOs, OVM, private veterinarians, local communities, LCV, CNASA, service providers, rural radio stations, Ministry of Health, Ministry of Interior, Customs, Police</p>
<p>Implementation Stakeholders Component 2</p>	<p>DNPIA (Director and Technical Staff) Private operators through competitive bidding (Subcomponent 2.1), Water and Forestry Directorate, (Subcomponent 2.1: infrastructure), Rural Hydraulic Directorate (Subcomponent 2.2) through Agreements. NGOs or other specialized operators through expressions of interest (management, capacity-building of communities, etc.</p>
<p>Implementation Stakeholders Component 3</p>	<p>DNPIA Regional, local and Communal services Service and Financial Services Providers Market Observatory, Pastoralist PO</p>
<p>Implementation Stakeholders Component 4</p>	<p>Food Security Commissariat (CSA) SAP, partnerships, POs, NGOs Service providers Social Protection Department, Safety Nets Project, Promotion de la Femme et de Famille</p>
<p>Implementation Stakeholders Component 5</p>	<p>ML- UCP Partners (through arrangements), CSA, SAP, DNPIA, DNSV, DNACPN, CPS/SDR, DNPFF</p>

13. **PRAPS-2-Mauritania (PRAPS-2-MR) will be anchored at the Secretary General of the Ministry of Rural Development (in charge of Livestock, SG-MDR).** A Steering Committee (CP) will be established by ministerial *arrêté* at the national level, chaired by the Secretary General (GS) of the MDR, and serve as an exchange and guidance body. The CP will validate the AWPB. A Technical Committee (CT) (established by the same ministerial *arrêté*) will be chaired by the National Project Coordinator and comprise senior officials from the directorates of the ministerial departments involved. The CT will review the AWPB before transmission to the CP for final validation. Preparation of activity plans will start at the local level through Regional Development Committees (CRDs), chaired by the Wali/Governors and including the different regional technical services.

14. The MR-Project Coordination Unit (MR-PCU) will be headed by a National Coordinator (Contractor), who will report to the Minister of Rural Development. The National Coordinator will be assisted by a technical team comprising all relevant disciplines (FM, procurement, M&E, gender, safeguards, and communication) as well as four technical experts to cover each Component 1–4. At the subnational level in Mauritania, eight Sub-national Coordination Offices will be established in the main Regional Delegations of MDR concerned and strengthened to assist in PRAPS-2-MR implementation (the seven regional offices of PRAPS-1 will be maintained and one new office added at the level of Tagant to cover the new northern extension area of PRAPS-2). The Regional Development Committees (CRD) will monitor PRAPS-2-MR implementation in the regions. Figures A1.11 and A1.12 depict the detailed institutional arrangements.

Figure A1.11: PRAPS-2-MR institutional and implementation arrangements (organigram)

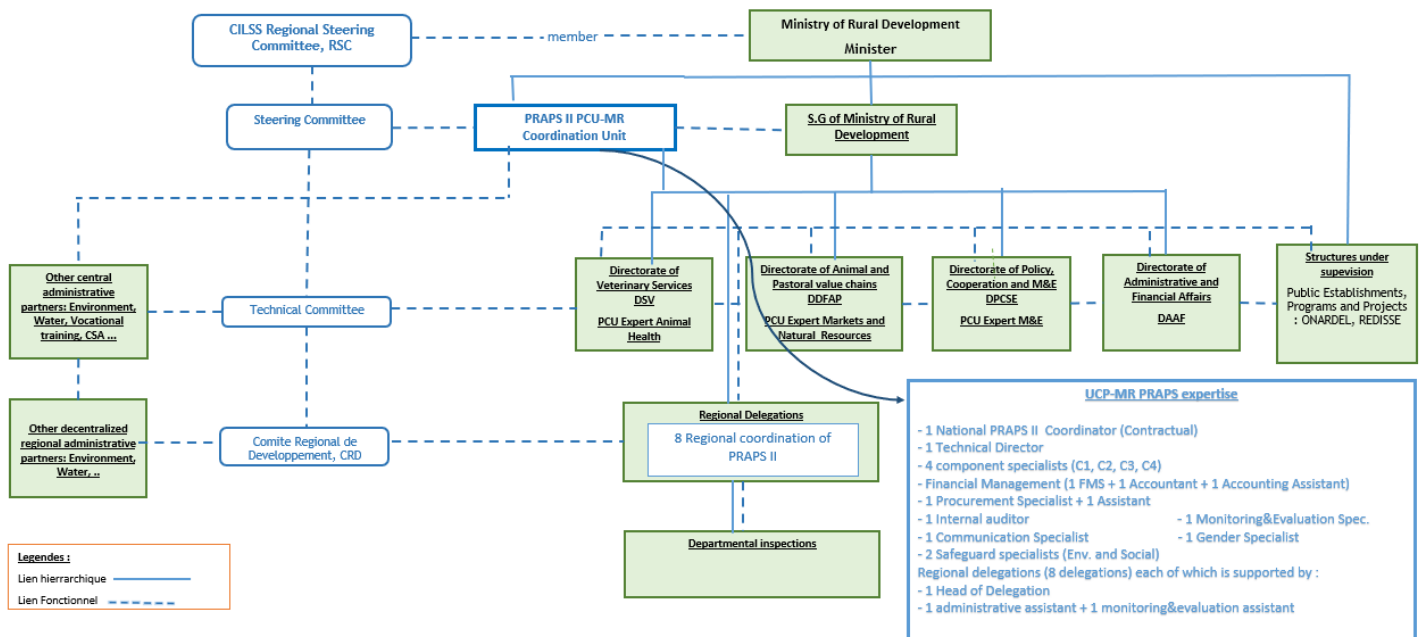


Figure A1.12: PRAPS-2-MR institutional and implementation arrangements

<p>STEERING COMMITTEE (CP)</p>	<p>Exchange and Guidance Body. Chaired by SG of MDR, including Ministry of Economic Affairs and Promotion of Productive Sectors, Ministry of Environment and Sustainable Development, Ministry of Hydraulics and Sanitation, Ministry of National Education, Technical Training, and Reform; other concerned ministries, development partners involved in pastoralism and NRM, local representatives, NGO representative, PO representative, research and university representatives, CSO representative, pastoralism project representative, CILSS representative, GGW country focal point. Meeting frequency: at least twice a year.</p>
<p>TECHNICAL COMMITTEE (CT)</p>	<p>Implementation Monitoring Body. Chaired by the National Coordinator and comprising representatives of technical directorates, livestock POs, other livestock projects (as applicable), and other key representatives (selected ad hoc). Meeting frequency: at least twice a year before the CP.</p>
<p>PROJECT COORDINATION UNIT FOR PRAPS-2-MR (MR-PCU)</p> <p>Technical Financial Management Procurement Monitoring & Evaluation Gender Environment and Social Safeguards Communication</p>	<p>In charge of day-to-day management of PRAPS-2-MR activities. The MR-PCU will comprise the following:</p> <ul style="list-style-type: none"> A National Coordinator (contractor) A Technical Director (contractor) An Animal Health Specialist (contractor) An NRM Specialist (contractor) A Livestock Value Chain Improvement Specialist (contractor) A Social Development Specialist (contractor) An Infrastructure Engineer (contractor) An Administrative & Financial Management Expert, an Accountant, and an Accountant assistant (contractors) An Internal Auditor (contractor) A Procurement Specialist and a Procurement Assistant (contractors) An M&E Expert (contractor) A Gender and Social Intermediation Expert (contractor) An Environmental Safeguard Expert (contractor) A Social Safeguard Expert (contractor) A Communication Expert (contractor) Support Staff (Drivers, Liaison Agents, Guards, etc.) MDR Staff appointed to support concerned technical directorates
<p>IMPLEMENTATION ARRANGEMENTS IN TARGETED REGIONS (in association with Regional Development Committees for activity guidance)</p> <p>8 Regional Coordination Units will be established within existing MDR Regional Delegations, each comprising:</p> <ul style="list-style-type: none"> A Head of Regional Coordination Unit (civil servant), an M&E Assistant (contractor), an Administrative and Financial Assistant (contractor) Support Staff (Drivers, Liaison Agents, Guards, etc.) 	
<p>Implementation Stakeholders Component 1</p>	<p>DSV (Direction des Services Veterinaires) and regional and local MDR services</p> <p>Partners: Ministry of Education, EISMV (Ecole InterEtats des Sciences de la Médecine Vétérinaire), ONARDEL (Office National pour la recherche et le développement de l'élevage), REMEMA (Réseau Mauritanien d'Epidémiologie et de Maladies Animales), local administrative authorities, traditional authorities, private veterinarians, POs, NGOs, private operators</p>
<p>Implementation Stakeholders Component 2</p>	<p>Director and Technical Staff from DDFAP (Directions du Développement des Filières Animales et du Pastoralisme), DH (Direction de l'Hydraulique), DECE (Direction de l'Evaluation et du Contrôle Environnemental), and DPN (Direction de la Protection de la Nature)</p> <p>Regional levels</p> <ul style="list-style-type: none"> Specialized Consultancy Firm (ICB), main operator for social engineering interventions Partnerships with POs, NGOs (expression of interest) for direct support to local communities
<p>Implementation Stakeholders Component 3</p>	<p>Director and Technical Staff from DDFAP (Directions du Développement des Filières Animales et du Pastoralisme) operational strengthening for services provided by POs, DSSIA (Direction des Statistiques et des Systèmes d'Informations Agropastorales),</p> <p>Regional Levels</p> <ul style="list-style-type: none"> Partnerships with POs, traders, unions, federations, interprofessions, NGOs Construction companies
<p>Implementation Stakeholders Component 4</p>	<p>DSSIA (Directorate of Statistics and Agropastoral Information Systems) and Director of Strategies, Cooperation and M&E</p> <ul style="list-style-type: none"> Partnerships with Social Registry, TAAZOUR Agency and INAP-TFP (Institut National de Promotion de la Formation Technique et Professionnelle) Training providers institutions
<p>Implementation Stakeholders Component 5</p>	<p>MR-PCU</p> <p>Partners and service providers (through agreements and contracts): DSV, DSSIA, DDFAP, DSCSE (Direction des Strategies, de la Cooperation et du Suivi-Evaluation), OSA (Observatoire de la Sécurité Alimentaire)...</p>

15. **PRAPS-2-Niger (PRAPS-2-NE) will be anchored in the Ministry in charge of Livestock.** A ministerial *arrêté* will establish a Steering Committee (CP) at the national level, chaired by the Secretary General of the Ministry in charge of Livestock (or representative appointed by him/her), and will provide strategic guidance and ensure coherence between the Project and other projects and programs in the sector. A Niger Project Coordination Unit (NE-PCU) in charge of coordinating the implementation of the Project will be established and fully staffed throughout the Project implementation period.

16. The NE-PCU will be headed by a National Coordinator (civil servant), who will report to the Secretary General of the Ministry in charge of Livestock and work closely with the Head of the Livestock development program in the same ministry. The National Coordinator will be assisted by a team of technical, fiduciary and safeguards specialists. Implementing Technical Departments and agencies will provide support to PRAPS-2-NE implementation through appropriate means (possibly through Memorandums of Understanding, contracts, or equivalent). At the subnational level, Regional Coordination Offices, led by the Regional Director of Livestock, will be established in the targeted areas to assist PRAPS-2-NE implementation (six regional offices in total). Three M&E specialists (one for two regions) and three assistant accountants (one for two regions) will support M&E and FM systems in these regional offices. The existing Regional Technical Committees under the 3N initiative will monitor PRAPS-2-NE implementation. Figures A1.13 and A1.14 depict the detailed institutional arrangements.

Figure A1.13: PRAPS-2-NE institutional and implementation arrangements (organigram)

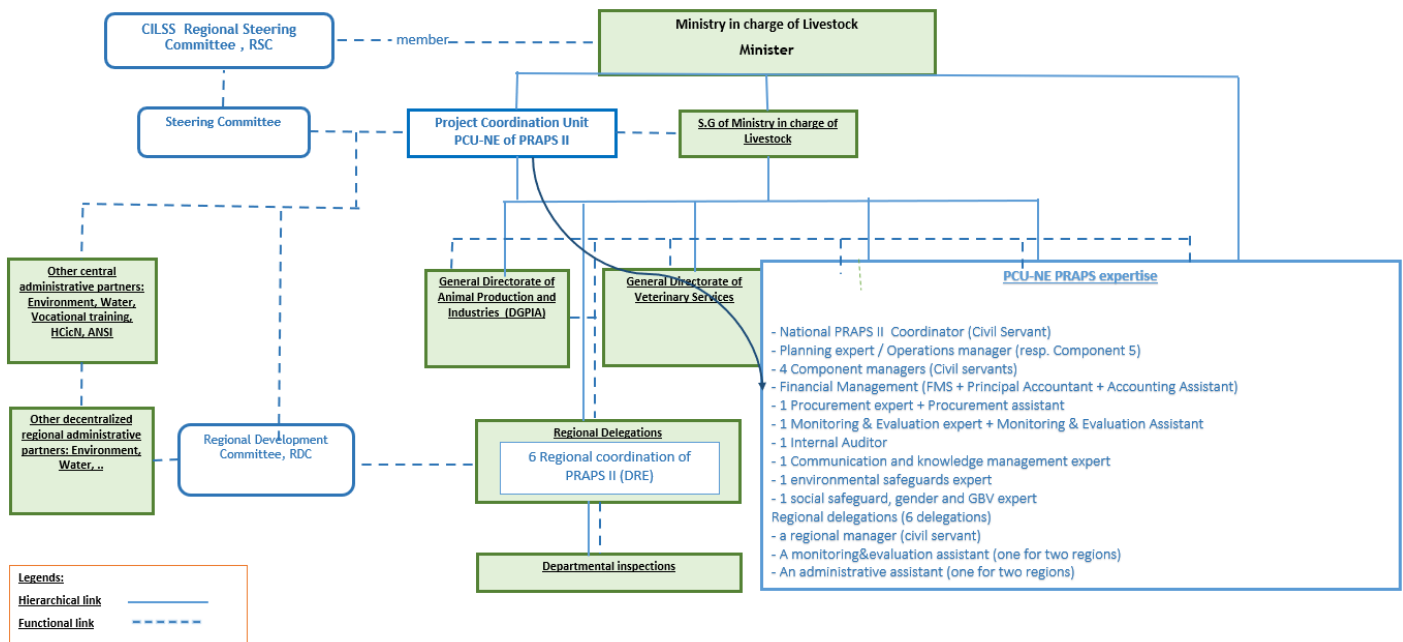


Figure A1.14: PRAPS-2-NE Institutional and implementation arrangements

<p>STEERING COMMITTEE (CP)</p>	<p>Exchange and Guidance Body. Chaired by the Ministry in charge of Livestock, with representatives of the Ministry of Planning, Ministry of Finance, HC i3N, concerned technical ministries (Trade, Environment, Interior, Youth, Gender, Vocational Training, Basic Education), National Agency for Information Technologies (ANSI), National Research Council, Niger Network of Chambers of Agriculture (RECA), CSOs, and GGW country focal points. The CP chair may invite other resource person as needed. Frequency: at least once per year.</p>
<p>PROJECT COORDINATION UNIT FOR PRAPS-2-NE (NE-PCU)</p> <p>Technical Financial Management Procurement Monitoring & Evaluation Gender Environment and Social Safeguards Communication</p>	<p>In charge of day-to-day coordination of project activities. The NE-PCU will comprise the following:</p> <ul style="list-style-type: none"> A National Coordinator (civil servant) Heads of technical components (civil servants) A Planning/Technical Operations Expert (contractor) – lead for Component 5 An Administrative & Financial Management Expert, a Principal Accountant, and an Assistant Accountant (contractors) An Internal Auditor (contractor) A Procurement Expert and a Procurement Assistant (contractors) An M&E Expert, and an M&E Assistant (contractors) An Administrative Assistant (contractor) A Social Safeguard, Gender & GBV Expert (contractor) An Environment Safeguard Expert (contractor) A Communication and Knowledge Management Expert (contractor) Support Staff (IT Expert, Assistants, Drivers, Guards, etc.)
<p>IMPLEMENTATION ARRANGEMENTS IN TARGETED REGIONS (in association with Regional Coordination Committees for activity guidance)</p> <p>6 Regional Coordination Units (Agadez, Tahoua, Zinder, Maradi, Tillabéri, Dosso) will be created within the Regional Livestock Directorates (DREL), each composed of the following:</p> <ul style="list-style-type: none"> A Regional Focal Point (MEL civil servant) M&E Assistants: one per two regions: Agadez-Tahoua, Zinder–Maradi, and Tillabéri–Dosso (contractors) Accountant Assistants: one per two regions: Agadez-Tahoua, Zinder–Maradi, and Tillabéri–Dosso (contractors) Support staff (Drivers, Liaison Agents, Guards, etc.) 	
<p>Implementation Stakeholders Component 1</p>	<p>Lead: DGSV in close collaboration with LABOCEL Partners: DSA, DPPV/PV, STD, SVPP, POs, ANSI, ANAB, Training institutes</p>
<p>Implementation Stakeholders Component 2</p>	<p>Lead: DGPIA in close collaboration with the Directorate for Rural Conflicts, the Regional Livestock Directorates (DREL), and the Permanent Secretariat of the Rural Code Partners: CSOs, ANSI, Communes (<i>collectivités territoriales</i>), DDP, DHP, DGCMB, INRAN</p>
<p>Implementation Stakeholders Component 3</p>	<p>Lead: Directorate of Livestock Statistic (DES)/SIM-B in close collaboration with DPFAQ Partners: DREL, ANSI, communes (<i>collectivités territoriales</i>), DPOE, IP/BVCP, OPEL, RECA, etc.</p>
<p>Implementation Stakeholders Component 4</p>	<p>Lead: DGPIA Partners: MEPT, Direction de l’alphabétisation, Etat Civil, Cellule filets sociaux, ANSI, DEXCCO, CSOs, OPEL</p>
<p>Implementation Stakeholders Component 5</p>	<p>Lead : NE-PCU in collaboration with DNP-GCA and SAP for sub -component 5.2) Partners: DDP, ANSI, RECA, ANAB, training institutes, Ministry of Higher Education</p>

Note: LABOCEL : Laboratoire Centrale de l’Elevage ; DGCMB : Direction Générale des Centres des Multiplication du Bétail ; INRAN : Institut National des Recherche Agronomique du Niger ; DEXCCO : Direction des Examens et Concours, des Certifications et de l’Orientation ; ANSI : Agence Nationale pour la Société de l’Information ; IP/BVCP : Inter Profession de la Filière Bétail Viande Cuir et Peaux ; ANAB : Agence Nationale d’Attribution des Bourses

DGSV : Direction Générale des Services Vétérinaires ; DGPIA : Direction Générale de la Production et des Industries Animales ; DSA : Direction de la Santé Animale ; DPFAQ= Direction de la Promotion des Filières Animales et de la Qualité ; DPOE= Direction de Promotion des Organisations des Eleveurs ; DDP= Direction de Développement Pastoral ; DPV/PPVP= Direction des pharmacies vétérinaires privées et de la privatisation de la profession vétérinaire ; STD : Services Techniques Déconcentrés ; SVPP : Services Vétérinaires Privés de Proximité ; OPEL : Organisations des Professionnels de l’Elevage ; RECA : Réseau National des Chambres d’Agriculture du Niger ; MEPT / Ministère de l’Enseignement Professionnel et Technique ; DREL : Direction Régionale de l’Elevage ; DHP : Direction de l’Hydraulique Pastorale ; DNP-GCA : Dispositif National de Prévention et de Gestion des Crises Alimentaires ; SAP: Système d’Alerte Précoce.

17. **PRAPS-2-Senegal (PRAPS-2-SN) will be anchored at the Secretariat General of the Ministry of Livestock and Animal Production (SG-MEPA).** A NSC (COFIL), established at the national level and chaired by MEPA, will provide overall guidance and approve AWPBs and progress reports. The COFIL will ensure that the strategy and activities of the Project remain aligned with sectoral policy and government priorities in livestock development. It will meet once per year and if necessary, convene an extraordinary meeting. An *arrêté* of MEPA will determine the composition of the COFIL.

18. A Project Coordination Unit (SN-PCU) will be established, headed by a National Coordinator (civil servant), who will report to the Secretary General, MEPA. The National Coordinator will be assisted by a team comprising FM, procurement, M&E, safeguards, and communication experts, as well as technical experts to manage Components 2 and 4 (including gender aspects). For Component 1, a National Focal Point will be appointed in the technical department concerned (Directorate of Veterinary Services), while the Technical Director will be in charge of Component 3. At the subnational level, three Subnational Coordination Offices (ACR-SN) will be established (one more than under PRAPS-1) within the concerned Regional Livestock Services to assist PRAPS-2-SN implementation in targeted areas, staffed with a Head of ACR-SN, an Accountant, an M&E Assistant, and support staff. The previously established Regional Dialogue Committees (*Comités départementaux de concertation*, CDCs) will monitor PRAPS-2-SN implementation in the departments involved. Figures A1.15 and A1.16 depict the detailed institutional arrangements.

Figure A1.15: PRAPS-2-SN institutional and implementation arrangements (organigram)

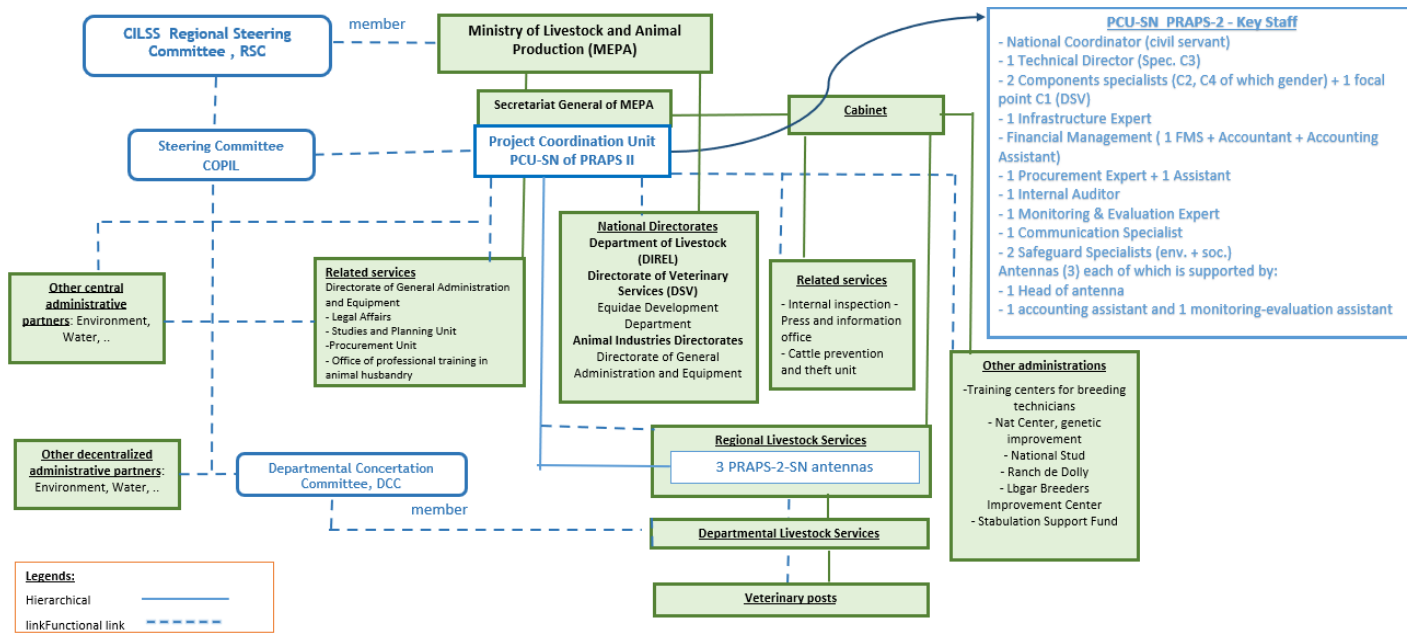


Figure A1.16: PRAPS-2-SN institutional and implementation arrangements

<p>STEERING COMMITTEE (COFIL)</p>	<p>Supervision and Guidance Body. Chaired by the Secretary General, MEPA, with representatives from the ministerial departments and technical departments involved in PRAPS-2-SN implementation, livestock POs, NGOs concerned, GGW country focal points. Composition will be fixed by ministerial executive order. Meeting frequency: at least once a year.</p>
<p>PROJECT COORDINATION UNIT FOR PRAPS-2-SN (SN-PCU)</p> <p>Technical Financial Management Procurement Monitoring & Evaluation Gender Environment and Social Safeguards Communication</p>	<p>In charge of day-to-day management of PRAPS-2-SN activities. The SN-PCU will include:</p> <ul style="list-style-type: none"> A National Coordinator (civil servant) A Technical Director (contractor) (also in charge of Component 3) An Administrative & Financial Management Expert, an Accountant, and an Accountant Assistant (contractors) An Internal Auditor (contractor) A Procurement Expert and Assistant (contractor) An M&E Expert (contractor) An Environmental Safeguard Specialist A Social Safeguard Specialist A Communication Specialist An Infrastructure Expert (contractor) A Focal Point for Component 1 appointed by DSV A Specialist in pastoralism (in charge of Component 2) (contractor) A Specialist in social inclusion and gender/GBV (in charge of Component 4 and gender across the Project) Support Staff (Administrative Assistants, Drivers, Liaison Agents, Guards)
<p>IMPLEMENTATION ARRANGEMENTS IN TARGETED REGIONS (in association with Departmental Concertation Committees - CDC for activity guidance)</p> <p>3 <i>Antennes</i> (offices) within the Regional Livestock Directorates will support Project implementation in the regions: (i) Ndoum, covering Podor, Dagana, Linguère, and Louga Departments; (ii) Kounghoul, covering Kounghoul and Koumpentoum Departments, and (iii) Kanel, covering Kanel, Matam, Ranérou, and Bakel. Each will be staffed by: a Head of Antenne (civil servant), an M&E Assistant (contractor), an Assistant Accountant, and support staff (an Executive Assistant, a Liaison Agent, a Driver, a Guard).</p>	
<p>Implementation Stakeholders Component 1</p>	<p>MEPA: Direction of Veterinary Services (DSV) (Director and Technical Staff), Local and Regional Livestock Services and Veterinary Posts</p> <p>Partners (through agreement): ISRA Vaccine Production, ISRA-LNERV, EISMV, CIRAD, Direction des Bassins de Rétention et des Lacs artificiels (DBRLA) supervising construction</p> <p>Others: Service providers, POs, private veterinarians, local communities, foreign laboratories, rural radio stations Ministry of Health, Ministry of the Interior, Customs, Police</p>
<p>Implementation Stakeholders Component 2</p>	<p>MEPA: Pastoral Division (DIREL)</p> <p>Partners (through agreements): Hydraulic Directorate (DH), OFOR, Directorate of Water Resources Planning and Management (DGPRE), ISRA, CSE, DEFCCS, PPZS, local authorities, NGOs (AVSF), FAO</p> <p>Others: POs (DINFEL, CNMDE), service providers, construction companies</p>
<p>Implementation Stakeholders Component 3</p>	<p>Direction of Animal Industries (DIA)</p> <p>Partners (through agreements): DBRLA, FNDASP, ISRA-PPZS, CEPSE</p> <p>Others: Interprofessional Organizations (CNMDE, ANPROVBS, DINFEL, and milk and meat POs) and regional POs (RBM, APESS), Local and Regional Livestock Services, CEP, service providers, construction companies</p>
<p>Implementation Stakeholders Component 4</p>	<p>SN-UCP</p> <p>Partners (through agreements): Direction Apprentissage (DA), Ministry of Employment, Vocational Training, Apprenticeship and Integration (MEFPAI), DGPSN, DINFEL/AFAO</p> <p>Operators (contracted)</p>
<p>Implementation Stakeholders Component 5</p>	<p>SN-UCP</p> <p>Partners (through agreements): DIREL, Secrétariat Exécutif du Conseil National de Sécurité Alimentaire (SECNSA), Compagnie Nationale d'Assurance Agricole du Sénégal (CNSA)</p>

Note : DSV: Direction des Service Vétérinaires ; ISRA/UPV: Institut Sénégalais de Recherche Agricoles, Unité de Production de Vaccins ; ISRA-LNERV: Institut Sénégalais de Recherche Agricoles, Laboratoire National Elevage et de Recherches Vétérinaires ; DBRLA: Direction des Bassins de Rétention et des Lacs Artificiels ; DH: Direction de l'Hydraulique ; OFOR: Office des Forage Ruraux ; DGPRE: Direction de la Gestion et de la Planification des Ressources en Eau ; OP: Organisations professionnelles ; CSE: Centre de Suivi Ecologique ; DEFCCS: Direction des Eaux, Forêts, Chasse et Conservation des Sols ; PPZS: Pole Pastorale Zone Sèche ; AVSF: Agronomes et Vétérinaires Sans Frontières ; DINFEL: Directoire National des Femmes en Elevage ; CNMDE: Conseil National de la Maison des Eleveurs ; DIA: Direction des Industries Animales ; FNDASP: Fonds national de Développement agro-sylvo-pastoral ; CEPSE: Cellule d'Etudes de Planification et de Suivi Evaluation ; ANPROBVS: Association Nationale des Professionnelles de la viande et du bétail au Sénégal ; RBM : Réseau Billital Marobé ; APESS: Association pour la Promotion de l'Elevage au Sahel et en Savane; DA: Direction de l'Apprentissage ; MEFPAI: Ministère de l'Emploi, de la Formation Professionnelle, de l'Apprentissage et de l'Insertion ; DGPSN: Délégation Générale à la Protection sociale et à la Solidarité nationale ; AFAO: Association des Femmes de l'Afrique de l'Ouest.

II- Implementation Support Plan

19. The World Bank team will monitor progress on several fronts, including: (i) compliance with key legal conditions and covenants; (ii) compliance with World Bank FM and disbursement regulations and provisions; (iii) compliance with E&S safeguards ; (iv) adequate planning and implementation; (v) overall technical quality; (vi) M&E processes, including reporting on key results indicators as identified in the Results Framework; and (vii) overall progress made against Project AWPBs.

20. Based on lessons from some PRAPS-1 countries, the World Bank team will give close attention to Project expenses, in particular operating costs, using the initial budgets established with the Costab software during preparation as reference. Based on issues faced during Project implementation, the World Bank team may advise to carry out reallocations between components or subcomponents, or a restructuring of the Project to achieve more solid and impactful results, and a full use of the grants/credits.

21. The World Bank team will closely monitor the completion of the baseline, mid-term, and end-term quantitative surveys that will be used to evaluate the impact of key activities supported by the Project. The team members will help identify capacity-building needs (in particular with respect to fiduciary and safeguard compliance) to ensure successful Project implementation. In addition to monitoring Project progress, the World Bank team will work closely with all implementing agencies to provide technical support as needed, leveraging the regional-level capacity to help address technical issues in countries that could impact overall Project performance.

22. The implementation support team will need to include: (i) a regional Task Team Leader (TTL) overseeing overall Project implementation and the performance of the regional component of the Project, as well as co-TTLs in charge of the respective beneficiary countries; (ii) a range of technical specialists covering the different disciplines related to the five components, including (a) an animal health specialist; (b) a NRM specialist; (c) an economist (private sector/trade/VC specialist); (d) a social inclusion specialist; (e) an institutional/crisis prevention and management specialist; and specialists covering specific or transversal themes, including a water infrastructure specialist (under Component 2), gender specialist (transversal), professional education and jobs (under Component 4), and M&E and communication experts. The World Bank team will also comprise financial and procurement specialists who will carry out reviews of financial reports and the procurement system (STEP), complemented by in-country supervision missions, as needed.

23. Given the complexity of the Project (six countries, three regional entities, and multi-sectoral interventions), the World Bank TTL will hold monthly team meetings to closely monitor progress and address issues as early as possible, facilitating cross-fertilization and harmonization of approaches, and coordination with other sectors involved. At least two ISMs will be carried out annually in each country and at the regional level, with technical check-ins between missions, and will form the basis for preparing ISRs. A MTR will be carried out halfway through implementation and will include a comprehensive assessment of progress in achieving the objectives laid out in the Results Framework. The MTR will also serve as a platform for revisiting design issues that may require adjustment to ensure satisfactory achievement of the PDO. At the close of the Project, each Government, CILSS, and the World Bank will carry out separate implementation completion reviews to assess the success of the Project and draw lessons from its implementation.

24. Table A1.1 outlines the specific types of support for implementation during the Project period.

Table A1.1: Implementation support during the Project period, PRAPS-2

Focus	Skills needed	Total staff weeks
Year 1 (resource estimate: US\$675.000)		
Project launch/regular support (including two ISMs per year)	Task team total	135
	TTL	15
	co-TTLs (x6)	48
	Animal health spec.	8
	NRM spec.	8
	Economist/VC spec.	8
	Social inclusion spec. specialists	8
	Institutional/jobs spec.	7
	M&E spec.	6
	FM spec.	8
	Procurement spec.	8
	Safeguard spec.	9
Gender spec.	2	
Year 2-6 (resource estimate: US\$545.000 per year) without MTR/ICR		
Project regular support (including 2 ISMs per year)	Task team total	109
	TTL	12
	co-TTLs (x6)	36
	Animal health spec.	6
	NRM spec.	6
	Economist/VC spec.	6
	Social inclusion spec. specialists	6
	Institutional/jobs spec.	5
	M&E spec.	6
	FM spec.	8
	Procurement spec.	8
	Safeguard spec.	8
Gender spec.	2	
MTR and ICR (resource estimates: US\$350.000)		
MTR (Year 3)	Task team total	40
ICR (Year 6)	Task team total	30



ANNEX 2: Detailed Component Description

1. PRAPS-2 will build on initial achievements and lessons from PRAPS-1, which pioneered ambitious interventions in fragile, complex settings. Several key technical interventions of PRAPS-1 need to be consolidated, adjusted, and scaled up. An initial stock-taking exercise of this first phase identified lessons and recommendations that helped define the activities to be undertaken under the proposed Project. Those lessons and recommendations included the need to: (i) foster an enabling environment for pastoral systems through regional and national policy dialogues and concertation frameworks dealing with transhumance, trade, food security, and crisis prevention; (ii) enhance regional cooperation, momentum, knowledge creation, and networking around pastoral systems; and (iii) improve country capacity (public, private, and associative) and regional institutions in addressing regional priority diseases surveillance and control, NRM, the facilitation of trade in livestock and livestock products along regional trade and transhumance routes (Box A2.1)—efforts that in total will support the development of a competitive regional (agro)pastoral livestock VC.

2. PRAPS-1 established a set of governance mechanisms for resource use and management, such as the *chartes pastorales*. It also contributed to cross-border dialogue on mobility and conflict resolution at the local level, tested the use of digital technologies for animal health management and market price collection and dissemination, and developed a body of knowledge and policy documents, among other key results. On the other hand, the achievement and verification of medium-term outcomes was compromised by the delayed execution of civil works (for instance, delayed construction of market infrastructure complicated progress in increasing the number of animals sold in the new markets), and by a lack of resources to achieve ambitious goals (in animal health, for instance). PRAPS-1 did not sufficiently address IGAs for women and youth from pastoral households, although IGAs are considered fundamental for building the resilience of pastoral groups.

3. PRAPS-2 will consolidate achievements and demonstrate the value of approaches and systems supported under PRAPS-1 to ensure their full ownership and increase the likelihood that they will continue after the Project ends. PRAPS-2 will continue to support significant investments in infrastructure to fill critical gaps along transhumance and trade routes, but compared to PRAPS-1, it will expand the focus on: (i) enhancing the performance of animal health systems, by adding a new area of intervention to control the quality of veterinary medicines and significantly contributing to the achievement of NSPs objectives; (ii) animal feeding, by increasing and securing access to pastoral areas and their sustainable management, and adding interventions to develop cultivated forage; (iii) increasing the capacity of pastoral populations to play a more active role in decision-making processes affecting them, by strengthening their POs (among other activities); (iv) supporting the development of small businesses and private sector investments benefiting (agro)pastoral livestock VCs, through MGs; (v) including pastoral populations in social and civil registries to help them benefit from national resilience programs and support for the most vulnerable groups (women and youth in particular) through IGAs adapted to their needs; and (vi) supporting overall institutional strengthening for improved governance across components (from the local to regional level), which is essential to ensure the sustainability of investments and prevent future conflicts. PRAPS-2 will exploit to the maximum extent opportunities offered by digital technologies across all components, building on a diversity of initiatives and developing new options adapted to the needs of the various users, from herders to POs, VC actors, government agencies, and decision makers.⁸⁴

⁸⁴ To that end, the UN Capital Development Fund (UNCDF) undertook a regional analysis during preparation to inform investment options.



4. At the regional level, CILSS (and RAHC on Component 1, with technical support from OIE and other partners) will play a catalytic role in coordinating the overall program in close collaboration with the regional economic bodies (ECOWAS and WAEMU), bringing targeted support to PRAPS-2 beneficiary countries to increase the quality and relevance of interventions; sharing experiences and harvesting lessons; supporting regional analytical studies, solid data generation, and statistics; and supporting core regional integration activities (in accordance with the mandates of the regional institutions involved) to benefit the six PRAPS-2 Sahelian countries and wider West Africa region. PRAPS-2 activities implemented at the national and regional levels will reinforce each other and also generate positive regional impacts beyond the Sahel, in the form of harmonized regional policies, strategies, and regulations, alongside investments in the six countries that will act to reduce regional risks (sanitary, conflict, economic) and increase opportunities linked to regional livestock movements—transhumance to access resources, and trade to sell animals and their products in coastal West African countries.

5. The five components of PRAPS-2 remain closely aligned with PRAPS-1 and are augmented by new activities to address growing and rapidly evolving challenges. Figure A2.1 shows the relationship between the two phases (including scaled-up and new activities), the linkages and synergies between the components to contribute to the PDO, and the different types of interventions envisioned under PRAPS-2 to address the key problems identified and help establish more productive, profitable, and socially and environmentally sustainable activities. More specifically, Components 1 and 2 will support the maintenance of healthier, better-nourished livestock capital and healthier ecosystems to support livestock and pastoralists. These two components are mutually reinforcing: Component 1 will help to reduce animal morbidity and mortality through veterinary interventions, where Component 2 will reduce it through interventions that increase access to sufficient feed (mainly naturally available forage, complemented during lean seasons or prolonged drought by cultivated or stored fodder), which can be more easily converted into energy. Through Component 3, producers and VC actors will realize the value of this improved livestock capital in the form of increased revenue and value-added, and consumers will realize it through the increased availability of more affordable, nutritious food (meat and milk products), among other products. Component 4 will help increase the protection of the most vulnerable pastoral households against shocks, in particular climatic shocks, by facilitating access to national resilience programs and providing support to pursue IGAs adapted to their needs. Lastly, Component 5 will provide much-needed institutional strengthening to pursue sound development policies and strategies that duly consider (agro)pastoral systems and livelihoods, including mechanisms to prevent and respond to pastoral crises, during and beyond the life of the Project.

6. The proposed activities are fully aligned with the Regional Integration Strategy, CPFs, and national strategies, including NDCs (see Tables A2.1 and A2.2). Investments in the Project components are calibrated to support priority areas defined in national and regional high-level agendas and strategies, taking into consideration financing gaps based on the commitments of governments and other partners. A budget table (Table A2.3) at the end of this annex summarizes costs by component, subcomponent, and country/region, based on detailed Cost tables.



Figure A2.1: Comparison of components and activities under PRAPS-1 and PRAPS-2

RELATION BETWEEN COMPONENTS	COMPONENTS /SUBCOMPONENTS PRAPS-2	SCALE-UP / NEW	INNOVATION / TRANSFORMATION				
	C1 C1.1 Strengthening of NVS capacities (infrastructure, equipment, skills, operational capacity) C1.2 Harmonized surveillance and control of PPR and CBPP C1.3 Veterinary medicines control	++ ++ New	Harmonization of approaches & strategies, filling critical gaps Implementation of nationwide vaccination/surveillance programs Initiating structured, more frequent veterinary drugs/AMR control	More systematic use of digital technology capabilities (all levels)	Gender gaps addressed across activities	Climate adaptation/mitigation approaches fostered across activities	Regional integration /coordination enhanced
	C2 C2.1 Access to natural resources and sustainable landscapes management C2.2 Sustainable management of water infrastructure C2.3 Fodder production	+ + New	Enhanced focus on pastoral governance / crossborder agreements 'Open' new grazing areas / filling strategic water points gaps Testing sustainable approaches for cultivated fodder production Progressive change in feeding practices/livestock management				
	C3 C3.1 Strategic market development C3.2 Capacity development of national and regional POs C3.3 Value chain development and sub-project financing	= = New	Delegated management to multi-actor committees / strategic location for cross border trade Greater emphasis on management, planning, service delivery to members Support to SMEs / POs through matching grants to support selected investments in VCs including feed				
	C4 C4.1 Access to vocational and technical training C4.2 Access to social and civil registries C4.3 Income generating activities	++ New New	Support to new curricula/adaptation to pastoral populations preferences / capacities Inclusion of pastoral populations in registries and access to related rights Better targeting of most vulnerable/link to registries - Focus on young and women				
	C5 C5.1 Project Coordination C5.2 Institutional strengthening C5.3 Contingency emergency response	+ ++ =	New partnerships including with social protection, education Better data and tools for policy and strategy development Skills for executives strengthened according to needs Pastoral crisis included in broader national crisis contingency plans				



Table A2.1: PRAPS-2 alignment with CPFs and national strategies

Country	CPF period	National strategic documents	Areas of alignment with CPF
Burkina Faso CPF Report No. 123712-BF	2018-2023	- National Economic and Social Development Plan ⁸⁵ (PNDES 2016-2020) - Agro-Silvo-Pastoral Orientation Law ⁸⁶ (2015)	- Objective 1.1: Improve agriculture productivity and agribusiness value chains in targeted areas - Objective 2.1: Support inclusive, high-quality education and skills development
Chad CPF Report No. 137044-TD	2016-2020	- National Development Plan ⁸⁷ (2017-2021) - Chad National Rural Investment Plan (2016-2022) - Agro-Silvo-Pastoral Fishery and Animal Orientation Law (2018)	- Objective 2.1: Support a more productive and resilient agriculture - Objective 3.2: Improve rural access to and quality of education, including Technical and vocational educational and training (TVET)
Mali CPF Report No. 138106-ML	2016-2019	- Strategic Framework for Economic Recovery and Sustainable Development ⁸⁸ (CREDD, 2019, 2023) - Agriculture Orientation Law ⁸⁹ (LOA - 2006)	- Objective 2.1: Improve Productive Capacity and Market Integration of Farmers and Pastoralists - Objective 3.1: Develop human capital, supporting relevant post-basic skills for agriculture and livestock and other priority sectors and sub-sectors of the identified livelihood areas
Mauritania CPF Report No. 125012-MR	2018-2023	- Strategy for accelerated growth and shared prosperity (SCAPP) ⁹⁰ - National Livestock Development Plan (PNDE)	- Objective 1.2: Increase agriculture and livestock production in the face of climate change - Objective 2.3: Improve employability, particularly of youth and women
Niger CPF Report No. 123736-NE	2018-2022	- Sustainable Development and Inclusive Growth Strategy (SDDCI Niger 2035) - Sustainable Development Strategy for Livestock (2012-2035) ⁹¹	- Objective 1.1: Increased rural production with diversified output in the agriculture and livestock sectors - Objective 1.2: Improved availability of productive infrastructure for trade in rural areas - Objective 2.4: Increased access to quality education and training services, particularly for women
Senegal CPF Report No. 143333-SN	2020-2024	- <i>Plan Senegal Emergent</i> (PSE) - National Livestock Development Plan (PNDE)	- Objective 2.4: Boost productivity and competitiveness of agriculture and related value chains and livestock - Objective 3.1: Promote and protect resilient livelihoods and ecosystems in the face of climate change

⁸⁵ Plan National de Développement Economique et Social.

⁸⁶ Loi d'orientation agro-sylvo pastorale halieutique et faunique.

⁸⁷ Plan National d'Investissement pour le Secteur Rural du Tchad, PNISR.

⁸⁸ Cadre Stratégique pour la Relance Economique et le Développement Durable.

⁸⁹ Loi d'orientation agricole.

⁹⁰ Stratégie de Croissance Accélérée et de Prospérité Partagée -. 2016-2030 – Ministry of Economy and Finance.

⁹¹ Stratégie de Développement Durable et de Croissance Inclusive / Stratégie de Développement Durable de l'Élevage.



Table A2.2: PRAPS-2 alignment with NDCs

Country	Relevance to Proposed Activities
Burkina Faso, 2015-2030	The document contains the country's engagement on livestock, pastoralism and sustainable land management. The adaptation objectives include the development of pastoral water bodies and water points, as well as delimitation and development of pastoral zones.
Chad, 2015-2030	The document supports actions related to securing the transhumance axes, preserving natural resources, agriculture-livestock association, forage crops, etc., supporting social agreements between the different groups of livestock farmers, and of farmers in transhumance areas.
Mali, 2015-2030	The document includes mitigation measure linked to the substitution of high nitrogen content urea by organic manure; and adaptation measures including the development of climate-resilient pastoral planning aiming at the materialization of 3,300 km of transhumance axes, to reduce conflicts between farmers and herders, and the establishment of 21 perimeters and pastoral areas with a total area of 400,000 ha.
Mauritania, 2015-2030	The country has set mitigation targets in the Agriculture, Forestry, and Land Use sector (including livestock) at -20, 431.5 GO2 Eq. In terms of adaptation, the country aims at restoring natural pastures (management of rangelands)
Niger, 2015-2030	The document contains engagement on livestock, pastoralism and sustainable land management. Niger's mitigation and adaptation targets in the Agriculture, Forestry, and Land Use sector which includes the restoration of pastoral land, assisted natural regeneration, and the securing of pastoral land tenure.
Senegal, 2015-2030	Mitigation targets in the whole agricultural sector are established. As for adaptation targets, the document plans the development of pastoral units, the promotion of pastoral insurance, genetic improvement of species and improvement and adaptation of production and animal health.

COMPONENT 1: Animal health improvement and veterinary medicine control

7. To harness and deepen the achievements of PRAPS-1, PRAPS-2 will increase support to national efforts to establish more robust animal health systems. PRAPS-2 will also aim at increasing regional integration and coordination through a regionally mandated institution (RAHC). The selected approach consists of strengthening the main determinants of performance to significantly upgrade the health status of large and small ruminants, which are fundamental assets for pastoral and agropastoral activity. Accordingly, Component 1 resources will be dedicated mainly to reinforcing VS capacities, supporting the prevention and control of PPR and CBPP (regional priority transboundary diseases), and boosting VMP control, including measures to reduce AMR. By improving VS and reducing mortality and disease prevalence, Component 1 will help to improve animal and herd productivity, leading to lower livestock emission intensities and contributing to climate change mitigation. Better-performing VS will also be more effective in preventing critical climate-sensitive and zoonotic diseases. Enhanced animal health status is a strategy for adapting to climate change, as reductions in disease pressure enable animals to be more resistant to climate stresses such as heat and drought.

8. The parallel (unauthorized) market for VMPs is a concern for public authorities in the West Africa and increasingly for the population at large. In addition to the economic losses induced by this problem (reduced earnings for wholesalers, pharmacists, and veterinarians), the uncontrolled and illegal sale of VMPs raises great concern for human and animal health. The use and misuse of counterfeit VMPs and low-quality VMPs can be toxic for animals and threatens the safety of foods of animal origin. It can contribute to the emergence



of AMR bacteria, regarded as a major public health risk throughout the world. In the framework of a global action plan endorsed by WHO and supported by FAO and OIE, a major mobilization of effort is underway to combat this problem. WAEMU, of which four of the six PRAPS-2 countries are members, has introduced important regulatory reforms (as part of its common agricultural policy) to strengthen and harmonize national regulations on registration and quality control of VMPs. These regulations have not yet been widely transposed to and/or implemented at the national level, however, and the Project will support participating countries in setting up and implementing full legal and regulatory control frameworks for VMPs.

9. The challenges addressed through Component 1 require an approach that is distinct from the approach taken under other components of the proposed Project. Although the main beneficiaries of the Project are pastoralists and agro-pastoralists, the contagious nature of PPR and CBPP (the priority diseases this component seeks to help control), the path that must be taken to eradicate PPR, and the protection of animal and human health through regulatory control of VMPs all require the activities under this component to be undertaken nationwide and not only in (agro)pastoral areas. Only works relating to the construction and rehabilitation of veterinary infrastructure (veterinary posts, vaccination pens) will however focus primarily in the underserved pastoral areas.

Subcomponent 1.1: Strengthening capacity of National Veterinary Services

10. To contribute to the optimal implementation by the VS of their core public good mandate and essential missions at the service of herders, in particular pastoralists and (agro)pastoralists, PRAPS-1 started to fill the significant gap in VS capacity, focusing initially on the most critical capacities identified by OIE PVS assessment missions. PRAPS-2 will continue, intensify, and diversify that support.

11. First, PRAPS-2 will intervene in initial and vocational training to help reduce the acute shortage of qualified personnel with the required skills. For efficiency, investments will be prioritized and formalized in national training plans compiling capacity-building needs, endorsed by the authorities and regularly updated. The Project will support initial training (such as master's degree training) for veterinary doctors and high-level specialists in crucial areas such as veterinary public health or wildlife.⁹² It will also ensure continued training of public and private VS agents, based in the field and at central and decentralized administrative levels, on various aspects of preventing and controlling animal diseases, including climate sensitive diseases such as Rift Valley Fever, which is strongly related to rainfall patterns.

12. Second, based on the needs identified, and with a constant aim of facilitating access to quality VS in pastoral areas, the Project will help increase the number of operational veterinary facilities. It will build or renovate infrastructure of priority interest to herders such as veterinary posts, units, or pharmacies, as well as vaccination pens, and it will provide essential equipment, including means of transport, cold chain equipment, and digital communication equipment (computers, tablets, smartphones). The development of new veterinary infrastructure close to borders (border inspection posts) will benefit, as far as possible, from a joint approach involving neighboring countries. The Project will also support the installation of private veterinarians in strategic areas to provide animal health care services.

13. Third, to optimize the efficiency and impact of Project-supported activities, the possibilities for using digital technologies will be assessed systematically. A wide range of activities—the management of human resources, materials, and equipment, in addition to the collection, synthesis, and analysis of data from VS field activities (inspection reports, supervision, monitoring suspected or confirmed disease outbreaks,

⁹² Depending on the country, students (the beneficiaries of initial and vocational trainings) will be identified according to clear performance criteria following a request for applications from the respective PCUs. Applications will be screened by review panels (involving government and PCU staff) in Mali, Burkina Faso, Chad, Senegal, and Mauritania or by a specialized government agency (such as ANAB) in Niger. The PCU will sign contracts with schools, and the registration and fees of the selected student will be paid directly to the schools. In Mauritania, Senegal, Chad, Burkina Faso, and Mali, the PCU will directly support travel and pay stipends to the selected students according to terms laid down in a contract signed between the PCU and each student. In Niger, stipends shall be paid to the selected student by the school, and travel will be paid by the PCU. Implementation details will be described in the respective country PIMs.



vaccination campaigns, seromonitoring surveys, and results of laboratory analyses)—will benefit from the digitalization and strengthening of databases (taking further advantage of KBT) and the deployment of digital equipment and tools at all levels.

Subcomponent 1.2: Support to harmonized surveillance and control of priority contagious animal diseases

14. Actions to combat CBPP and PPR were formalized, strengthened, and harmonized during PRAPS-1, in particular through the development and validation of NSPs. These actions will be expanded nationwide in all countries and significantly intensified. Controlling these diseases will strengthen the resilience of animals during transhumance, reduce their feed intake during the dry season, and increase their capacity to adapt to climate change.

15. PRAPS-2 will provide major support to increase the control of CBPP and approach the goal of eradicating PPR by 2030. The NSPs will be regularly updated to reflect their implementation status and any events that could affect their implementation. Vaccination campaigns will be organized annually in each country, after consultation and harmonization between neighboring countries whenever possible and appropriate. In addition, and in complementarity to other funding from the governments (through their own budgets and other projects supported by technical and financial partners), the Project will finance the provision of vaccines, related equipment, and logistics to meet annual immunization targets spelled out in the NSPs. For PPR specifically, the efficiency of vaccination campaigns will be enhanced by the marking the ears of vaccinated small ruminants. Every two years, seromonitoring surveys will be implemented for PPR and CBPP to estimate improvements in herd health status, assess the consistency and effectiveness of the vaccination activities carried out (and reorient or intensify them if needed), and regularly update NSPs. For CBPP, the Project will also explore options to assist in the implementation of experimental protocols including antimicrobial treatments, abattoir surveillance for the detection of specific lesions, and AMR monitoring programs. Laboratory capacities will also be reinforced as appropriate to provide the competencies and equipment required for them to play their role in vaccine quality control and seromonitoring surveys.

16. National systems and networks for active and passive epidemiological surveillance of animal diseases will be consolidated and revitalized. Efforts to fight other priority animal diseases with a strong economic or health impact, such as foot-and-mouth disease, or zoonotic diseases such as Rift Valley fever, may also be supported, based on needs identified in the respective countries, but the extent of these efforts will be limited compared to those undertaken for PPR and CBPP.

Subcomponent 1.3: Support to control veterinary medicines

17. The control of VMPs aims mainly to reduce fraud (the illegal market in VMPs) and protect public health from the use of toxic or ineffective counterfeits, the excessive or inappropriate use of VMPs, which favors the emergence of resistant microorganisms), and the presence of residual pharmaceuticals or toxins in food products of animal origin. The communication and awareness actions that the Project will support should integrate these different aspects of the problem. Beyond the direct positive impacts on animal and public health, the improved quality of VMPs will increase the resilience of animals, including to climate variability and shocks.

18. PRAPS-2 will support countries in consolidating their legal and regulatory frameworks for controlling veterinary medicines. For WAEMU member countries, this could mean the full transposition of Community regulations to the national level. As with the control of animal diseases, to formalize and increase the efficiency of VMP control, the Project will support the drafting and/or finalization of NSPs for VMPs. These documents will define, at the national level, the priority actions required to eliminate illegal and fraudulent activity in the VMP market. Owing to the high level of concern related to potential health risks, attention will be paid to establishing a fully operational inspection system at the level of VMP manufacturing, distribution, and sales as well as on farms and in slaughterhouses to ensure that regulations are implemented as intended. NSPs will be updated regularly to maintain their relevance.



19. To prevent the emergence of AMR, the Project will contribute to the finalization, if necessary, and implementation by VS and competent laboratories, of the national action plan measures on AMR in their remit. This effort will include the preparation of surveillance plans in slaughterhouses and farms to collect and analyze samples to identify any bacteria resistant to antimicrobials and to detect and quantify VMP residues in animal products (meat, milk).

20. To make the system more reliable, the Project will build capacity for the inspection of VMP production and distribution chains, the inspection of meat in slaughterhouses, and the collection and shipment of samples to national or international laboratories, as well as upgrade laboratories.

21. **At the regional level**, this component will encompass two main types of activities: (i) regional integration of policies, harmonization of regulations, and coordination between countries in animal health management, implemented by RAHC; and (ii) targeted technical assistance to support PRAPS-2 beneficiary countries in implementing their activities, implementing by OIE, ensuring continuity with PRAPS-1 activities.

22. Under (i), PRAPS-2 will support the operation of two regional networks for laboratories and surveillance (RESOLAB, RESEPI), ensuring regular technical meetings and workshops; provide coordination to cross-border prevention and control activities against PPR and CBPP, in a bilateral concertation process among neighboring countries; strengthen regional dialogue among VS of the ECOWAS Member States through the RVC (C/REG.23/11/10), providing regular technical items and policy and regulatory propositions on animal health and welfare matters toward further regional integration; strengthen the regional policy and regulatory harmonization on animal health and welfare matters, through regular reviews and analysis, with (for example) a focus on transboundary movements of live animals, trade, and certification within the ECOWAS space; strengthen the strategic commitment of ECOWAS Member States to ensuring quality VMPs and curbing AMR in the region; support the development of regional reference centers such as EISMV; contribute to the animal health and welfare training and development of the regional veterinary workforce; and complete the identification, mapping, and georeferencing of animal health infrastructure and capital equipment in the region. Other activities may be supported based on regional priorities identified, including in support of countries of the region not directly benefitting from PRAPS-2.

23. Under (ii), the Project will provide targeted support to the six PRAPS-2 beneficiary countries to help control CBPP and eradicate PPR, through regular reviews of NSPs and guidance for their implementation, as well as support to design and analyze sero-surveillance surveys in animal populations; strengthen epidemiological surveillance systems, including through the training for the deployment and scaling up of KBT databases; strengthen quality control for VMPs through the improvement of dedicated NSPs and their roadmaps, and provision of guidance to support their implementation; and support to the completion and regular review of national schemes/plans for the training and development of the veterinary workforce on animal health and welfare.

24. Both RAHC and OIE will draw on technical and scientific expertise in the region through partner organizations, including (but not necessarily limited to) EISMV, WAEMU, FAO, ILRI, and CIRAD, to complete their respective activities. The specialized RTC will regularly review progress and provide guidance and steering on the regional activities under this component. It will foster dialogue and exchange of information among implementation partners and will ensure coherence of the PRAPS-2 activities with the broader landscape of animal health initiatives in the region.

COMPONENT 2: Sustainable landscape management and governance enhancement

25. As reflected in the Project's Results Framework, the outcome of Component 2 is an increased area under sustainable landscape management and governance. This component will also contribute to improve grazing management and enhance livestock productivity, which in turn will improve soil carbon sequestration and reduce livestock emission intensities for climate change mitigation, and help to provide additional ecosystem services. With this aim in mind, the Project will build on the legacy of PRAPS-1 and continue to support key



activities that proved to be successful and to contribute to expected outcome for this component, including: (i) the development of governance and social engineering mechanisms for resource use and management (such as *chartes pastorales* and social agreements⁹³ on critical transhumance routes);⁹⁴ (ii) local and cross-border community dialogue on mobility; and (iii) conflict management and resolution.

26. Building on these lessons and achievements, the Project will continue to secure mobility and enhance access to natural resources (Subcomponent 2.1); finance the construction, rehabilitation, and sustainable management of water infrastructure (Subcomponent 2.2); and support fodder production (Subcomponent 2.3). These activities will enhance the resilience of pastoralists to climate risks. To the extent possible, the Project will invest mainly along herd transhumance routes and key livestock mobility corridors at local, national, and cross-border levels, to improve spatial coherence, ensure the geographic concentration of interventions, and enable dialogue between adjacent cross-border communities for peaceful transhumance and resource use.

Subcomponent 2.1: Access to natural resources and SLM

27. In spite of PRAPS-1 achievements, pastoralism in the Sahel Region continues to face significant policy, security, social, and climatic constraints, linked to chronic political instability, security vacuums, recurrent drought, poor landscape governance,⁹⁵ and competition and conflict over the use of natural resources and access to feed. These constraints challenge the adaptative capacity and productivity of pastoral systems, which are based on the mobility of herds and use of natural resources on large areas extending across national boundaries. Reduced mobility challenges access to feed and water, increases conflicts between farming and herding communities over the use of pasture and agricultural land, and in turns causes further degradation of resources. The southward movement of pastoralists in search of pasture and transhumance reception zones may also generate tensions with communities from coastal countries.

28. Against this backdrop, and building on the results and experience of PRAPS-1, Subcomponent 2.1 will aim to: (i) develop multi-sectoral strategies for securing and sustainably managing pastoral resources at national and cross-border levels; (ii) establish mechanisms for improving the governance of landscapes and livestock mobility, including for dispute resolution, at national and cross-border levels; (iii) finance investments in sustainable land management and restoration; (iv) improve access to new grazing areas (making more feed—natural forage—available); and (v) promote digital solutions for pastoralists giving real-time information on the state of pastoral resources to enhance mobility. It will contribute to bringing an additional area of around 7 million hectares under SLM.

29. For this to happen, the Project will strengthen the capacity of institutional stakeholders to develop multi-sectoral strategies for sustainably managing pastoral resources such as rangelands and water infrastructure. To prepare these strategies, the Project will finance forums and dialogue platforms involving the respective line Ministries (Water/Hydraulics, Environment, Land and Decentralization). This assistance will first be implemented at the national level to assess and update the national regulatory frameworks. Subsequently, the Project will accompany the implementation of pastoral resource management strategies at the decentralized level, involving the respective local institutions and pastoral communities.⁹⁶

30. The Project will also establish mechanisms for improving the governance of pastoral lands and pastoral mobility, in accordance with national governance frameworks and regulations on pastoralism (such as agro-

⁹³ Often referred as “Accords Sociaux.”

⁹⁴ With the support of specialized NGOs.

⁹⁵ The reasons behind poor landscape governance include, for example: (i) the multiplicity of actors and tenure systems and/or the lack of clear tenure; (ii) over-stretched or poorly equipped local conflict-resolution mechanisms; and (iii) uncontrolled expansion of agricultural land and encroachment into pastoral areas.

⁹⁶ Land Development Scheme at the regional level in Niger (*Schéma d’Aménagement Foncier*), Provincial Scheme of Pastoral Development in Chad (*Schéma Provincial de Développement Pastoral*), Communal Pastoral Resources Management Plan in Burkina Faso (*schémas communaux de gestion des ressources pastorales*), National Strategy for Pastoral Water Resources in Niger, Mali, Senegal and Mauritania (*Stratégie Nationale d’Hydraulique Pastorale*).



silvo-pastoral laws – see also Table A2.1), particularly for with respect to rangeland tenure security and access to water and pastoral resources. These activities will include: (i) establishing community-driven landscape management and transhumance management mechanisms, such as pastoral agreements at targeted local and cross-border mobility routes;⁹⁷ (ii) developing the capacity of land management authorities and transhumance committees;⁹⁸ (iii) physically delineating transhumance routes and rest areas; and (iv) establishing local conflict management and prevention committees. Use of the social engineering approach (Box A2.1) will also help to mitigate risks of conflict linked to natural resource use. These activities will be implemented by experienced POs or NGOs.

31. The Project will also finance SLM activities to protect, develop, and regenerate pastoral lands and ecosystems.⁹⁹ Interventions will restore the quality of pastures, rehabilitate degraded rangelands, maintain and improve soil fertility, increase biodiversity, improve grazing management, and enhance the sequestration of soil organic carbon. These activities will be implemented with the support of contracted service providers, local land management authorities, or community-based landscape management associations, and involve local pastoral populations. SLM investments will aim to protect rangelands (sand dune and land degradation control, firebreaks, fire control lines), regenerate pastures (grass reseeding), and recover degraded land. In addition to providing climate co-benefits, SLM activities will also contribute to providing livestock feed.

32. The Project will promote innovative digital solutions for POs and institutional stakeholders to access information on pastoral resources in real time. Depending on the country, the Project will finance the development of digital services providing satellite-derived information about the availability/ quality of pastoral resources (pasture, surface water), meteorology (rainfall patterns), and concentration of animals around water points, as well as digital technical advice on herd management (including animal health).¹⁰⁰ These information services will be available to POs through call centers, SMS, or USSD technology.¹⁰¹ They will support pastoralists during their mobility phase (particularly in times of crisis), help them to manage their herds, and enhance the adaptive capacity of pastoralists and their animals. The Project will establish implementation arrangements with national agencies responsible for new information and communication technologies,¹⁰² the private sector (agritechs), and specialized providers of digital technology services.¹⁰³

Box A2.1: Using a social engineering approach to prevent conflict

Social engineering is an approach to prevent conflict over access to common resources, and it has been inscribed since the 1990s in national policies on the management of pastoral water resources and (agro)pastoral land. In the context of PRAPS, this approach consists of facilitating multi-actor and multi-scale consultations to arrive at social agreements on the use of common resources—namely, a social charter which reflects all of the points of consensus on which all parties—local actors, beneficiaries, administrative and customary authorities—have agreed and are committed to.

Through this process, investments supported by PRAPS on pastoral lands (which are characterized by shared use of resources and hierarchy of rights) are secured, while social conflicts are prevented. PRAPS-1 achieved positive results

⁹⁷ “Chartes foncières locales” in Burkina Faso, “Chartes Pastorales” in Niger, Mali and Mauritania

⁹⁸ Code Rural in Niger, *Comités Fonciers* (COFO) in Mali, *Comités de Gestion* (COGES) in Burkina Faso

⁹⁹ The Project will benefit from the joint World Bank-WOCAT publication done under TerrAfrica Partnership in 2019 on Sustainable Rangeland Management (SRM) in Africa. <https://www.wocat.net/library/media/174/>. The guidelines present best practices on SRM, which will be promoted under the project.

¹⁰⁰ In Niger, a partnership with the Network of Chambers of Agriculture of Niger (*Réseau des Chambres d’Agriculture du Niger* - RECA) is envisaged to implement the e-extension system, which was initiated under the World Bank-funded PASEC and WAAPP.

¹⁰¹ Unstructured Supplementary Service Data.

¹⁰² Such as the National Agency for the Information Society (*Agence Nationale pour la Société de l’Information* - ANSI) and RECA in Niger, the National Agency for the Promotion of Information and Communication Technologies (*Agence Nationale de Promotion des Technologies de l’Information et de la Communication*) in Burkina Faso, and the Information and Communication Technologies Agency (*Agence des Technologies de l’information et de la Communication* - AGETIC) in Mali, among others.

¹⁰³ For example, partnerships with SNV Netherlands Development Organisation are being explored in Burkina Faso and Mali to scale up/enhance the Garbal solution.



with this approach, building social cohesion and ownership of investments supported through the Project. PRAPS-2 will strengthen the complementarity of the social engineering approach with World Bank ESS, in addition to improving the documentation and registration of social agreements. The social engineering approach will accompany the entire Project cycle and include:

Upstream

Consultations at several levels following a bottom-up approach, combined with a territorial diagnosis, define priorities for investment in pastoral lands and determine the best location of investments in a participatory, inclusive manner. This process considers the challenges and objectives of secure herd mobility, as well as the geographical coverage of water infrastructure, markets, and pastoral routes. Consultations start at the communal level and move on to the departmental and regional levels to produce pastoral development plans, such as the *Schémas d'aménagement Pastoraux*.

Downstream

- Consultation between stakeholders to agree on the exact location of the infrastructure/investments, based on an analysis of physical, environmental, and social factors.
- Negotiation of social agreements for the use of pastoral areas and infrastructure. At times, the negotiation of voluntary land donations or the commitment of certain users to renounce the exploitation of natural resources is accompanied by acts defining the conditions and possible forms of compensation.
- Negotiation of social agreements for the proper management of facilities and their sustainability, including the establishment of management committees.

33. **At the regional level**, this subcomponent will play a decisive role in scaling up innovative approaches by facilitating dialogue for peaceful and more fluid regional mobility (including cross-border transhumance) within the framework of the Regional Strategy for the Promotion of Pastoralism in West Africa (initiated by CILSS, ECOWAS, and WAEMU). In line with positive outcomes supported by PRAPS-1,¹⁰⁴ and jointly with Component 3, PRAPS-2 will support high-level dialogue at the political and strategic level. It will also help broker more local dialogue between selected decentralized authorities and representatives of pastoralists from both sides of borders to enhance cross-border land-use planning, preserve cross-border mobility, negotiate transhumance reception zones, and agree on transhumance calendars, formalized through bilateral or multilateral agreements. The Project will also finance analytical activities related to pastoral land tenure rights, their implementation, and their coherence across the region to inform regional harmonization and coordination processes. Finally, it will strengthen the Regional Pastoral Information System (SRIP)¹⁰⁵ to provide relevant information to key stakeholders on the state of pastoral areas, risks of conflict over access to resources, and statistics on cross-border transhumance, and other issues.

Subcomponent 2.2: Sustainable management of infrastructure for access to water

34. This subcomponent addresses the problem of access to water for pastoral livestock. PRAPS-1 started to fill important investment gaps, but pastoral water infrastructure is still insufficient in most targeted areas due to a lack of supporting policies, as well as chronic under-investment and maintenance. The main constraints are: (i) aging infrastructure; (ii) little or no access to water in some grazing areas; and (iii) the encroachment of agricultural land around water points. Maintaining the momentum generated under PRAPS-1 (well-conceived design, building, and rehabilitation of water facilities, water point database, geo-referencing of infrastructure), PRAPS-2 will significantly increase the number of functional water points accessible to pastoralists and strategically located on new and existing transhumant routes.

35. Using the social engineering approach described previously, the Project will finance the construction of pastoral water points in rangelands with no or limited access to water, to ensure the sustainable access of pastoralists to new grazing areas and natural forage resources, and to improve capacity to adapt to climate

¹⁰⁴ For example, the Katsina (Nigeria)–Maradi (Niger) cross-border transhumance agreement.

¹⁰⁵ Supported under the EU-funded Regional Dialogue and Investment for Pastoralism and Transhumance (PREDIP), and managed by CILSS/Agrhymet Regional Center (CRA).



change by reducing water stress and making a larger area of rangeland available. The main activities will be the design, construction, or rehabilitation of 368 wells, boreholes, and their surface equipment (drinking troughs), and surface water structures such as ponds, water pans/reservoirs, and riverbanks. The Project will set up and develop the capacity of water-user management committees (*Comités de gestions*, COGES) for the sustainable and non-conflictual management of water infrastructure assets. As recommended under the Sustainable Livestock Guidelines,¹⁰⁶ the Project will promote manure, nutrient, and waste management around pastoral water points to reduce methane and other GHGs and contribute to climate change mitigation. In all participating countries, Ministries of Water will be closely involved during implementation, together with the directorates of pastoral water, decentralized communities mandated by the State (regional councils, rural communities, municipalities), and the land tenure authorities.

36. **At the regional level**, this subcomponent will support coherent planning (spatial, environmental, social, economic) of pastoral water points adapted to the needs of beneficiaries to help reduce unserved pastoral areas and contribute to inter-regional planning within the countries. It will support technical studies, including the geo-mapping of pastoral water points; the development of technical and economic reference guides adapted to available water resources (rainwater collection, underground dams, and so on) shared between countries with contiguous watersheds.¹⁰⁷ It will further support the review and/or finalization of national pastoral water strategies and the preparation of a regional pastoral hydraulic strategy to better identify investment opportunities for PRAPS-2 and beyond. It will also promote knowledge exchanges and innovations in the management and maintenance of water infrastructure.

Subcomponent 2.3: Fodder production

37. Rangeland resources (grass, trees, shrubs) represent the largest part of the feed ration in pastoral systems (between 80 percent and 100 percent of dry matter). The low availability and digestibility of grass forbs and woody forages from pastures and rangelands during the dry season limit herd productivity and resilience of pastoralists during climatic shocks. The objective of this subcomponent is to increase the availability and accessibility of cultivated fodder to complement the supply of grass, helping to secure pastoral farming and herd mobility and improving resilience.

38. Fodder production is a field of innovation for PRAPS-2. As a first step, the Project will finance technical and socio-economic feasibility analyses to determine the most appropriate fodder crops, production systems, and agro-ecological production techniques in each participating country, after a review of current and past trials and studies. It will also finance studies of the impact and sustainability of previous fodder interventions in pastoral areas and their access to (agro)pastoralists.¹⁰⁸ To identify potential sites for fodder production, the Project will explore partnership opportunities with the World Bank-financed Regional Sahel Irrigation Initiative Support Project (SIIP).

39. Based on the results of the feasibility studies, the Project will finance: (i) the development and equipping of fodder production sites to produce at least 10,800 tons of fodder; (ii) the construction and operationalization of fodder storage warehouses; and (iii) experiential and participatory farmer training, for example through agro-pastoral field schools¹⁰⁹ on fodder production using agro-ecological techniques, feed processing,¹¹⁰ and improved livestock feeding practices (improving digestibility and hence reducing enteric

¹⁰⁶ Guidelines developed jointly by World Bank and FAO. Available at <https://www.sustainablelivestockguide.org/project-in-formulation>.

¹⁰⁷ Lake Chad (Niger-Chad), Niger river (Mali-Niger-Burkina), Senegal river and affluents (Mali-Senegal-Mauritania)

¹⁰⁸ Several fodder production experiments have been tested in Niger, Chad, and Mauritania, including irrigated fodder production and the integration of fodder legumes in rainfed production systems.

¹⁰⁹ Technical assistance from FAO, benefiting CILSS and PRAPS-2 countries, is envisaged under the Project to promote the agro-pastoral field school (APFS) approach. At the regional level, the Project will organize knowledge-sharing seminars on APFS (cases studies, costs, implementation modalities, trade-offs, and so on) to further institutionalize the approach in interested countries.

¹¹⁰ Examples of techniques to be disseminated include the use of crop residues (rice straw, sugar cane molasses, and others), strategic feed supplementation and ration formulation schemes, preparation and mixing of feed supplements, and feed conservation.



methane emissions). (Note that under Subcomponent 3.3, a complementary activity will use MGs to finance feed production, transformation, and storage by private entrepreneurs to develop the feed VC.) During implementation, the Project will work closely with pastoral organizations¹¹¹ involved in producing fodder and animal feed.

40. **At the regional level**, and with technical assistance from FAO,¹¹² the Project will also support regional institutions and countries in building and institutionalizing capacity to better measure feed availability,¹¹³ including the availability of forage and fodder (Box A2.2). This work will be conducted in collaboration with CILSS Agrhymet Regional Center (CRA) and will benefit institutions at the national and regional level. Methods to measure feed availability (tonnage of grass, woody fodder, crop residues in dry matter) and quality (energy and protein), especially methods that take seasonal factors into account (rainy season, cold dry season, hot dry season), are essential to project and map structural deficits and feed and fodder surpluses. They are critical at the national and regional level for preserving regional transhumant livestock herding and livestock cross-border trade as well as for planning the development of feed supply chains, which are important contributors to regional economic integration and social cohesion. The FAO improved feed balance methodology will be used by PRAPS-2 countries to assess, estimate, and map structural feed (including forage and fodder) deficits at the national and regional level and enhance investment planning and targeting, starting with activities under Subcomponents 2.1 and 2.2. Feed balances are also essential tools for enhancing the accuracy of EWS (see Component 5). In addition, the Project will finance a comparative study of the feasibility (economic, environmental, social) of cultivated forage crops (comparative analysis of forage crops versus rice).

Box A2.2: Using feed balances to improve resilience in pastoral communities

A feed balance exercise assesses feed resources, including forages, and compares them to the needs of livestock. It provides information to regional and national policymakers, producers, and stakeholders of the livestock sector in general to improve their planning and evaluation of the sector. In particular, feed balances are essential for anticipating deficits and taking measures such as feed distribution or destocking livestock, and for assessing the potential consequences of climate change for food production. Feed balances can also be used for assessments at different scales—for example, as part of global or regional assessments of competition between feed and food (Mottet et al. 2017) or estimates of GHGs from livestock (Gerber et al. 2013).

In the Sahel, regional institutions and national technical services have used feed balances estimated at the end of the year (based on satellite and field data) to understand prospective needs in the coming dry season. Indeed, the estimation and mapping of feed and fodder deficits and surpluses provide essential information for supporting transhumance (improving the resilience of pastoral communities over the long term), developing feed supply chains, and establishing water points, stopover lodges, pastoral reserves, access rights, and livestock markets. In the context of PRAPS-1, feed balances were an essential tool for EWSs that feed pastoral indicators into the harmonized framework (*Cadre Harmonisé*).

FAO's Guidelines for the Estimation of Fodder Balances in the Sahel Region of West and Central Africa (2019) were developed under a project implemented by the FAO Animal Production and Genetic Resources Sub-Division in Chad and Niger, with financial support from the Government of France, to improve the methodology used to estimate feed balances in the Sahel. Their development benefited from the content and conclusions of a workshop on feed balance sheets (FBS) held in Niamey, Niger in March 2019, in addition to prior work by FAO and its development partners, including the FAO Handbook, *Conducting National Feed Assessments* (2012) and de Haan et al. (2016).

¹¹¹ Examples include ADENA in Senegal, RECOPA and CRUS au Burkina Faso, AREN in Niger and, GNAP in Mauritania.

¹¹² Details of the FAO intervention under PRAPS-2 will be developed into a specific Project document and contract between FAO and CILSS. A technical note describing FAO's proposed interventions was developed during Project preparation. Pilots will be initiated with Chad, Niger, and Senegal, before possibly expanding to other countries.

¹¹³ New FBS methodology and guidelines developed by FAO. See Box A2.2 for details.



COMPONENT 3: Livestock value chain improvement

41. Component 3 seeks to improve livestock VCs, facilitate regional livestock trade, and contribute to regional markets integration. PRAPS-1 initiated a number of interventions to support this aim: increasing the availability of adequately designed, strategically positioned and equipped infrastructure (such as physical markets and livestock rest areas) to enable livestock trade; enhancing livestock POs, implementing data collection systems to monitor and provide market price information, providing training in regional trade regulations, and monitoring trade issues. Several of these interventions must now be consolidated, adjusted, and scaled up.

42. To do so, this component of PRAPS-2 will continue to fill gaps in infrastructure to market live animals, support its sustainable management, and strengthen market intelligence systems with digital technologies (Subcomponent 3.1). It will strengthen the capacity of national and regional POs and interprofessional bodies to serve their members and take advantage of economic opportunities by providing support related to the legal, organizational, and operational aspects of their activities, policy dialogue, advocacy, economic intelligence, and digital finance (Subcomponent 3.2). It will also provide subproject financing (MGs) to support innovative solutions responding to the specific needs of livestock VC actors (Subcomponent 3.3). Activities will be prioritized along strategic north/south and east/west¹¹⁴ regional trade routes¹¹⁵ where animals conveyed by foot cross the borders to supply the growing demand from markets in coastal countries.

Subcomponent 3.1: Strategic market infrastructure development for regional trade

43. Despite the significant volume of animals and animal products traded from the Sahel to West African coastal countries, which constitute a major demand hub for meat and livestock products (demand is growing at an average of 4 percent annually), there is a scarcity of livestock infrastructure such as markets and slaughtering and processing facilities. Constant road harassment of merchants along trade routes, poor governance of market infrastructure, and recurrent tax collection from local and regional authorities with marginal reinvestment in pastoral production also continue to hinder the development of national and regional livestock trade.

44. This subcomponent will finance studies to generate knowledge on the supply and demand for quality animal products at national and regional levels, and to scout management options such as public-private partnerships (PPPs) to ensure that infrastructure (markets and slaughtering areas) is continuously supplied with healthy animals. In turn, these studies will contribute to the development of strategies for the establishment of strategic livestock infrastructure for local and cross-border trade. These strategies will be developed through dialogue with all VC stakeholders—traders, herders, pastoral and agro-pastoral communities—together with relevant Livestock Departments.

45. The Project will rehabilitate and/or construct market infrastructure (livestock markets, rest areas) along strategic regional trade routes and upgrade national market information systems. Small-scale trade route infrastructure will enhance the resilience of pastoralists and herds to climate change by providing shade, water, and feed, and it will inherently have low emissions. To ensure the sustainability of investments, the Project will strengthen the governance of new livestock markets and slaughtering areas. Reinforcing legal frameworks and agreements for transparent governance and management of facilities (the regular maintenance of infrastructure, delegation of management to private actors through PPPs, and so on) will support compromise among stakeholders, among other impacts. Building on PRAPS-1 achievements with market information systems, the Project will expand their scope and digitization by incorporating a feature

¹¹⁴ For instance, 100,000–300,000 small ruminants and the same number of cattle move from Mali to Côte d'Ivoire each year; 2,000,000 small ruminants and 300,000 cattle move from Niger to Nigeria each year; and 20,000–100,000 small ruminants and 20,000–100,000 cattle move from Mauritania to Senegal each year. See Inter-Réseaux (2018), "Pastoral Livestock Farming in Sahel and West Africa: Preconceptions Put the Test."

¹¹⁵ An ongoing regional study supported by CIRAD will further improve the mapping of regional trade corridors.



on animal feed prices and linking these systems to other digital information platforms and solutions, such as those described in Component 2.

46. At the country level, implementation of Subcomponent 3.1 will involve ministries of livestock in partnership with the local authorities and municipalities in charge of managing public infrastructure. POs and their federations will be closely associated with implementation as well, as they are expected to drive social negotiations and agreements for the identification, development, and management of market infrastructure.

47. **At the regional level**, this subcomponent will facilitate cross-border trade and enhance market intelligence and knowledge by improving the collection and monitoring of regional trade flows and barriers to trade¹¹⁶ for pastoral products, with the objective of improving the reliability of official statistical data on intraregional trade—particularly between Niger and Nigeria; Nigeria and Chad; and Mauritania, Mali, and Senegal—in collaboration with the International Food Policy Research Institute (IFPRI). It will also carry out studies with ILRI on the supply and demand for livestock—mainly cattle, sheep, and goat—products in the Sahel Region and the competitiveness of (agro)pastoral livestock VCs. Another set of activities will focus on enhancing and improving the sustainability of market information systems for livestock (SIM-B), taking further advantage of digital technologies and piloting new approaches in selected markets. Reference guides for the sustainable construction and management of livestock markets will be developed and disseminated. Alongside Component 5, regional efforts under this subcomponent will contribute to joint market assessments for (agro)pastoral products in the CILSS/ECOWAS area in collaboration with international and regional technical partners (FAO, WFP, FEWSNET, RESIMAO, and National SIM).¹¹⁷ The results will inform regional analyses of food security carried out within the framework of the PREGEC.¹¹⁸

Subcomponent 3.2: Capacity development of national and regional pastoral POs

48. Structured pastoralist POs, both national and regional, still have relatively limited capacity to provide services to their members and to seize economic opportunities, although POs are essential to successful economic and social development in pastoral territories. In continuation of efforts under PRAPS-1, this subcomponent will further strengthen and empower national and regional POs. The Project will strengthen the capacity of national POs to engage in policy dialogue, benefit from market intelligence, and use digital technologies, and at the regional level, the Project will strengthen PO networks and disseminate regional trade regulations for livestock products.

49. The Project will mobilize a participatory organizational assessment of POs at the national level, which will be used to prepare strategic action plans that will be submitted to the PO general assembly for validation and endorsement (to ensure ownership and sustainability). Implementation of the action plans will be co-financed by PRAPS-2. Specialized support will be provided for the following activities (among others): (i) organizational management and governance (including closing the gender gap in PO governance structures); (ii) business management; (iii) policy dialogue and advocacy; (iv) conflict resolution; (v) marketing/commercialization of feed and livestock products; and (vi) understanding of climate change and risks, as well as adaptive measures and low-carbon strategies. The implementation of these action plans is expected to enhance the services offered to PO members, empower POs in the formulation of regional policies and strategies to promote peaceful transhumance, and prevent conflicts between farmers and herders through cross-border dialogue. Last but not least, the Project will promote the use of digital finance solutions (such as mobile money) by POs and their members as a means of facilitating financial transactions

¹¹⁶ In complementarity with the FARM-TRAC project managed by CILSS.

¹¹⁷ WFP (World Food Program); FEWSNET (Famine Early Warning Systems Network); RESIMAO (West Africa Market Information Systems Network).

¹¹⁸ Convention for the prevention and management of food security crises, available at <http://www.food-security.net/topic/la-charte-pregec/>.



in livestock markets and enhancing financial inclusion in pastoral areas. Activities related to digital finance will be outsourced to specific digital finance operators.¹¹⁹

50. **At the regional level**, this subcomponent will strengthen the capacity of regional and apex POs (APESS, RBM, and ROPPA) to play a more active role in facilitating regional trade, in collaboration with other regional programs from ECOWAS, including the World Bank-financed Food System Resilience Program (FSRP), WAEMU, and CILSS. Specific activities will aim to improve knowledge of regulations, provide digital platforms to share relevant information widely (for example, through the SLATCH application),¹²⁰ support transborder concertation meetings with authorities, and collect data to support advocacy. PRAPS-2 will focus its support on three major livestock marketing axes: (i) Niger–Nigeria; (ii) Mali–Mauritania–Senegal (around the Kayes crossroads in Mali); and (iii) Chad–Nigeria. Exchanges will be supported with other regions for experience sharing and cross-fertilization.

Subcomponent 3.3: Value-chain development and subproject financing

51. The constraints that hinder the development of pastoral VCs include limited value addition along VCs, poor infrastructure, poor access to finance, and the lack of transformative private investments. The objective Subcomponent 3.3, which is mainly national in scope, is to increase the productivity and commercialization of POs and private investors (including women) in targeted PRAPS-2 areas by: (i) improving their access to critical inputs, equipment, productive infrastructure, and technical assistance; and (ii) increasing their linkages with national and regional markets.

52. Initiatives led by POs or private investors will be financed through a co-financing agreement (that this, through MGs). The list of subprojects eligible for MG support and the selection criteria (such as a contract with downstream buyers, the generation of public goods, a nutrition dimension, female entrepreneurship, youth inclusiveness, environmental impacts, climate change adaptation, natural resource and energy use efficiency, job creation, and so on) will be described in the PIM. According to preparation team estimates, subproject costs are expected to average US\$30,000. Depending on the country, the Project will contribute 60–70 percent of the total cost of the subproject. Examples of subprojects that could be financed include: (i) feed production (including fodder, and the valorization of crop residues and byproducts from agriculture and industry/local processing)¹²¹ and storage; (ii) hide and skin processing; (iii) red meat processing; (iv) milk collection and processing; (iv) small-scale dairy and small ruminant fattening; and (v) climate-smart livestock or circular economy/recycling initiatives that reduce waste and recycle carbon and nutrients, such as renewable energy/biogas production (through the anaerobic digestion of manure). Beneficiaries of MGs will be POs and small enterprises that have some assets and are legally registered, operational, and viable, with productive and entrepreneurial potential but without formal linkages to financing institutions and markets.

53. To facilitate the grant process and implementation of subprojects, the Project will finance: (i) public information campaigns; (ii) calls for proposals; (iii) technical assistance to POs or private investors for subproject/business plan preparation; (iv) equipment and infrastructure (as described in the subproject/business plans); and (v) specific technical assistance to POs or private investors during subproject implementation. To assist with the preparation of subprojects and business plans and provide technical assistance during subproject implementation, the Project will contract various business development service providers, such as NGOs and consulting companies. Technical committees at the local and national level (comprising PCU staff, pastoral POs, representatives of the Ministry of Livestock, and local government representatives) will review, select, and approve viable subprojects/business plans, with particular attention to the selection criteria mentioned previously. Technical committees will meet two to three times per year

¹¹⁹ For example, the United Nations Capital Development Fund (UNCDF) (not exclusive).

¹²⁰ See www.slatch.io

¹²¹ Oilseed cake, or byproducts of food processing industries such as milling and brewing.



on average.¹²² The use of simple project assessment tools such as RuralInvest (or equivalent) will be required for assessing subprojects. Depending on the country, the procurement of goods and services under each subproject will be handled either by the PCU¹²³ or by beneficiaries themselves.¹²⁴ The PCUs will oversee and monitor the implementation of approved subprojects (M&E, compliance with E&S safeguards, and so on). Climate change adaptation and resilience building will be an integral part of technical assistance provided during subproject implementation.

54. **At the regional level**, in complementarity with Subcomponent 3.1, PRAPS-2 will support the harmonization of feed quality standards in the region. It will finance a study to survey the standards and regulations in place in the region, the structures responsible for controlling the quality of feed produced, and the functioning of laboratories in PRAPS-2 countries to identify the main investment gaps and needs to increase feed quality.

COMPONENT 4: Social and economic inclusion improvement, women and youth

55. The outcome of Component 4 is improved socio-economic inclusion of pastoralists, particularly women and youth. PRAPS-1 successfully pursued a range of activities to broaden inclusion, such as providing improved access to skills, technical, and vocational training, as well as direct support for IGAs. PRAPS-2 will continue in this vein by widening access to technical and vocational training (Subcomponent 4.1) and IGAs (Subcomponent 4.3), specifically targeting young people and women (mainly young women). In addition, PRAPS-2 will open a new area of work that will promote the inclusion of pastoral populations in social and civil registries (Subcomponent 4.2), which will consolidate access to basic rights and services, including social safety nets and land rights, for pastoralist populations.

Subcomponent 4.1: Access to vocational and technical training

56. Pastoral communities, especially women and youth, continue to have unequal access to opportunities for technical skills and vocational training in the Sahel Region. One barrier is that training is tailored for delivery to urban residents and also poorly adapted to the social constraints faced by rural women. Another barrier is that few training opportunities focus on technical areas that can be leveraged in a pastoral environment, creating a mismatch between the types of training on offer and the aspirations of many young people to remain connected to pastoralism. Subcomponent 4.1 will provide solutions on both fronts. It will support adaptations in the training offered to young and female pastoralists and make it easier for them to access that training.

57. The subcomponent will specifically target vulnerable¹²⁵ women and youth¹²⁶ from pastoral households and support their social and economic insertion, addressing their particular vulnerability to the impacts of climate change and enhancing their resilience to any future shocks. PRAPS-2 will aim to improve their resilience through a package of services designed to support them along their path to higher, more stable, and more diversified incomes. Based on lessons from PRAPS-1 as well as youth employment programs,¹²⁷ the program will deliver a mix of the following services, depending on the specific needs of the targeted groups: (i) technical training; (ii) functional literacy training; (iii) counseling and mentoring sessions; and (iv) business skills training to prepare IGAs. Participating training centers will receive funding to adapt the delivery of their offerings to the specific circumstances of the targeted communities (through

¹²² The frequency of meetings will be adapted depending on the number of applications.

¹²³ In Niger and Chad.

¹²⁴ In Burkina Faso, Senegal, Mauritania, and Mali.

¹²⁵ Where possible, the Project will use the social registry to check the eligibility of youth and women applicants.

¹²⁶ Defined as young adults between ages 18 and 35–40, with a particular focus on those ages 18–24.

¹²⁷ The main lessons are derived from Datta et al. (2018), "Integrated Youth Employment Programs: A Stocktake of Evidence on What Works in Youth Employment Programs." World Bank, Washington, DC. Available at <https://openknowledge.worldbank.org/handle/10986/31424>.



decentralization, mobile technologies, and adapting training times and places to the mobility of pastoral communities).

58. The modalities for implementing this subcomponent will be adapted to the conditions and needs of each beneficiary country and will build on the institutional partnerships forged under PRAPS-1. For two countries (Mauritania, Senegal), activities will be carried out in partnership with the national institution in charge of Technical and Vocational Training, which will be responsible for selecting beneficiaries, diagnosing their needs, directing them toward appropriate training opportunities, and following up during and after their training. In Chad, Burkina Faso, Mali, and Niger, agreements will be established between the PCU and technical training centers identified by the Project. The PCU will lead the preparation of local training plans and follow up on training activities. In all countries, training providers will be mobilized to provide the support required by young and female trainees, and then to accompany them in preparing a micro-investment (IGA) project that will immediately enable trainees to make use of the increased earning potential conferred by their training.

59. Specific activities financed under this subcomponent include: (i) initial diagnostic studies to assess training needs and identify potential candidates among young and female populations; (ii) technical assistance in the form of field-based coaching and mentoring during the training and for the development of IGAs; (iii) the delivery of demand-driven training in technical skills; (iv) technical assistance to develop innovative training materials; (v) stipends for youth and women to participate in training; (vi) grants for youth and women to pursue IGAs; and (vii) quality assurance mechanisms and monitoring of training outcomes. This program to foster economic inclusion aims to close gender and age gaps by boosting participation of females (with a target of at least 55 percent female participants) and youth (90 percent of participants will be young people, and at least 60 percent will be ages 18–24).

60. **At the regional level**, CILSS will mobilize regional stakeholders specialized in vocational training, including the regional platform on technical and vocational training (PEFOP) in Dakar¹²⁸ and the WAEMU Platform¹²⁹ for sharing vocational training tools and resources. These efforts will allow PRAPS-2 countries to receive tailored technical assistance and benefit from the experience and lessons from PRAPS-1, which will be adequately documented and disseminated.

Subcomponent 4.2: Improved access to social and civil registries

61. Better access to social registries and programs as well as civil registries and rights remains a strong demand of pastoral PO in the Sahel. States in the region have committed to building fully inclusive social registries and making rapid progress toward better coverage of civil registries, particularly in rural areas where registration deficits are glaring (only 20 percent of the population on average is registered). There is significant risk that vulnerable pastoralist populations will remain on the margins and underserved, which will fuel fragility and resentment of a State that does not resolve this inequality quickly enough. In the six

¹²⁸ Platform of expertise in vocational training (Pefop); see <https://pefop.iiep.unesco.org/>.

¹²⁹ See <https://www.mutualisation.ccmefp-uemoa.org>.



PRAPS-2 countries, the rapid formation and expansion of social registries¹³⁰ and social transfer programs¹³¹ represents a key opportunity to strengthen the resilience of the most vulnerable pastoralists. Inclusion in social registries largely determines access to social transfers of various kinds, from emergency aid mobilized in an adverse climatic event or crisis (including pastoral crises) to the regular provision of safety net assistance such as cash transfers or cash-for-work programs targeted to poor, vulnerable households.

62. With respect to civil status, the stakes in terms of rights and services are very broad, including education and health. For pastoral populations more specifically, civil status influences the possibility of securing land rights that are increasingly challenged by other stakeholders. Civil status also directly affects prospects for participating and playing a role in public life, including participation in local bodies that discuss important decisions related to public investment (feeder roads, markets, schools, and so on) and NRM (such as water access infrastructure, landscape management, irrigation schemes encroaching on critical pastures).

Advancing the registration of pastoralists and agro-pastoralists in social registries

63. The PRAPS-2 intervention strategy will be two-fold. First, where social registries have not yet reached full geographical coverage and inclusion of eligible pastoralists, PRAPS-2 will partner directly with the administrations supervising social registries, providing the means to extend the social registry to geographical areas that are considered by and large to be predominantly pastoral areas and promote the inclusion of vulnerable eligible pastoralists households. PRAPS-2 will build on (and adapt where needed) the approach defined by the Mali Drylands Development Project (P164052, Component 1.1.). Second, PRAPS-2 will seek to improve the functionality of social registries to ensure inclusive registration processes for pastoral populations in all beneficiary countries. Initial diagnostics will be conducted to identify risk factors related to exclusion and measure the inclusion of vulnerable pastoral communities in social registries.

64. PRAPS-2 will finance: (i) diagnostic studies in studies on the status of inclusion of vulnerable pastoralist populations in social registries PRAPS-2 countries,¹³² commissioned by CILSS at the regional level; (ii) technical assistance and process facilitation for the adaptation of social registry tools and methods; and (iii) the cost of expanding social registries in selected pastoral areas and increasing inclusion. Success will be measured by: (i) the number of pastoral/agro-pastoral households newly registered in the social registry in the areas targeted for extension of the social registry; and (ii) the number of improved registration tools and procedures adopted by the social registry.¹³³

Supporting the acquisition of civil status in pastoral communities

65. PRAPS-2 will facilitate civil registration for pastoral populations by: (i) sensitizing authorities and pastoral families in selected pastoral areas on the importance of civil registration; and (ii) organizing mobile court hearings, conducted by the authorities in charge of civil administration at strategic times of the year (taking the transhumance calendar into account), in convenient geographical areas (markets, fairs, “wintering”

¹³⁰ Legal frameworks creating social registries and their respective institutions are as follows. In Chad, the Unified Social Registry (Registre Social Unifié, RSU) was created by ministerial decree in February 2019 and is managed by the National Institute of Statistics. In Mali, the RSU was created in 2013 and contains the beneficiaries of contributory social protection programs. It is coordinated by the Directorates in charge of Social Protection and governed by a Steering Committee established in 2016. In Mauritania, the Social Registry Directorate (Direction du Registre Social, DRS) was created by decree in March 2016; the social registry is anchored at the level of the Ministry of Economy and Industries because its cross-cutting positions makes it a unique targeting instrument, as foreseen in the National Social Protection Strategy. In Niger, the 2011 National Social Protection Strategy (Politique Nationale de Protection Sociale, PNPS) highlighted the need to set up a unified database of current and potential beneficiaries of social protection interventions. A Technical Committee has been established for this purpose by government decree in 2018. The registry is coordinated by the National Framework for Food Crisis Prevention and Management, which has operated since 1998 to coordinate interventions to reduce food vulnerability. In Senegal, the RNU was created in 2015 and in April 2019 was placed under the authority of the General Delegation for Social Protection and National Solidarity (Délégation Générale à la Protection Sociale et à la Solidarité Nationale, DGPSN) within the Ministry of Community Development, Social and Territorial Equity. As in Mali, the social registry in Senegal was initially built on the national list of social safety net beneficiaries.

¹³¹ The total number of households already registered in the six countries exceeds 1.8 million.

¹³² Except for Senegal, where the study will be piloted under a World Bank-executed Trust Fund in FY21.

¹³³ These indicators are not reflected in PRAPS-2 Results Framework but will be monitored by PRAPS M&E Units at the country level.



areas, annual salt-cures, traditional gatherings) to give pastoral communities the opportunity to initiate and complete civil registration processes, such as the issuance of birth certificates. The PCUs will be responsible for this intervention, through strong partnerships established with POs and the administrations in charge of civil registration in the targeted areas.

66. PRAPS-2 will finance: (i) communication campaigns in pastoral areas to reinforce the importance of civil registration and the practical steps involved; (ii) the mobilization of pastoral POs for communication and community mobilization, including in hard-to-reach areas; and (iii) operating expenditures for administrations in charge of civil registration. PRAPS-2 will build directly on the approach of POs such as Kawrane in Burkina Faso, which facilitated civil registration in pastoral areas highly effectively. Success will be measured by the number of (agro)pastoral households newly entered into the civil registry in the selected target areas.

67. **At the regional level**, CILSS will undertake two key activities. First it will commission (i) an initial diagnostic study on the inclusion of vulnerable pastoralist populations in social registries which will combine a process analysis with a field analysis to measure the degree of inclusion of vulnerable pastoralists by sampling the population; and (ii) a report that will highlight lessons, achievements, and best practices for making civil and social registries more inclusive. Second, it will support regional POs in advocating the inclusion of pastoralist populations in civil and social registries. Regional POs will receive resources to conduct sensitization and advocacy activities directed at the authorities in charge of extending civil and social registries in the six countries to promote better inclusion of pastoralist populations.

Subcomponent 4.3: Income-generating activities

68. Self-employment remains one of the most secure and effective ways of building resilience in pastoral areas by providing more stable and higher incomes. Opportunities exist to operate profitable IGAs, either within or beyond pastoralism, but many vulnerable youth and women cannot take advantage of those opportunities because they lack the skills and seed capital. Building on approaches developed during PRAPS-1, PRAPS-2 will expand opportunities for vulnerable women and youth to pursue IGAs, taking advantage of the options offered through the use of mobile technologies (training, coaching, mobile grants) and the development of social registries (identification of beneficiaries).

69. Although the specific approach to IGAs will be adapted to the context in each PRAPS-2 country, a set of common interventions will be implemented, including the implementation of local processes for selecting beneficiaries, an exploration of how social registries can be used to select beneficiaries, the mobilization of field-level mentorship for beneficiaries (including the delivery of short technical training sessions specific to the particular IGA),¹³⁴ the mobilization of assistance to prepare IGA subprojects, coaching, and psycho-social support. The Project will also provide organizational support for IGAs with a collective dimension and support functional literacy training as needed.

70. Technical committees at the local and national level (comprising PCU staff, pastoral POs, representatives of the livestock ministry, local government representatives, and civil society, including women's groups) will review, select, and approve beneficiaries on the basis of lists established through community based targeting.¹³⁵ Depending on the country, the procurement of goods and services (as described in the procurement schedule for subprojects) will be handled either by the PCUs or beneficiaries themselves. The PCUs will oversee and monitor the implementation of subprojects (including M&E, compliance with E&S safeguards, and so on).

¹³⁴ Unlike the medium to long term training delivered under Subcomponent 4.1, Subcomponent 4.3 will offer short term training specific to the type of IGA.

¹³⁵ The use of social registries will be encouraged as available and appropriate.



71. Each beneficiary will receive a small grant (the average amount will be US\$450). The Project PCU will be responsible for conducting regular compliance monitoring of funded activities. Eligible activities will be defined in the PIM and may include, for example, investments related to fodder production, small-scale processing of milk, hides, and skins, and other pastoral products. Criteria will include, as appropriate, sustainability, resilience to shocks (especially climate shocks). Technologies that use natural resources and energy efficiently will be promoted systematically.

72. **At the regional level**, CILSS will be supported to commission two main activities under this subcomponent: (i) a study to estimate the sustainability and impact (in terms of additional income) of IGAs supported by PRAPS-1 and PRAPS-2 for youth and women from pastoral areas; and (ii) a capitalization report on the achievements of PRAPS-2 in the development of IGAs for youth and women from pastoral areas. The report will illustrate how PRAPS-2 very specifically oriented activities to women and youth (with significant inclusion of persons ages 18–24) in pastoral areas, and it will provide practical guidelines for others planning to pursue similar activities.

73. Results indicators will include the number of (agro)pastoral households that benefited from the package of services described earlier. At least 75 percent of beneficiaries are expected to be women and 95 percent youth, of whom at least 60 percent will be ages 18–24.

Component 5: Project coordination, institutional strengthening, crisis prevention and response

74. Component 5 will focus on all aspects of Project management, including fiduciary management, safeguards, M&E, and communication (Subcomponent 5.1). It will develop institutional capacity in a number of ways: through adapted training, the use of pastoral crisis prevention tools and procedures, and efforts to fill important gaps in knowledge and data at the national and regional level (Subcomponent 5.2). A CERC (Subcomponent 5.3) will allow countries to swiftly respond to eligible crises or emergencies.

Subcomponent 5.1: Project coordination

75. Under PRAPS-2, as under PRAPS-1, each beneficiary country and designated regional entity will oversee day-to-day Project management. The regional level, under the leadership of CILSS, will ensure overall Project coordination, in close collaboration with beneficiary countries. CILSS will host the PRAPS R-PCU and coordinate the implementation and management of all components at the regional level, including Component 1 (implemented by RAHC and OIE), while line ministries responsible for implementing the Project in beneficiary countries will each host an N-PCU, as detailed in Annex 1. Under Subcomponent 5.1, the Project will support PCU staff salaries, equipment, operating costs, M&E, procurement, FM, social and environmental safeguard implementation, and communication activities. It will also support operation of the Steering and Technical Committees.

76. As part of its overall coordination role, the R-PCU will provide oversight and guidance to N-PCU operations, support selected M&E activities to harmonize approaches (and lead surveys to report on PDO indicator #3 related to increased revenues, in partnership with CIRAD), review and consolidate country M&E data, monitor safeguard implementation issues in countries, advise on activity planning, and identify needs for support to countries. Beyond their regular missions in PRAPS-2 countries, regional staff will also participate as observers in World Bank ISMs to participating countries.

77. Considering the growing landscape of national and regional projects, which presents challenges in coordination as well as opportunities to join forces, align approaches, and fill financing gaps, the R-PCU will play an important role in ensuring the overall coherence of interventions within PRAPS-2 countries and particularly between the regional programs managed by CILSS and ECOWAS. The same is true at the national level, where PRAPS-2 is expected to lead the way for other projects and programs investing in efforts relevant to pastoralism. In this regard, support for strategic activities, capacity building, and data generation under the technical Project components and Subcomponent 5.2 will be critical.



78. To ensure consistency and complementarity between countries and the regional level, communication activities will receive greater emphasis. They are important not only to disseminate Project results but to share key information and data supporting higher-level objectives of consolidating the position of pastoral systems in national and regional development agendas in the long term.

Subcomponent 5.2. Institutional strengthening

79. Recognizing the intrinsic weaknesses of national and regional institutions owing to chronic underfunding of human resource development (including the lack of continuous, strategic skill development), recruitment, and retention, PRAPS-2 will scale up investments in training and education. It will also support coordinated national and regional studies to generate important missing data. These critical investments in human and knowledge resources will enable countries and regional institutions to fulfill their mandates more effectively and develop sound national and regional policies, strategies, and investments for (agro)pastoral livestock.

80. In light of these needs, Subcomponent 5.1 will sponsor young professionals to obtain masters degrees on pastoralism (initiated under PRAPS-1 at CILSS/Agrhymet), finance some doctoral research activities, as well as veterinary masters and doctoral degree training, and support training in specialized subjects such as ecology, natural resources, and epidemiology. These efforts will prepare a new generation and network of young experts in the region to support development of the sector well beyond Project closing. Curricula will include subjects such as climate change impacts, risk assessments, climate information, GHG emissions, carbon sequestration, and climate change mitigation and adaptation strategies.

81. The Project will also finance a series of cross-cutting technical and analytical studies, supported and led by the regional level, that will build expertise within CILSS and participating countries to use global reference tools—particularly LSIPT (to develop livestock sector master plans and sector analysis)¹³⁶ and GLEAM-*i* (to estimate the environmental footprint of livestock investments).¹³⁷ This work will be done in partnership with FAO and its network of experts. The use of LSIPT and GLEAM-*i* will improve the understanding of the socio-economic importance of pastoral systems and more concretely and convincingly demonstrate their contribution to poverty reduction, economic growth, food and nutritional security, and adapting to climate change. These tools will also help countries to develop scenarios to anticipate impacts and adapt future policies accordingly. Country institutions (including livestock ministries) and regional institutions will be trained to use these reference tools.

82. The Project will also finance a regional analysis of the supply of meat from Sahelian countries and the evolution of demand in coastal countries, as well as the competitiveness of VCs linked to pastoralism, bringing in expertise from ILRI. These studies will also generate critical data and knowledge of the social, economic, and ecological importance of pastoralism at the national and regional level. Results will be disseminated widely and help guide and calibrate future strategies, including the ECOWAS strategy on pastoralism, under preparation.

83. Lastly, the Project will further strengthen EWS and pastoral crisis prevention activities initiated under PRAPS-1. It will consolidate capacity-building efforts for the administrations in charge of pastoral components of EWS in each of the six countries. Aside from basic and refresher technical training, this effort will feature innovative training on emerging risks (in relation to COVID-19). The Project will invest in mobilizing digital technologies for pastoral EWS and linking them with information systems that integrate multi-source, multi-actor, and multi-sectoral data to deliver tailored information services and products. During the first three year of implementation (no more), the Project will finance the collection of harmonized data in countries on indicators related to pastoralism and their integration in the *Cadre Harmonisé*. Three essential actions will support efforts under PRAPS-2 to improve the response to pastoral crises: (i) training

¹³⁶ Developed with World Bank financial support and technical inputs from FAO and CIRAD. The continuous development of LSIPT is now led by FAO, working in consortium with CIRAD and ILRI.

¹³⁷ Web version of GLEAM-*i* developed with financial support of World Bank and the International Finance Corporation (IFC).



human resources, by expanding the number of technicians trained and master trainers accredited in LEGS¹³⁸ in each country and supporting their networking; (ii) organizing stakeholders in charge of crisis response; and (iii) planning, using pastoral crisis simulation exercises to test and make the response teams operational. The Response Plans developed during PRAPS-1 will be updated twice to improve their quality, particularly in targeting the most vulnerable, and the Project will facilitate operational linkages with social registers to link Response Plans directly to information on vulnerable pastoralist households.

84. CILSS (including its technical agencies such as Agrhymet) will fully play its mandated technical support role, given that strengthening EWS is its core business, and catalyze coordination of the LEGS initiative. It will mobilize technical partners as necessary, facilitate LEGS training, and pool the experiences and efforts of the six Project countries.

Subcomponent 5.3: Contingent emergency response

85. The PIM will define operational procedures acceptable to the World Bank for implementing the CERC in the event of an eligible emergency or crisis. All CERC expenditures will comply with paragraphs 11, 12, and 13 of World Bank IPF Policy. They will be appraised and reviewed to determine if they are acceptable to the World Bank before any disbursement is made. Disbursements will be made against an approved list of goods, works, and services required to support pastoral crisis mitigation, response, recovery, and reconstruction. If this component is to be implemented based on the prevailing conditions defined in the FAs, the due diligence on a positive list of CERC eligible activities will be assessed against those reported in the PIM to ascertain the coverage of CERC activities are included in the ESMF. No withdrawal shall be made under this component unless and until all safeguard documents required for said activities are prepared and disclosed and any actions required to be taken under those safeguard documents are fulfilled.

Table A2.3: Budget summary, PRAPS-2, IDA Financing (US\$ million)

	Burkina Faso	%	Chad	%	Mali	%	Mauritania	%	Niger	%	Senegal	%	CILSS	TOTAL	%
Component 1	13.0	29.0	40.4	40.4	18.8	31.3	17.4	38.7	17.1	28.4	15.7	34.8	2.9	125.3	33.4
SC.1.1	6.7	14.9	11.8	11.8	6.6	11.0	5.8	12.9	8.1	13.4	7.8	17.3			
SC.1.2	5.6	12.3	26.9	26.9	11.7	19.4	10.2	22.7	7.7	12.8	6.9	15.4			
SC.1.3	0.8	1.8	1.8	1.8	0.6	0.9	1.4	3.2	1.3	2.2	1.0	2.1			
Component 2	12.2	27.2	18.2	18.2	11.2	18.7	7.7	17.0	13.2	22.0	8.7	19.4	3.0	74.3	19.8
SC.2.1	2.8	6.2	5.6	5.6	5.6	9.4	2.7	5.9	5.6	9.4	1.7	3.7			
SC.2.2	9.3	20.7	10.8	10.8	5.0	8.3	3.2	7.0	5.8	9.6	6.6	14.7			
SC.2.3	0.2	0.4	1.8	1.8	0.6	1.0	1.8	4.1	1.8	3.1	0.4	1.0			
Component 3	5.9	13.1	15.7	15.7	7.8	13.0	5.8	12.9	13.2	22.0	5.4	11.9	1.2	54.9	14.7
SC.3.1	3.8	8.6	11.0	11.0	5.0	8.3	4.2	9.3	10.4	17.3	2.9	6.5			
SC.3.2	0.6	1.3	2.3	2.3	1.5	2.4	0.3	0.8	1.5	2.5	0.6	1.4			
SC.3.3	1.5	3.3	2.4	2.4	1.3	2.2	1.3	2.8	1.4	2.3	1.8	4.0			
Component 4	6.4	14.3	11.5	11.5	8.7	14.4	6.3	13.9	8.0	13.4	6.0	13.3	0.3	47.1	12.6
SC.4.1	3.7	8.3	2.7	2.7	0.9	1.5	2.6	5.9	3.6	5.9	2.3	5.0			
SC.4.2	0.6	1.4	3.3	3.3	6.2	10.3	0.8	1.7	1.1	1.9	1.3	2.8			
SC.4.3	2.1	4.6	5.4	5.4	1.5	2.6	2.8	6.3	3.3	5.5	2.4	5.4			
Component 5	7.4	16.4	14.2	14.2	13.6	22.6	7.9	17.5	8.5	14.1	9.3	20.6	12.5	73.3	19.5
SC.5.1	5.0	11.0	9.9	9.9	8.7	14.5	6.2	13.8	6.0	10.0	6.5	14.4			
SC.5.2	2.4	5.4	4.4	4.4	4.9	8.1	1.7	3.7	2.4	4.1	2.8	6.2			
SC.5.3	0.0		0.0		0.0		0.0		0.0		0.0				
TOTAL	45		100		60		45		60		45		20	375	

¹³⁸ See <https://www.livestock-emergency.net/scope-and-content-of-legs/>.



ANNEX 3: Procurement and Financial Management

Procurement

1. Procurement will be carried out in accordance with all relevant policies and procedures: (i) the World Bank PR for IPF Borrowers, dated July 2016 (revised November 2017, August 2018, and November 2020); (ii) “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants,” dated October 15, 2006 (revised January 2011 and as of July 1, 2016); and (iii) other provisions stipulated in the FAs, using the SPDs accompanying the Regulation. STEP will be the platform for preparing, submitting, reviewing and clearing Procurement Plans and prior review procurement activities. STEP will also be used for uploading the documents and evaluation reports for post review contracts. The PIM will detail the procurement procedures, SPDs, and model contracts associated with the market approaches and selection methods for various procurement categories. Details of the Procurement Plans are in STEP.

Procurement Capacity Assessment Summary

2. **CILSS.** CILSS has a procurement unit established within the financial department. CILSS also uses an established manual of procedures, but the procurement procedures are not well described in the manual and most importantly there are no apparent provisions for resolving complaints. The procurement unit is managed by a Procurement Specialist with limited experience in World Bank PR, although CILSS has already implemented PRAPS-1, governed by World Bank procurement directives.

3. *Weaknesses and procurement risk.* The main weaknesses identified during the assessment are: (i) the limited experience of the procurement staff of CILSS with World Bank PR; and (ii) the lack of an acceptable procurement system, including a complaint mechanism.

4. CILSS will delegate the operational responsibility related to Component 1 to two specialized institutions with mandates on animal health: (i) ARAA will carry out fiduciary activities on behalf of RAHC; and (ii) OIE will carry out its own fiduciary activities under PRAPS-2 in continuity with the arrangements initiated under PRAPS-1.¹³⁹ As indicated in the institutional arrangements, two agreements will be signed: one between CILSS and ECOWAS (on behalf of ARAA and RAHC) and another between CILSS and OIE.¹⁴⁰ ARAA is a newcomer in PRAPS arrangements, including procurement. Procurement activities to be carried out by ARAA and OIE are simple, however, and similar to their own procurement activities. The assessment of the two institutions did not reveal any major concern except the absence in the procurement documents of provisions compliant with the World Bank anti-corruption policy, the World Bank right to sanction, and the World Bank inspection and audit rights. These provisions will have to be included in their procurement documents (bidding documents, requests for quotations, contracts).

5. The overall procurement risk for the Project is evaluated to be **Substantial**.

6. **Burkina Faso.** This Project will be governed by the adopted regulation of projects and programs and classified as a Category 1 (that is, directly implemented by the public administration). Implementation will be carried out by a multidisciplinary team led by a Project Manager under the supervision of the Coordinator of the Project Management Unit of budget program 081 (Securing and sustainable management of pastoral resources) under MRAH.

7. *Assessment of procurement capacity and risks.* The procurement assessment conducted in MRAH noted that this ministry has a Procurement Department (*Direction des Marchés Publics*, DMP). DMP supervises all

¹³⁹ Under PRAPS-1, OIE was the sole agency designated by CILSS as entrusted with responsibilities in animal health, owing to the lack of operational capacity of RAHC.

¹⁴⁰ Under PRAPS-1, an agreement had been signed between CILSS and the OIE that will serve as reference.



procurement activities of MRAH and is responsible in particular for: (i) finalizing procurement documents prepared by the project implementation unit or the technical structures; (ii) preparing the advertisement notices; and (iii) presiding over tender committees and drafting contracts for approval. The tender committee comprises both internal and external members. The assessment revealed that the PRAPS-1 procurement team was comprised of one senior and one procurement specialist assistant who have PR experience and could be retained in the PRAPS-2 PCU. DMP has an experience in World Bank PR with the ongoing Burkina Faso Livestock Sector Project (P159476).

8. The procurement assessment shows that that DMP staffing has been reinforced and staff have been trained in PR under PRAPS-1. The procurement team of the PCU has experience with the World Bank PR. However: (i) there are significant delays in the procurement process; (ii) important security concerns occurred in implementing contracts in the Project intervention area; (iii) there is insufficient archiving of documentation in STEP; and (iv) the PRAPS-1 procurement manual needs to be updated. The overall procurement risk is rated **Substantial**.

9. **Chad.** The risks are associated with the current national public procurement system, delays in various World Bank-financed projects with approval of bid evaluation reports, possible long delays in the approval of contracts, and the experience of overall poor management of contracts.

10. *The procurement capacity assessment shows that:* (i) the PCU is not sufficiently staffed and is overloaded; (ii) the existing procurement specialist has qualifications, competencies, and national public procurement skills, and sufficient experience in World Bank PR; (iii) the PIM is available and must be updated; and (iv) the PCU has already experienced STEP during the initial project, but persistent issues have been encountered with many contracts processed out of STEP despite the additional assistance provided with the hiring a consultant and the recruitment of an additional procurement assistant during the initial phase.

11. To ensure that the procurement activities are implemented on time and that procured services are of high quality, it is recommended that the PCU: (i) reinforce its procurement organization and functioning by the recruitment of: (a) an international procurement specialist on call basis for the first two years of implementation of the Project; (b) a Senior national procurement specialist, recruited based on open competition, for the entire Project duration; and (c) two procurement assistants dedicated to the Project, based on open competition; (ii) implement all procurement activities included in the approved PPSD and Procurement Plan; (iii) put in place a contract management plan; (iv) improve the quality of archiving procurement documentation by establishing an adequate filing and recording system; (v) carry out two joint technical and procurement audits in the second and fifth year of implementation on key Project activities, namely infrastructure works and procurement of vaccines; (vi) enhance due diligence on the capacity and historical performance of winning suppliers, contractors and consulting/non-consulting service providers; (vii) provide beneficial ownership disclosure for the contracts as identified in the procurement plan, in the form required in the procurement documents; (viii) arrange to provide regular hands-on training on procurement, developing qualification criteria and bid evaluation, and risk management to the PCU to further strengthen their fiduciary capacities; (ix) ensure that all procurement staff, procurement decision makers and evaluation committee members sign undertaking to follow ethics rules; (x) ensure 100 percent use of STEP; (xi) deploy third party monitors for regular concurrent monitoring of the progress in infrastructure contracts; (xii) deploy Geo-Enabling initiative for Monitoring and Supervision (GEMS) for remote monitoring of progress in infrastructure contracts, including involvement of citizens; and (xiii) strengthen the complaint handling management during procurement and contract management.

12. The World Bank shall enhance its supervision, conduct three missions per annum, conduct procurement post reviews in each of its missions, follow-up on the implementation of the above measures by the PCU, encompass more sites and conduct impact and spend analyses; an adequate complaint handling mechanism and code of ethics for procurement decision makers and procurement staff and evaluators in participating departments in Chad shall be set-up. The overall procurement risk is rated **Substantial**.



13. **Mali.** The arrangement for PRAPS-1 and PADEL-ML projects within MAEP shall apply for PRAPS-2-ML. The procurement functions for the proposed Project and PADEL-ML will be pooled. A joint procurement specialist will cover both PRAPS-2 and PADEL-M procurement activities. The existing procurement specialist from PRAPS-1 and the recruited procurement assistant for PADEL-ML are well experienced in World Bank procedures and the new procurement framework.

14. *The assessment of the pooled PCU revealed significant delays in procurement processing, mainly on the contract award and signature process at the government level. Additionally, important security concerns occurred during contract implementation, particularly in northern and central Mali. Furthermore, the archiving of documentation in STEP is insufficient, and long delays have been observed in handling complaints. The overall procurement risk is rated **Substantial**.*

15. **Mauritania.** PRAPS-2 PCU will retain the PRAPS-1 PCU procurement specialist. The procurement execution of PRAPS-1 observed long delays owing to the application of national procurement procedures. The qualified procurement commission members of the Ministry are civil servants in most cases and not always available to carry out procurement matters with due diligence.

16. *Other findings include:* (i) the procurement manual of procedures is outdated (based on World Bank Procurement Directives of January 2011, revised July 2014), hence PRAPS-2 will need to update the manual to reflect provisions of the PR for IPF Borrowers (dated July 2016, revised November 2017, August 2018, and November 2020); and (ii) the physical and the digital filing in STEP of post review activities are not satisfactory. The overall procurement risk is rated **Substantial**.

17. **Niger.** The PRAPS-1 fiduciary team will be retained to ensure a smooth transition to PRAPS-2. The assessment revealed that currently the position of the procurement specialist is vacant in the PCU. It also observed long delays in procurement because a national procurement code provision is applied to World Bank-funded projects. This provision confers the power of nominating procurement committee members to the Secretary General of the Ministry. These members are civil servants in most cases and are not available to carry out their responsibilities in procurement matters with due diligence.

18. *Other findings of the assessment are:* (i) the procurement manual of procedures is outdated (based on World Bank Procurement Directives of January 2011, revised July 2014), hence PRAPS-2 will need to update the manual to reflect provisions of the PR for IPF Borrowers (dated July 2016, revised November 2017, August 2018, and November 2020); and (ii) the physical and digital filings in STEP are not satisfactory. The overall procurement risk is rated **Substantial**.

19. **Senegal.** The institutional arrangements established for PRAPS-1 will be retained for the second phase, with small modifications. The procurement assessment of the PCU during the implementation of PRAPS-1 shows that: (i) the PCU has always experienced high staff turnover, particularly for the position of procurement specialist; (ii) the procurement specialist recruited after multiple cases of resignation has the capacity to implement the procurement of the proposed Project and will be assisted by a procurement/contracting assistant; and (iii) users do not provide timely inputs (technical specifications and ToRs) for procurement activities and are not sufficiently involved in the evaluation of bids and proposals.

20. The World Bank team will monitor procurement activities through prior reviews, which will be based on the level of risk, considered to be **Moderate**.

Procurement mitigation measures

21. To address the various risks identified in the assessments at both the Project regional and country levels, the mitigation measures described in Table A3.1 will be implemented. The prevailing risk can be upgraded to **Moderate**, provided the corrective measures in Table A3.1 are implemented.



Table A3.1: Procurement mitigation measures for CILSS and countries participating in PRAPS-2

Agency/ country	Implementing agency	Procurement mitigation measure	By when
CILSS and all participating countries	PCU	<ul style="list-style-type: none"> Update the procurement manual in the PIM to ensure appropriate implementation of activities in line with the World Bank general framework related to the Project. The manual should describe procurement rules applicable to the Project and a clear accountability system, as well as responsibilities for decision making, and describe streamlined procurement procedure when applicable. 	Before Project effectiveness
	PCU	<ul style="list-style-type: none"> Adopt World Bank provisions related to environmental, social (including SEA and GBV), health and safety (ESHS) risks and impacts, including codes of conduct that include prohibitions against SH and sexual abuse to all works procurements that apply SPDs. 	Throughout Project implementation
	PCU	<ul style="list-style-type: none"> Maintain the procurement team from PRAPS-1 PCU. Train contract staff on the new framework (online and/or in person) and the STEP, which will be used to manage all contract transactions and related documents. Ensure timely archiving of all procurement documents and complaints in STEP. 	Throughout Project implementation
CILSS	CILSS/World Bank	<ul style="list-style-type: none"> Ensure that ARAA and OIE procurement documents (bidding documents, requests for quotations, contracts) contain provisions compliant with the World Bank anti-corruption policy, the World Bank right to sanction, and the World Bank inspection and audit rights. 	Throughout Project implementation
Burkina Faso	MRAH/World Bank	<ul style="list-style-type: none"> Reinforce procurement capacity by training the DMP, DGCMEF, PCU, and the tender committee in World Bank procurement procedures with external training courses. 	Throughout Project implementation
Chad	PCU	<ul style="list-style-type: none"> Reinforce the procurement organization and functioning through the recruitment of: (a) an international procurement specialist on a call basis for the first two years of implementation; and (b) a Senior national procurement specialist, based on open competition, for the entire Project duration. 	Before Project effectiveness
	PCU	<ul style="list-style-type: none"> Recruit two Procurement assistants dedicated to the Project, based on open competition. Put in place a contract management plan. Improve the quality of the records' keeping of the procurement documentation by putting in place adequate filing and recording system. Provide beneficial ownership disclosure for the contracts as identified in the procurement plan, in the form required in the procurement documents. Deploy third party monitors to for regular concurrent monitoring of the progress in infrastructure contracts. Deploy GEMS for remote monitoring of progress in infrastructure contracts, including involvement of citizens. Strengthen the complaint handling management during procurement and contracts management. 	Within three months of Project effectiveness
	PCU	<ul style="list-style-type: none"> Carry out a joint in-depth technical and procurement audit. 	During the second and fifth year of implementation
	PCU	<ul style="list-style-type: none"> Reinforce procurement capacity by training the PCU staff, DGCMP (<i>Direction Générale de Contrôle des Marchés</i>) staff, and the tender committee (<i>Commission de Passation des Marchés</i>) in World Bank procurement procedures with external training courses. Implement all procurement activities included in the approved PPSD and procurement plan. 	Throughout Project implementation



		<ul style="list-style-type: none"> Enhance due diligence on the capacity and historical performance of winning suppliers, contractors and consulting/non-consulting service providers. Ensure 100 percent use of STEP as planned under the Project. 	
Mali	PCU	<ul style="list-style-type: none"> Recruit a Procurement Assistant 	Within three months of Project
	PCU	<ul style="list-style-type: none"> Closely monitor and exercise quality/control on all aspects of the procurement process, mainly contract signature and approval stages in line with the procurement manual. 	Throughout Project implementation
Mauritania	PCU	<ul style="list-style-type: none"> Carry out contract staff training on the new framework (online and/or in person) and the use of STEP, which will be used to manage all contract transactions and related documents. Develop a contract management system to ensure that all contracts under the Project are managed effectively. 	Within three months of Project effectiveness
Niger	PCU	<ul style="list-style-type: none"> Complete the recruitment of a procurement specialist. 	Before Project effectiveness
	PCU	<ul style="list-style-type: none"> Provide enough space for a dedicated room for physical archiving. Set up a filing system at the PCU level to ensure compliance with World Bank procurement filing manual. 	Within three months of Project effectiveness
Senegal	PCU	<ul style="list-style-type: none"> Closely monitor and exercise quality control on all aspects of procurement. Reinforce the procurement capacity by training all of the actors involved in the procurement cycle, namely the tender committee, in the World Bank new procurement framework comprising STEP. 	Throughout Project implementation

Procurement Overview

22. **Procurement documents.** For international competitive procurement of works, goods, non-consulting services, and consulting services, the Borrower shall use the World Bank SPDs with minimum changes, acceptable to the World Bank, as necessary to address any Project-specific conditions.

23. **Procurement information and documentation—filing and database.** Procurement information will be recorded and reported as follows:

- a. Complete procurement documentation for each contract, including bidding documents, advertisements, bids received, bid evaluations, letters of acceptance, contract agreements, securities, and related correspondence will be maintained at the level of respective ministries in an orderly manner, readily available for audit.
- b. Contract award information will be promptly recorded and contract rosters, as agreed, will be maintained.
- c. Comprehensive quarterly reports will be prepared indicating: (i) revised cost estimates, where applicable, for each contract; (ii) status of ongoing procurement, including a comparison of originally planned and actual dates of the procurement actions, preparation of bidding documents, advertising, bidding, evaluation, contract award, and completion time for each contract; and (iii) updated Procurement Plans, including revised dates, where applicable, for all procurement actions.

24. **General Procurement Notice, Specific Procurement Notices, Requests for Expression of Interest, and results of the evaluation and contracts award** should be published in accordance with advertising provisions in the PR. For request for bids and request for proposals that involve international bidders/consultants, the contract awards shall be published in the United Nations Development Business in line with the provisions of the PR.

25. **Training, workshops, study tours, and conferences.** Training (including training materials and support), workshops, and conference attendance (based on individual needs as well as group requirements), and on-the-job training will be carried out based on an approved annual training and workshop/conference plan



that will identify the general framework of training activities for the year. A detailed plan and ToR providing the nature of training/workshop, number of trainees/participants, duration, staff months, timing, and estimated cost will be submitted to IDA for review and approval before initiating the process. The appropriate methods of selection will be derived from the detailed schedule. After the training, each beneficiary will be requested to submit a brief report indicating what skills have been acquired and how these skills will contribute to enhance his/her performance and contribute to the attainment of the PDO. Reports by the trainees, including completion certificate/diploma upon completion of training, shall be provided to the Project Coordinator, will be kept as parts of the records, and will be shared with the World Bank if required.

26. Procurement Manual. Procurement arrangements, roles and responsibilities, methods, and requirements for carrying out procurement shall be elaborated in detail in the Procurement Manual, which will be a section of the PIM. The context of fragility and the capacity constraints in Project countries will be considered, and simplified procurement arrangements will be designed accordingly. The PIM shall be prepared by the Recipients and agreed with the World Bank before project effectiveness.

27. Operating costs. Operating costs financed by the Project are incremental expenses, incurred by CILSS or PCU as approved by the World Bank, on account of Project implementation, management, and M&E, including utilities; office space rental; office supplies; bank charges; vehicle operation, maintenance, and insurance; maintenance of equipment and buildings; communication costs; travel and supervision costs (that is, transport, accommodation, and per diem); and salaries of contracted and temporary staff. They will be procured using the procedures specified in the Project manual of administrative, financial, accounting, and procurement procedures, accepted and approved by the World Bank.

28. Implementing entities. The procurement activities for the Project will be executed by the respective Project implementing agencies. PCUs will be set out within these agencies. The PCU will carry out the following activities:

- a. Managing overall procurement activities and ensuring compliance with the procurement process described in the relevant manuals.
- b. Ensuring compliance of bidding documents, draft requests for proposals, evaluation reports, and contracts with World Bank procedures.
- c. Preparing and updating the Procurement Plan.
- d. Monitoring the implementation of procurement activities.
- e. Developing procurement reports.
- f. Seeking and obtaining approval of internal designated entities and then of IDA on procurement documents, as required.

29. The PCU will participate in the process of all procurement activities and will notably support the following activities: (i) preparation of ToRs and the bidding documents; (ii) preparation of evaluation reports and contracts in line with World Bank procedures; and (iii) participation in procurement commission activities and all related meetings.

30. Procurement Procedures. When approaching the national market, the country's own procurement procedures may be used with the requirements set forth or referred to in paragraphs 5.3–5.6 related to National Procurement Procedures and subject to certain requirements for national open competitive procurement. Other national procurement arrangements (other than national open competitive procurement) that may be applied by the Recipients (such as Limited/Restricted Competitive Bidding, RFQ, Shopping, Local Bidding, and Direct Contracting), shall be consistent with World Bank core procurement principles and ensure that World Bank Anticorruption Guidelines and Sanctions Framework and contractual remedies set out in the World Bank Legal Agreement apply.



31. **Frequency of Procurement Supervision.** In addition to the prior review supervision which will be carried out by the World Bank, semi-annual supervision missions are recommended. Annual World Bank procurement post review will be conducted in the respective countries by the World Bank procurement specialists. The sample size will be based on the procurement risk rating for the implementing agencies in each country. The prior review procurements will be reviewed and cleared in STEP by the respective country's World Bank procurement specialist.

32. **Procurement prior review.** The procurement risk is rated **Substantial**. Table A3.2 summarizes the procurement prior review for Substantial risk. These prior review thresholds can evolve according to the variation in procurement risk during the life of the Project.

Table A3.2: Procurement prior review thresholds (US\$ millions) for Substantial risk

Works	10.0
Goods, information technology, and non-consulting services	2.0
Consulting firms	1.0
Individual consultants	0.3

33. **Contract management and administration.** For all prior review contracts, contract management plans (in line with the provisions of Regulations Annex XI) will be developed during contract creation and completed at the time contracts are signed.

34. **Summary of the Project Procurement Strategies for Development (PPSDs).** The PPSDs and the Procurement Plans detailing the first 18 months of implementation have been prepared by the Borrowers and submitted to the World Bank. The Project envisages several goods such as vaccines and reagents as well as refrigeration equipment for their conservation, logistical means intended to ensure the mobility of teams of veterinarians in the field (vehicles and motorcycles in particular), tools for quality control of drugs and preventive monitoring of animal diseases and intervention (medical vaccination equipment, surgical equipment, laboratory equipment), and so on. The most sensitive issue will be the procurement of works, since the Project will finance small works such as construction of solar pastoral boreholes, *boulis* and ponds, veterinary stations, vaccination pens, and hydraulic infrastructure in many dispersed locations. The consultant services include the selection of research services (intellectual services), some of which concern technical engineering and vocational training and others advice and legal assistance (drafting of regulatory texts and communication/awareness in various forms), technical studies, E&S studies, and others. The different approaches, selection methods, need for pre-qualification, estimated costs, prior review requirements, and timeframe are agreed between the recipient and the World Bank in the Procurement Plans. The initial Procurement Plans have been approved by the World Bank during the negotiations. During implementation, the Procurement Plans will be updated as required and at least annually, to reflect actual Project implementation needs and improvements in institutional capacity to meet implementation needs. While open national competition is generally the preferred method, in some areas the market and security situation might lead to other options.

Financial Management and Disbursement

35. As part of the Project preparation, an FM assessment of the proposed PCUs was conducted for Burkina Faso, Chad, CILSS, Mali, Mauritania, Niger, and Senegal. An additional FM assessment was undertaken for OIE and ARAA, which will be delegated by CILSS to assume some fiduciary responsibility through specific agreements to carry out regional activities under Component 1. The objective of the FM assessment was to determine whether the respective selected PCUs have adequate FM arrangements to ensure that: (i) Project funds will be used for purposes intended in an efficient and economical way; (ii) the Project financial reports will be prepared in an accurate, reliable, and timely manner; (iii) the Project's assets will be safeguarded;



and (iv) the Project is subjected to a satisfactory auditing process.¹⁴¹ The review of existing FM systems included budgeting, staffing, financial accounting, financial reporting, fund flow and disbursements, and internal and external audit arrangements.

(i) Budgeting Arrangements

36. The BF-PCU, TD-PCU, ML-PCU, MR-PCU, NE-PCU, SN-PCU, in Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal, respectively, and the R-PCU hosted by CILSS, will each prepare an AWPB in accordance with ToRs acceptable to the World Bank. Implementing entities receiving funds from the above-mentioned Project implementing entities will submit their budgets to the respective PCUs for consolidation (for example, OIE and ARAA, which will receive funds from CILSS). The AWPB will then be approved by respective Project Steering Committee and submitted to the World Bank not later than November 30 of each calendar year throughout the implementation of the Project.

37. The implementing entities will monitor the Project's execution with the Project accounting software in accordance with the budgeting procedures specified in the FM manual of procedures, and they will report on variances along with submitting the semi-annual unaudited IFRs. The budgeting system will need to forecast for each fiscal year the origin and use of funds under PRAPS-2. Only budgeted expenditures will be committed and incurred to ensure that resources are used within the agreed-upon allocations and for the intended purposes. The semi-annual IFRs will be used to monitor the execution of the AWPB.

(ii) Accounting Arrangements

38. **Accounting policies and procedures, and information system.** Overall, accounting procedures are adequate for the selected Project implementing entities of the six countries and CILSS. The entity in Mali will acquire and install an accounting software appropriate for the needs of the Project based on ToRs to be agreed with the World Bank not later than five (5) months after effectiveness, while the entities in Chad, Mali, Mauritania, Niger, and Senegal as well as CILSS will utilize a multi-site license of the existing accounting software used for PRAPS-1 to reflect the needs of the proposed Project. The new accounting software license will be acquired, and the existing accounting systems will be customized within five months after effectiveness. OIE and ARAA will also update their existing accounting software to include the specificities of the new operation, no later than five months after effectiveness. Any new accounting staff in each Project implementing entity will be trained to be conversant with the accounting software.

39. The existing Administrative, Accounting, and Financial Procedures Manuals under PRAPS-1 in each of the seven implementing agencies will be updated prior to Project effectiveness, to consider the PRAPS-2 context.

40. **Accounting staff.** To strengthen the accounting staffing arrangements in the selected Project implementing entities for the six participating countries and CILSS, which will retain the FM staff currently in charge of PRAPS-1, several actions are recommended. All accounting staff will be trained in World Bank FM and Disbursement procedures as well as in the use of the Project accounting software.

Regional level:

- **CILSS:** The FM team dedicated to PRAPS-1 comprises one FMS and one Accountant. The FMS is currently shared between PRAPS-1 and another IDA-funded regional project. There is no need to recruit additional staff. CILSS will need to revise the ToRs and contracts of the existing FM staff to include the needs of PRAPS-2, within one month of Project effectiveness.
- **ARAA:** The current FM team within ARAA has no experience in managing World Bank-financed projects. The FM team is comprised of one Chief of Administration and Finance Division in charge of the supervision of all FM activities, three Accountants, and two Accounting Assistants. ARAA will

¹⁴¹ The FM assessment was carried out in accordance with the Financial Management Manual for World Bank-Financed Investment Operations effective on the 1st March 2010, and reissued on the 10th of February 2017, and the supporting guidelines.



appoint within its FM team an accountant to oversee this operation within one month after effectiveness. An additional accountant to support ARAA FM staff will be recruited by the Project. PRAPS-2 will support ARAA capacity building with training on Project FM.

- **OIE:** The current FM team under PRAPS-1 at OIE is comprised of two Accountants reporting directly to the Administration Manager. There is no need to recruit additional staff. OIE will need to revise the ToRs/contracts and/or job description of the FM staff to include the requirements related to PRAPS-2, within one month of Project effectiveness.

Country level:

- **Burkina Faso:** The current FM team within BF-PCU comprises one FMS, a financial controller, a Senior Accountant, and an Accounting Assistant, all based in the national office located in Ouagadougou. There is no need to modify the existing FM arrangements for PRAPS-2. The ToRs and contracts of the existing FM staff will be updated to include PRAPS-2 activities, not later than two months after Project effectiveness.
- **Chad:** Currently the FM team of TD-PCU comprises one FMS, one Senior Accountant, and one Secretary-Accountant. No FM staff are deployed in the regions. The FM team needs to be strengthened to address some of the weaknesses identified under PRAPS-1. To that end, the TD-PCU will need to competitively recruit one Senior FMS before Project effectiveness, and one additional Accounting Assistant within three months of effectiveness, under ToRs approved by the World Bank. The TD-PCU will need to revise the ToRs and contracts of other existing FM staff to include the needs of PRAPS-2, within three months of Project effectiveness.
- **Mali:** The current FM team under PRAPS-1 in Mali comprises one FMS, one Accountant, one Assistant, and three Administrative Assistants at the central level (in the Bamako office) and three Administrative and Financial Assistants at the regional level. There is no need to recruit additional staff. The ML-PCU will need to revise the ToRs and contracts of these staff to include the needs of PRAPS-2, within three months of Project effectiveness.
- **Mauritania:** The current FM team within the MR-PCU comprises: one qualified, experienced FMS in charge of the supervision of all Project FM activities; one qualified, experienced Accountant; one qualified, experienced Junior Accountant (at the central level); and seven Administrative and Financial Assistants (at the regional level). No additional staff will be required for these units. The MR-PCU will need to revise the ToRs and contracts of these staff to include the needs of PRAPS-2, within three months of effectiveness. An additional Administrative and Financial Assistant will be recruited for the eighth regional coordination unit that will be established under PRAPS-2.
- **Niger:** The current FM staff within the NE-PCU comprises: one FMS and one Senior Accountant at the central level (in Niamey office) and three Administrative and Financial Assistants at the regional level. In addition to those staff, within three months of Project effectiveness, one qualified and experienced Accountant Assistant will be competitively recruited and dedicated to coordinate the activities implemented in the regions. The NE-PCU will need to revise the ToRs and contracts of current staff to include the needs of PRAPS-2, within three months of effectiveness.
- **Senegal:** The current FM team within the SN-PCU comprises: one Project FMS, one Accountant, one Accountant Assistant at the central level (in Dakar office), and two Accountant Assistants at the regional level. No additional staff will be required for these units. The SN-PCU will need to revise the ToRs and contracts of these staff to include the needs of PRAPS-2, within three month of effectiveness. An additional Accountant Assistant at the regional level will be recruited for the third regional coordination unit that will be established under PRAPS-2.

41. **Accounting standards and basis.** All fiduciary units in Burkina Faso, Chad, CILSS, Mali, Mauritania, Niger, and Senegal will use the current SYSCOHADA accounting system customized for African francophone countries and in use for PRAPS-1.



(iii) Internal Control and Internal Audit Arrangements

42. **Internal controls.** The internal control procedures will be documented in the FM Manuals of procedures for each of the Project implementing entities and their PIM, taking into consideration gaps in their existing FM Manuals/Regulations to ensure that Project FM arrangements are in line with the FAs. These efforts will ensure that PRAPS-2 has an effective internal control system covering the procedures required to support activities under different components, including those that will be carried out with subnational and local actors. A review of the internal control systems noted no major internal control or accountability issues, except for Chad, where ineligible expenditures in the amount of XAF 554 million (US\$1.028 million equivalent) were identified and officially notified to the Government of Chad. Considering this new operation, it was agreed that the Government of Chad shall fully refund the said amount to IDA before Project effectiveness.

43. **Internal audit.** Robust internal audit arrangements are in place in four countries (Burkina Faso, Mali, Mauritania, and Senegal), as well as CILSS and ARAA. At the time of the FM assessment, the position of Internal Auditor was vacant in Chad and Niger, and OIE had newly created internal audit functions. It was agreed that, within five months of effectiveness, the internal audit function of each of the two Project implementing entities in Chad and Niger will be strengthened by: (i) recruiting a qualified and experienced Internal Auditor for Niger; and (ii) recruiting an international audit firm to provide internal audit services to the implementing entity in Chad to perform periodic reviews which scope will be agreed with the World Bank. Internal Auditors in each of the implementing entities should ensure that the Project audit is included in their workplan and that the audit is conducted using a risk-based approach. CILSS, OIE, and ECOWAS¹⁴² will need to include in the annual workplan of their current internal audit team the activities of PRAPS-2 within two months of effectiveness.

(iv) Governance and Anti-Corruption (GAC) Arrangements

44. All country and regional implementing entities will follow their institutional rules/regulation/guidelines/policies and procedures. FM arrangements will ensure that there are internal control systems in place and audits conducted to prevent and detect fraud and corruption. Transparency and accountability are highly encouraged by putting the Project budget and audited financial statements on the Project implementing entity's websites where applicable. Complaint-handling mechanisms should also be set up by the Project implementing entities so that beneficiaries who are not receiving services as planned have a mechanism to raise their complaints and ensure that they are followed up and addressed. This will involve putting a system in place to record all complaints received, direct them to the person responsible for addressing them, and record when a response is sent to the complainant. PRAPS-2 must also comply with the World Bank Anti-Corruption Guidelines. The use of GEMS, proposed to be deployed for the monitoring of infrastructure contracts, would also provide additional real-time information for internal and external audits.

(v) Funds Flow Arrangements

45. **Designated and Project Accounts.** BF-PCU in Burkina Faso will open a DA, denominated in XOF, at the Central Bank of West African States (*Banque Centrale des Etats de l'Afrique de l'Ouest*) and a Project Operational Account denominated in local currency. MR-PCU in Mauritania will open a DA denominated in US\$ at the Central Bank of Mauritania (*Banque Centrale de Mauritanie*) and a Project Operational Account denominated in MRU (the local currency), subject to the World Bank acceptance. TD-PCU, ML-PCU, NE-PCU, and SN-PCU for Chad, Mali, Niger, and Senegal, respectively, will open a DA in a reputable commercial bank acceptable to the World Bank, while the R-PCU hosted at CILSS, will open two (2) DAs. Since CILSS will delegate part of its fiduciary responsibilities to OIE and ARAA, OIE and ARAA will not open a DA. OIE and

¹⁴² The Auditor General of ECOWAS performs the internal audit functions for all ECOWAS entities, including ARAA.



ARAA will open two dedicated Project accounts denominated in euros for OIE, and US\$ for ARAA. CILSS will transfer funds to OIE and ARAA based on the specific subsidiary agreements to be signed between CILSS and OIE, as well as CILSS and ECOWAS (on behalf of ARAA which will carry out fiduciary activities for RAHC). The signatories to these bank accounts should be in line with the FM Manuals of procedures of the respective implementing entities. Payments to eligible expenditure can be made from either the DA or the Project operational account. The signatories to these accounts should be in line with the FM Manuals of the sub-implementing entities and they should be submitted to the main implementing entities in the country.

46. Disbursements. All Project implementing entities in the six countries (Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal) and CILSS will access funding from the World Bank using the disbursement methods described in the World Bank Disbursement Handbook (that is, advance, direct payment, reimbursement, and special commitments). CILSS will transfer funds to OIE and ARAA based on the specific agreements. Detailed disbursement procedures will be documented in the FM Manuals of procedures. Upon Credit/Grant effectiveness, each entity will be required to submit a withdrawal application for an initial deposit to the DA, drawn from the IDA Credit/Grant, in an amount to be agreed to in the Disbursement and Financial Information Letter (DFIL). Further deposit of funds from IDA to the DA will be made upon evidence of satisfactory utilization of the advance, reflected in Statements of Expenditure (SOEs). Withdrawal applications must be submitted regularly (at least once a month).

47. If ineligible expenditures are found to have been made from the Designated and/or Project Accounts, the Borrower will be obligated to refund the same. If the DA remains inactive for more than three months, the World Bank may reduce the amount advanced. The World Bank will have the right, as reflected in the terms of the FA, to suspend disbursement of the funds if significant conditions, including reporting requirements, are not complied with. Additional details regarding disbursement will be provided in the disbursement letters.

48. Financial reporting arrangements. The BF-PCU, TD-PCU, ML-PCU, MR-PCU, NE-PCU, SN-PCU in Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal, respectively, and the R-PCU hosted by CILSS, will prepare either quarterly or semi-annual unaudited IFRs in form and content satisfactory to the World Bank, which will be submitted to the World Bank within 45 days after the end of the quarter or semester to which they relate. The frequency, formats and contents of the IFR have been agreed between the World Bank and the national implementing entities during negotiations. The contents of the IFR for all implementing entities will include the following information to account for Project funds:

- Statement of Sources and Uses of Funds.
- Statement of Uses of Funds by Project Activity/Component.
- DA Activity Statement.
- Bank statements for both the Designated and Project Account and related bank reconciliation statements.
- Summary statement of DA expenditures for contracts subject to prior review.
- Summary statement of DA expenditures not subject to prior review.

49. IFRs to be prepared by CILSS will include the information related to the use of funds received by OIE and ARAA based on the specific agreements (thus OIE and ARAA will not be required to submit separate IFRs to World Bank). BF-PCU, TD-PCU, ML-PCU, MR-PCU, NE-PCU, SN-PCU in Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal, respectively, and the R-PCU hosted by CILSS will also prepare annual financial statements for the Project within three months after the end of the accounting year in accordance, and these statements will comply with SYSCOHADA and World Bank requirements. The audited financial statements will be required to be submitted to the World Bank within six months after the end of the fiscal year. In addition, the R-PCU will be required to submit the entity's annual financial statements. The CILSS entity's audited financial statements shall be submitted to the World Bank within nine months after the end of the fiscal year.



50. **External audit arrangements.** Burkina Faso, Chad, CILSS, Mali, Mauritania, Niger and Senegal will use private audit firms that are acceptable to the World Bank; the Project will meet the cost of hiring a private audit firm. All audits will be carried out in accordance with International Standards on Auditing. ToRs for each implementing entity will be agreed with the World Bank. The external auditors must be appointed within six months of Project effectiveness. Audit reports for the Project accounts, together with management letters, should be submitted to the World Bank within six months after the end of the government’s fiscal year (December 31 for the six countries). The audit reports will be publicly disclosed by the World Bank in accordance with the World Bank disclosure policy. In addition, the R-PCU will be required to submit the CILSS entity’s annual financial statements to the World Bank, together with the management letter, within nine months after the end of the fiscal year. CILSS will be required to share with World Bank, for information, OIE and ARAA entities’ audit reports when they are made available under their internal procedures. The World Bank FM team will ensure that the ToRs for the external auditor for CILSS will include specific provisions to cover the activities implemented by OIE and ARAA. A review of the audit reports of each of the Project implementing entities (as documented under the internal control assessment reported above) found no major accountability and internal control issues that needed to be addressed for five countries (Burkina Faso, Mali, Mauritania, Niger, and Senegal) and CILSS. The audit scope of the external audit in Chad might be expanded, and/or complemented with additional reviews as deemed necessary to address some of the weaknesses identified under PRAPS-1. A review of CILSS audit status however revealed that the entity’s audit reports for FY2018 and 2019 were overdue. In addition, the Project’s audited financial statements for the ongoing IDA-financed Sahel Irrigation Initiative Support Project (P154482) for the regional component under CILSS responsibility were delayed. None of the seven existing PRAPS-1 PCUs (BF-PCU, TD-PCU, CILSS-PCU, ML-PCU, MR-PCU, NE-PCU, and SN-PCU) has outstanding audit reports.

51. Table A3.3 presents the FM Action Plan for PRAPS-2, with the entity responsible for each action and the completion date.

Table A3.3: Financial Management Action Plan, PRAPS-2

<i>Issue/topic</i>	<i>Action recommended</i>	<i>Responsible body/person</i>	<i>Completion status/date</i>
All countries and CILSS			
Staffing	Maintain existing FM team	Respective Governments/CILSS	N/A
	ToRs and contracts of existing FM staff to be updated	Respective Governments/CILSS	Within three months of Project effectiveness
Information system accounting software	Configure PRAPS-1 accounting software parameters to take into consideration the specificity of PRAPS-2	Respective Governments (except Mali) / CILSS	Within five months of Project effectiveness
Administrative, Accounting and Financial Procedures Manual	Update the FM manual under PRAPS-1	Respective Governments/CILSS	Before Project effectiveness
Internal Auditing	Maintain existing internal audit team	Respective Governments/CILSS	N/A
External Auditing	Recruitment and appointment of an External Auditor	Respective Governments/CILSS	Within six months of Project effectiveness
Specific Chad			
Staffing	Recruit and appoint a Senior FMS	Government of Chad	Before effectiveness
	Recruit and appoint an additional Accounting Assistant		Within three months of Project effectiveness
Internal Auditing	Recruit and appoint an international audit firm to provide internal audit services	Government of Chad	Within five months of Project effectiveness



<i>Issue/topic</i>	<i>Action recommended</i>	<i>Responsible body/person</i>	<i>Completion status/date</i>
Other	Refund ineligible expenditures to the World Bank	Government of Chad	Before Project effectiveness
Mali			
Information system accounting software	Acquisition and installation of an accounting software	Government of Mali	Within five months of Project effectiveness
Mauritania			
Staffing	Recruit an Administrative and Financial staff for the 8 th regional unit established under PRAPS-2	Government of Mauritania	Within three months of Project effectiveness
Niger			
Staffing	Recruit and appoint a qualified and experienced Accountant Assistant	Government of Niger	Within three months of Project effectiveness
Internal Auditing	Recruit and appoint an Internal Auditor	Government of Niger	Within six months of Project effectiveness
Senegal			
Staffing	Recruit an Accountant Assistant for the 3 rd regional unit established under PRAPS-2	Government of Senegal	Within three months of Project effectiveness
CILSS			
Internal Auditing	Include PRAPS-2 activities in the CILSS Internal Auditors' workplan	CILSS	Within two (2) months of Project effectiveness
ARAA			
Staffing	Appoint an Accountant to be in charge of PRAPS-2	ECOWAS	Within one month of Project effectiveness
Information system accounting software	Configure the existing SAP (FICO) parameters to take into consideration the specificities of PRAPS-2	ECOWAS	Within five months of Project effectiveness
Administrative, Accounting and Financial Procedures Manual	Update the FM manual in use at ARAA	ECOWAS	Before Project effectiveness
Internal Auditing	Include PRAPS-2 activities in the Internal Auditors' workplan	ECOWAS	Within two months of Project effectiveness
External Auditing	Include ARAA activities in CILSS's audit scope	CILSS/ECOWAS	Within six months of Project effectiveness
OIE			
Staffing	Appoint an Accountant to be in charge of PRAPS-2	OIE	Within one month of Project effectiveness
Information system accounting software	Configure the existing SAGE 100 parameters to take into consideration the specificities of PRAPS-2	OIE	Within five months of Project effectiveness
Administrative, Accounting and Financial Procedures Manual	Update the FM manual in use at OIE	OIE	Before Project effectiveness
Internal Auditing	Include PRAPS-2 activities in the Internal Auditors' work plan	OIE	Within two months of Project effectiveness
External Auditing	Include OIE activities under PRAPS-2 in CILSS's audit scope	CILSS/ OIE	Within six months of Project effectiveness



52. **Implementation Support Plan.** For FM, ISMs will be carried out twice a year for Burkina Faso, CILSS, Mali, Mauritania, Niger, and Senegal, based on the substantial FM residual risk rating. For Chad, given the specific internal control environment, ISMs for FM will be carried out at least every four months. Implementation support will also include desk reviews, such as the review of IFRs and audit reports. In-depth reviews and forensic reviews may be done where deemed necessary. The FM implementation support will be an integral part of the Project's implementation reviews.

53. **Conclusion.** The conclusion of this assessment is that the FM arrangements in place meet the World Bank's minimum requirements under World Bank Policy IPF, and therefore are adequate to provide, with reasonable assurance, accurate and timely information on the status of the Project required by World Bank (IDA). **The overall FM residual risk rating is *Moderate* for the implementing agencies in Mali, Mauritania, and Senegal; *Substantial* for Burkina Faso, CILSS, and Niger; and *High* for Chad.** No specific FM Risk for OIE and ARAA was rated, since these two entities will not have full FM responsibilities.



ANNEX 4: Economic and Financial Analysis

1. **This annex presents the EFA for the second phase of the World Bank-financed PRAPS-2.** The present analysis focuses on all six beneficiary countries – Burkina Faso, Chad, Mali, Mauritania, Niger and Senegal – and demonstrates the Project’s economic justification using the cost-benefit analysis methodology. In addition, the analysis also integrated the valuation of environmental externalities generated by the Project.

2. **Overall, the PRAPS-2 interventions as a whole are economically justified,** generating an NPV, at 6 percent of the additional benefits of US\$528.7 million and an EIRR of 20.7 percent (over a 20-year period¹⁴³), not accounting for environmental externalities. These economic results are satisfying, given that several other Project benefits (such as better public services for the livestock sector, increased human capital, spillover effects outside the core intervention areas, etc.) could not be quantified due to limited data availability. In addition, these economic results are robust when testing several sensitivity scenarios, including reduced animal vaccination coverage, delays in implementation and cost overruns.

3. **The valuation of environmental externalities offers further evidence that PRAPS-2 is economically justifiable.** As described in Annex 5, the Project is estimated to barely increase GHG emissions from livestock production by 0.1 percent (84,502 tCO₂eq per year), but sustainable rangeland management promoted by the Project will lead to the sequestration of 484,330 tCO₂eq per year. Thus, the Project net emissions are negative, representing a carbon sink of -399,828 tCO₂eq per year. When these environmental benefits are valued at the social price of carbon,¹⁴⁴ the overall economic results for the Project increase to an NPV of US\$694.9 million and EIRR of 24.4 percent (at the lower carbon price) and an NPV of US\$860.8 million and EIRR of 27.8 percent (at the higher carbon price).

Economics of pastoralism in Sahel and PRAPS-2 countries

4. Drylands - defined to include arid, semi-arid, and dry sub-humid zones - are at the core of Africa’s development challenge. Drylands make up 43 percent of the region’s land surface, account for 75 percent of the area used for agriculture, and are home to 50 percent of the population, including a disproportionate share of the poor. Due to complex factors, the economic, social, political, and environmental vulnerability in Africa’s drylands is high and rising, jeopardizing the long-term livelihood prospects for hundreds of millions of people. Climate change, which is expected to increase the frequency and severity of extreme weather events, will exacerbate this challenge¹⁴⁵.

5. The livestock sector is of major importance to the Sahel economy, its people, and their lands. In the Sahel and West African countries, the share of animal production in agricultural GDP ranges from 5 percent in Ivory Coast to 44 percent in Mali. In Sahelian countries, the average contribution of livestock to agricultural GDP is around 40 percent (Table A4.1). However, livestock GDP figures often do not include the indirect contribution of organic fertilizer (manure) and/or animal traction services. Such indirect contributions can be substantial¹⁴⁶. When counting labor power and organic manure as livestock products, the sector’s contribution to agricultural GDP would be nearly 50 percent for West Africa (OCDE- CEDEOA, 2018). Socially, livestock fully or partially supports the livelihoods of about 110–120 million people, or roughly 70 percent of the rural drylands’ population of West and East Africa. Of these people, between 25 and 41 million depend exclusively on livestock (pastoralists), while the rest derive a portion of their income from cropping (agro-pastoralists).

¹⁴³ Using a total budget of US\$460.2 million, i.e. IDA country allocations: US\$355 million, project beneficiary financing: US\$60.8 million, national budget financing: US\$24.4 million, and regional IDA allocation to CLSS: US\$20.0 million.

¹⁴⁴ Based on the World Bank *Guidance Note on Shadow Price of Carbon in Economic Analysis* (November 2017).

¹⁴⁵ De Haan, C. (editor). 2016. *Prospects for Livestock-Based Livelihoods in Africa’s Drylands*. World Bank Studies. Washington, DC: World Bank. doi: 10.1596/978-1-4648-0836-4. License: Creative Commons Attribution CC BY 3.0 IGO.

¹⁴⁶ Behnke, R. 2010. “The Contribution of Livestock to the GDP of IGAD Member States.” IGAD-LPI Working Paper 02–10. IGAD-LPI Addis Ababa.



Table A4.1: Contribution of the livestock subsector to GDP and agricultural GDP

	Burkina Faso	Chad	Mali	Mauritania	Niger	Senegal
GDP growth rate (World Bank, 2018)	6.8%	2.6%	4.9%	3.6%	6.5%	6.8%
Contribution to GDP (FAO, 2019)	13.5%	18.0%	29.8%	15.0%	20.4%	4.7%
Contribution to agGDP (FAO, 2019)	37.1%	40.0%	44.0%	80.0%	46.3%	29.4%

6. Endowed with favorable conditions for extensive animal production, livestock population in the six countries targeted by PRAPS-2 average 70 million cattle and 200 million small ruminants,¹⁴⁷ of which the majority are still reared under the transhumant pastoral system, although the trend is gradually reversing. In Burkina Faso, the proportion of livestock reared under a pastoral system is now estimated at 57 percent, while it was estimated of being more than 70 percent at the time of the preparation of PRAPS-1 (table A4.2).

Table A4.2: Estimates of distribution of livestock (cattle) between pastoral and agro-pastoral livestock systems¹⁴⁸

Livestock System	Burkina Faso	Niger	Senegal	Mali	Chad	Mauritania
Pastoral	57%	54%	52%	65%	55%	86%
Agro-pastoral	43%	46%	48%	35%	45%	14%

7. Cattle is one of the main exports from Sahelian landlocked countries, often ranking third after gold and cotton as in Burkina Faso. It is the most widely traded product between Sahelian countries and coastal countries; as such, it is an important factor in regional integration. The extensive production mode is also characterized by low production costs, making Sahelian cattle highly competitive.

8. The region is a net exporter of livestock and meat products towards coastal West Africa, particularly the fast-growing urban centers and consumption basins of Côte d’Ivoire, Ghana, and Nigeria. According to FAO, the global demand for meat and dairy products will increase by 52 and 40 percent respectively by 2050, compared to 2012, under a “business as usual” scenario. In the West African region, statistics also indicate a strong demand for animal products, both in coastal countries, described as consumption basins, and in Sahelian countries, production basins. This relative natural specialization of animal production presents advantages for the development of intraregional trade in animal products and hence the strengthening of regional integration.

Economic rationale for World Bank–funded investments in the pastoral areas of the Sahel

9. **The comprehensive literature review undertaken as part of the EFA for PRAPS-2 confirms the prominence of the livestock sub-sector in the economy of the Sahel Region and indicates that the proposed investments are likely to be economically justified.** Building on the results and lessons learned of PRAPS-1, the Project will continue its investments in areas where a large proportion of pastoral and agro-pastoral households remain in low-asset poverty traps and are vulnerable to drought and conflict. Poverty incidence is decreasing in the region but remains high and the significantly upward demographic trend is driving the absolute number of poor up while inequalities are rising. Over the past year, violence, insecurity and extreme weather have impacted millions of people in the region. Now, more than ever, public investments are needed for continuing support in pastoralism to meet productivity and sustainability goals. Demand for animal products is expected to scale up with a growing global population, rising incomes, and increasing urbanization. However, increasing livestock production – all else being equal – is contributing to rising GHGs,

¹⁴⁷ FAOSTAT, 2018.

¹⁴⁸ Table prepared by the project preparation team on the basis of data provided by the countries; cross-checked with different other sources.



deforestation, soil depletion, and biodiversity losses, which are compromising ecosystem services. Yet, livestock are providing key nutritional benefits and are supporting livelihoods and the resilience of families and communities in the region, so a balanced approach is needed to improve resilience and achieve sustainable production.

10. As for PRAPS-1, the Project will address several key factors affecting pastoralists and agro-pastoralists vulnerability and low resilience to shocks, poverty and food insecurity all which trigger increasing levels of rural-urban migration and emigration, particularly for the youth. The Project will invest in reducing the risks of livestock capital losses due to contagious transboundary animal diseases, low access to and poor capacity of animal health services, insecure access to natural resources (water and rangelands), climate change vulnerability, natural resources degradation, and policies reducing mobility such as transhumance bans from some coastal countries.

11. The Project will also address regional integration of VCs and pervasive obstacles in regional trade including important weaknesses remaining in infrastructure (more particularly live markets), weak regional integration of VCs and pervasive obstacles in regional trade. The trade in animal products within the region, largely driven by cross-border pastoralism, represents a compelling opportunity for regional integration. The interdependence between Sahelian countries (that have a comparative advantage in supplying meat and animal products) and those of the coast (providing cereals during certain periods of the year) strengthens the ties between people, societies, and economies. In the long run, integration offers an opportunity for peace, social union, and stability and makes conflict more costly and less probable. When animal diseases prevent livestock from being exported to demanding markets, the impossibility of exporting animals ultimately oversupplies the local market and contributes to lower market prices.

12. The literature indicates¹⁴⁹ that the costs of morbidity and mortality¹⁵⁰ of the highly contagious disease CBPP and PPR are high both for pastoralists (financial costs) and society (economic costs). A benefit-cost analysis conducted by Jones Ba¹⁵¹ (2016) to examine the economic returns from a proposed programme for the global eradication of PPR estimates discounted benefits of US\$76.5 billion, yielding a net benefit of US\$74.2 billion and suggesting a benefit cost ratio of 33.8, and an IRR of 199 percent. Regarding CBPP, the World Organisation for Animal Health (OIE) has shown that prevention yields desirable economic results: an investment of EUR 14.6 million to control CBPP could forestall EUR 30 million in losses from morbidity and mortality, leading to a net benefit of EUR 15.4 million¹⁵². Several economic analyses reported in the literature provide compelling insights about the cost-effectiveness of interventions in the arid and semi-arid lands (ASALs) of Africa.

Identification of benefits

13. It is expected that Project interventions will result in a number of measurable impacts, such as: (i) an increased coverage of vaccination for two regional priority animal diseases (CBPP and PPR) and an overall and national improvement of animal health status through investments in VS infrastructure, equipment and human capital, and the implementation of regulatory frameworks for veterinary pharmaceutical drugs and products, including quality control; (ii) an increase in the area where sustainable rangeland management practices have been adopted through the Project, leading to enhanced livestock mobility and access to feed (forage) and water, reduction of conflicts over access to resources, and increased ecosystems health; (iii) an increased income of (agro)pastoralist households generated by more sustained production of livestock

¹⁴⁹ Spickler, Anna Rovid. 2015. CBPP and PPR. Retrieved from. https://www.cfsph.iastate.edu/Factsheets/pdfs/contagious_bovine_pleuropneumonia.pdf and <http://www.cfsph.iastate.edu/DiseaseInfo/factsheets.php>

¹⁵⁰ Mortality rate ranging from 10 percent to 80 percent for CBPP (although mortality greater than 50 percent is reported to be uncommon) and with morbidity and mortality rates sometimes approaching 80-100 percent for PPR.

¹⁵¹ Jones BA, Rich KM, Mariner JC, Anderson J, Jeggo M, Thevasagayam S, et al. (2016) The Economic Impact of Eradicating Peste des Petits Ruminants: A Benefit-Cost Analysis. PLoS ONE 11 (2): e0149982. doi:10.1371/journal.pone.0149982.

¹⁵² OIE (2007).



products and increased livestock productivity, and better access to markets; (iv) an accrued resilience to climate and sanitary risks, more stable incomes and assets, which in turn generate benefits in the form of increased food security and nutrition; (v) an improved social and economic inclusion of pastoralists, in particular women and youth through targeted technical and vocational training programs, skills training, IGAs and assistance from the Project to obtain a civil status document and inclusion in social registries.

14. The above benefits constitute the initial accomplishments for building the resilience of pastoralists in the ASALs of the six countries—namely, to support these pastoral populations to anticipate, manage, adapt to, cope with, and recover from crises and risks to livelihoods. The Project is also expected to create other positive impact, such as institutional strengthening, enhanced capacities of stakeholders, and natural resource protection. These intangible benefits will not be fully quantified due to the difficulty of attributing a monetary value to their contribution to the PDO.

15. **Activities financed under PRAPS-2 are expected to generate three main benefit streams.** **First**, the Project will generate private (pastoralist)-level benefits, such as increased herd growth, accrued production of livestock and livestock products and increased livestock productivity due to increased parturition rate, increased animal live weight, and decreased livestock mortality and morbidity. In addition, investments in innovative livestock VC initiatives, as well as in IGAs will contribute to increasing value addition, creating employment and increasing incomes. In turn, improved incomes and assets will generate additional social benefits in the form of increased food security and nutrition. **Second**, PRAPS-2 will generate public benefits at national and regional levels, such as reduced transboundary animal diseases, strengthened capacity of public services and institutions, including participating ministries and regional economic community such as the CILSS, the ECOWAS RAHC, or other regional institutions (e.g. POs). **Third**, the Project is expected to lead to more global benefits, such as natural resources protection, resilience to climate change risks. Other economic benefits, arising from improved animal productivity and health, include spill-over effects on consumers through relatively lower meat prices as supply increases, less health-related illnesses through investments in strong VCs and food safety, and veterinary drug and feed suppliers who would expect higher demand for their services.

Methodology and assumptions for the evaluation of Project benefits

16. **Herd projection modelling.** Livestock production is the dominant livelihood and economic activity in the targeted areas of the Project. Preservation of these capital assets is therefore key for pastoral and agropastoral communities' resilience. Consequently, the quantification of benefits from extensive livestock activities is at the center of the Project's EFA, which uses the livestock herd dynamics models "EcoRum" of the Livestock Sector Investment Policy Toolkit (LSIPT) module (a program developed by FAO and CIRAD with the support of the World Bank for simulating bio-economic performances of herds of tropical domestic ruminants). Supported by cost-benefit analysis, LSIPT calculates, in "with" and "without" project scenarios, different livestock production outputs (meat, milk, hide and skins and manure) and financial outputs that can be used to assess the overall viability of the proposed Project, through the calculation of IRRs and NPVs. This methodology has been effectively used in the EFAs of other World Bank-financed projects supporting pastoral livelihoods in Ethiopia, Kenya, Uganda, Zambia, as well as in the Sahel (for the first phase of PRAPS).

17. **Livestock production systems (LPS).** In order to have a comprehensive representation of the diversity of the production systems in Project's areas and specificities of these systems in terms of demographic, herd management and productivity parameters, a total of 16 herd models have been. In addition to the distinction between species (cattle, sheep and goats), specific herd models have been designed for pastoral and agropastoral systems. Furthermore, as the Project's animal health component is designed to have national coverage - and therefore benefit to a large number of animals - a third distinction has made between animals benefiting from all Project interventions (*full project impact*), and animals benefiting from vaccination only (*vaccination impact* -PPCB for cattle and PPR for small ruminants). In addition, a specific model for dairy cattle has been developed to reflect the practice of keeping on the farm - including during transhumance - a



limited number of milking cows as an additional source of income for households and for child nutrition. Finally, two other models (fattening of sheep and fattening of cattle) have been considered to reflect the households' common practice of rearing some sheep or/and cattle for meat sale. However, due to data limitations at this stage, these two models have not yet been included in the present analysis; **hence, the overall analysis focused on 14 livestock production systems.**

18. Herd composition and baseline data collection. Analysis of livestock systems in the Sahelian countries is challenging, in part because statistics on the numbers and distributions of animals and animal keepers are scarce and sometimes contradictory. In addition, there is limited availability of baseline data (demographic, herd management and productivity parameters) to model the without Project situation and to develop assumptions to describe the with-Project scenarios. The COVID-19 restrictions further impeded data collection efforts.

19. Yet, for the present analysis, an extensive literature review¹⁵³ was conducted, complemented by expert opinions and extensive involvement of country project preparation teams. In particular, country teams were requested to provide information on livestock numbers and overall distribution of livestock between pastoral and agro-pastoral systems; number of households targeted directly by the Project; the different types of livestock production systems practiced by these households and the average number of animals per household in each livestock production system. The information provided by the countries, together with the number of CBPP and PPR vaccinations planned during the Project, made it possible to calculate the initial livestock population for each production system to be considered in herd projection models (listed in Table A4.3).

Table A4.3: Livestock production systems and number of animals targeted by the Project

		Burkina Faso	Chad	Mali	Mauritania	Niger	Senegal	Regional
		animals	animals	animals	animals	animals	animals	animals
Cattle (pastoral) - Full Impact	B1LG	106,225	1,925,841	562,106	470,652	1,051,347	368,552	4,484,721
Cattle (agro-pastoral) - Full Impact	B1MR	9,349	468,263	49,474	32,903	419,464	599,718	1,579,172
Cattle (pastoral) - CBPP Vaccination only	B2LG	1,193,899	1,804,715	6,317,715	1,706,455	2,885,545	575,611	14,483,941
Cattle (agro-pastoral) - CBPP Vaccination only	B2MR	682,742	2,584,009	3,612,846	321,509	2,398,012	2,087,511	11,686,629
Cattle (dairy, pastoral) - Full Impact	B3LG	5,060	124,944	26,776	49,080	83,279	33,219	322,358
Cattle (dairy, agro-pastoral) - Full Impact	B3MR	2,724	102,228	14,417	7,990	76,114	94,550	298,025
Goats (pastoral) - Full Impact	G1LG	538,199	1,988,209	60,203	147,857	34,652	353,093	3,122,212
Goats (agro-pastoral) - Full Impact	G1MR	152,254	619,701	16,399	9,557	9,439	122,390	929,740
Goats (pastoral) - PPR Vaccination only	G2LG	2,628,468	4,757,541	5,175,942	3,553,291	2,979,147	959,218	20,053,607
Goats (agro-pastoral) - PPR Vaccination only	G2MR	2,236,635	4,899,549	2,803,063	58,708	1,613,375	734,408	12,345,739
Sheep (pastoral) - Full Impact	O1LG	672,748	1,767,297	68,703	123,939	23,673	660,115	3,316,474
Sheep (agro-pastoral) - Full Impact	O1MR	121,803	413,134	17,925	6,725	6,176	208,198	773,962
Sheep (pastoral) - PPR Vaccination only	O2LG	1,833,675	2,698,311	5,626,195	2,480,573	1,938,591	1,570,522	16,147,866
Sheep (agro-pastoral) - PPR Vaccination only	O2MR	1,769,008	3,214,724	3,048,558	416,557	1,050,427	1,244,338	10,743,612
Total		11,952,790	27,368,466	27,400,322	9,385,797	14,569,240	9,611,442	100,288,057

20. The second step involved the collection of technical (demographic and production/productivity parameters) and financial data¹⁵⁴ for each production system. This step also included information related to animal nutrition practices and manure management needed to estimate the carbon balance of the Project. To begin with, average demographic and production parameters for cattle and small-ruminants in pastoral and agro-pastoral systems in the Sahel region were defined through extensive literature review and consultations with livestock specialists and experts from FAO, CIRAD and IRAM during Project preparation. Subsequently, templates with pre-defined average parameters were proposed to national livestock experts

¹⁵³ Including the Flagship World Bank document: De Haan, C. (editor). 2016. Prospects for Livestock-Based Livelihoods in Africa's Drylands. World Bank Studies. Washington, DC: World Bank. doi: 10.1596/978-1-4648-0836-4. License: Creative Commons Attribution CC BY 3.0 IGO.

¹⁵⁴ Including financial operational costs (veterinary costs, small equipment, etc.) and prices of livestock products (milk, meat, hide and skins, and manure).



(part of Project preparation teams) for validation and possible adjustments (in cases where more specific data were available). To prepare the above-mentioned pre-defined templates, the data from the “*Initiative Elevage Pauvreté et Croissance*” (IEPC, 2005) in Burkina Faso and Mauritania were a key information source. The assumptions were also triangulated with: (i) FAO’s GLEAM database on demographic parameters, animal nutrition and organic matter management; (ii) a meta-analysis of the literature carried out by M. Lesnoff (CIRAD) and communicated to the preparation team; (iii) a longitudinal analysis (1984-1995) recording of herd data made by CIRAD in the Kolda region in Senegal; (iv) data collected by the Enteric Methane / FAO-CCAC project; and (v) data sets found in publications from the World Bank De Haan, 2016), CIRAD (Lesnoff *et al.*, 2007¹⁵⁵, 2009¹⁵⁶, 2011¹⁵⁷, 2012¹⁵⁸, 2013¹⁵⁹), ILRI¹⁶⁰, and FAO (Otte and Chilonda, 2002.¹⁶¹

21. With and without Project scenarios. Using the above approach and resulting parameters, herd projection models for the main animal breeds populations¹⁶² (*Zebu* cattle, *Peulh* sheep and *Sahel* goats) have been developed for all six countries considering “with Project” and “without Project” situations over a 20-year period. For both scenarios, the demographic and production parameters of cattle and small ruminants, such as parturition and prolificacy rates, average annual mortality rates, average annual offtakes rates and live weight, together with herd structure and milk and meat productivity parameters, were estimated.

22. The impact of climate change has been included in the analysis, in light of the risks posed to livestock-dependent livelihoods in the Sahel. Based on recent and projected trends, the drought occurrence assumptions have been considered more severe than in PRAPS-1 (for which a probability of droughts and rain failures every five years was assumed). As such, for the present analysis, in both scenarios, droughts and rain failures have been assumed to occur every four years during the first decade and to every three years during the second decade, in line with available bibliography¹⁶³. In addition, two types of drought have been considered: (i) a “light” drought, with an increase in mortalities of 20 percent over all age groups; and (ii) a “more severe” drought (one during each decade) involving a 50 percent increase in mortality for all age groups. These hypotheses for mortality are based on a literature review carried out by CIRAD in 2012,¹⁶⁴ which reported a livestock population size decline averaging between 20 to 80 percent during drought periods in the Sahel. Subsequently, the livestock owners’ coping strategies in response these droughts have been considered twofold: (i) a reduction in the offtake rates of females (mainly in the sub-adult class of age) to preserve the productive capital herds; and (ii) an increase in the offtake rates of males (sub-adult and adult classes of age). Together, the two strategies would lead to an increase of the rate of females in the herd’s structure (a key factor of pastoralists’ resilience to drought).

23. Overall, in the without Project situation (WOP), droughts coupled with low reproductive efficiency (including low calving rates and long calving intervals, increased calf and adult mortality rates) are preserving over time a modest herd growth and offtake rates, but are also leading to low animal prices, as pastoral households sell weak and unhealthy animals in order to buy staple cereals. On the other hand, in the **with Project situation (WP),** the analysis assumes that all PRAPS-2 interventions (described above) would jointly translate into improved calving rates and prolificacy rates, reduced mortalities and improved live weight at

¹⁵⁵ Lesnoff M., Saley A., Adamou K., N’ Djaffa H., 2007, *Enquête démographique 2006 sur le cheptel domestique au Niger: sites de Fakara, de Gabi et de Zermou*, CIRAD, ILRI.

¹⁵⁶ Lesnoff. M., 2009, *Annual natural demographic rates in small ruminants’ herds extensively managed in Senegal*, Technical Note, CIRAD.

¹⁵⁷ Ba.A, Lesnoff.M, Pocard-Chappuis R., Moulin CH., 2011, *Demographic dynamics and off-take of cattle herds in southern Mali*, CIRAD.

¹⁵⁸ Lesnoff M., Corniaux C., Hiernaux P., 2012. *Sensitivity analysis of the recovery dynamics of a cattle population following drought in the Sahel region*, Ecological Modelling 232, p.28-39.

¹⁵⁹ Leznoff, M. *Simulating dynamics and productions of tropical livestock populations - mimage: An R package for discrete time matrix models*. Montpellier, France, CIRAD, <http://livtools.cirad.fr>.

¹⁶⁰ ILCA, 1990. *Livestock systems research manual*. Working Paper 1, Vol. 1. Addis Ababa, Ethiopia, ILCA.

¹⁶¹ Otte, M.J., Chilonda, P., 2002. *Cattle and small Ruminant production systems in sub-Saharan Africa - A systematic review*. FAO.

¹⁶² Camels were not considered in the analysis, due to their low number directly targeted by Project (about 1 percent of the total number of camels in the 6 countries).

¹⁶³ This hypothesis is in line with the Agricultural Sector Risk Assessment carried by the World Bank in Senegal and other countries, such as Niger.

¹⁶⁴ Lesnoff M., Corniaux C., Hiernaux P., 2012. *Sensitivity analysis of the recovery dynamics of a cattle population following drought in the Sahel region*, Ecological Modelling 232, p.28-39.



culling and slightly increased milk productivity. Project interventions would also result in reduced losses during drought, both in terms of mortalities and weight losses. In the “with Project” situation, herders’ coping strategy will adapt to the improved situation. As a result, the assumed offtake rates are adjusted to maintain a growth rate similar to the “without Project” and maintain a percentage of adult female in adult class after drought, allowing to compensate/minimise losses and sustain the productive capacity of the herd.

24. Table A4.4 below summarizes the key hypotheses used for the “with” and “without” Project situation.

It is worth stressing that the focus on the analysis is on herd dynamics and as such the impact of the different Project interventions (including better management of natural resources and better functioning of VCs) is modelled through the technical parameters used in the with-Project situation (WP). For example, better management of and access to natural resources is considered to positively impact feed/forage availability, hence animal nutrition, which in turn translates into increased live weights. In addition, better functioning of VCs, in particular through the investments in market infrastructures, are assumed to allow the commercialisation of the additional animals, without over-crowding facilities, translating into increased off-takes, reduced animal diseases and improved prices. It is also important to note that the EFA analysis distinguishes between the production systems only impacted by vaccination (larger animal numbers, smaller impact) and those fully impacted by the Project (smaller animal numbers, larger impact). Last, but not least, the regional nature of the Project is expected to generate spill overs of good practices – both in terms of better public service delivery and in terms of improved livestock rearing and marketing practices. As such, the key hypotheses are assumed the same across the six participating countries and reflect the good practices frontier to be achieved jointly through regional cooperation.

25. Based on these parameters, all 14 herd models demonstrate additional value being generated through the Project interventions. While growth rates between WOP and WP situations are quasi-equal, the improved reproduction, reduced mortalities, and increased live weight imply that the increased off-takes of beneficiary pastoralists translates into more value – either as additional income or increased self-consumption contributing to food and nutrition security. Furthermore, reduced impacts of shocks – such as the droughts – implies a more constant asset base for the beneficiaries, contributing to their resilience.

26. While the bulk of the impact generated by the Project interventions is estimated through the herd modelling, PRAPS-2 also includes two financing windows for subprojects. Under Subcomponent 3.3, the Project will finance - through a matching-grant scheme – innovative value addition activities in different segments of the livestock VC (including forage and fodder production). Overall, in the six participating countries, about 120 subprojects with an estimated average cost of US\$30,000 will be supported (financed 60 percent PRAPS-2, 40 percent beneficiaries). Under Subcomponent 4.3, the Project will finance IGAs for women and youth, as an inclusion and income diversification intervention. Overall, 20,000 IGAs with an average cost of US\$500 will be supported (with 10 percent beneficiary contribution, and the rest financed by the Project) in the six participating countries

27. As these subprojects will be demand-driven, it is not possible to determine ex-ante the types and mix of activities that the Project will finance. As such, the benefits from these investments can only be estimated indicatively using existing financial models for similar activities. As such, for the present analysis, the benefits of the larger subprojects have been estimated based on a cattle-fattening activity, requiring a similar level of investment. In turn, the IGA benefits have been estimated using a sheep-fattening activity of the respective investment size. Both models have been developed using the information available from the World-Bank financed PADEL-M Project in Mali. Overall, both models demonstrate the financial profitability of these livestock activities that could be supported by the Project, as summarised in Table A4.5.



Table A4.4: Summary of parameters used for the “with” and “without” Project situations

Cattle models

Model		B1LG						B1MR						B2LG						
I. Age classes																				
Length (months)																				
Female	Juvenile (J)	12						12						12						
	Sub-adult (S)	36						36						36						
	Adult (A)	132						132						132						
Male	Juvenile (J)	12						12						12						
	Sub-adult (S)	36						36						36						
	Adult (A)	72						72						72						
II. Demography																				
Reproduction		WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	
Parturition rate (/year)		0.52	-17%	-25%	2.0%	-17%	-25%	0.58	-17%	-25%	2.0%	-17%	-25%	0.52	-17%	-25%	0.2%	-17%	-25%	
Rate of net prolificacy		1.00	-2%	-3%	0.0%	-1%	-1%	1.00	-2%	-3%	0.0%	-1%	-1%	1.00	-2%	-3%	0.0%	-2%	-3%	
Mortality (%)																				
- /age class if length < 1 year																				
- /year if length >= 1 year	Female	J	20.0%	30%	50%	-2.0%	20%	30%	20.0%	25%	50%	-2.0%	20%	30%	20.0%	30%	50%	-0.5%	25%	40%
		S	7.0%	35%	50%	-1.0%	25%	30%	5.0%	35%	50%	-1.0%	25%	30%	7.0%	35%	50%	-0.5%	25%	40%
		A	3.0%	100%	120%	-1.0%	50%	60%	3.0%	100%	120%	-1.0%	50%	60%	3.0%	100%	120%	-0.5%	80%	100%
Male	J	20.0%	0%	0%	0.0%	0%	0%	20.0%	25%	50%	-2.0%	20%	30%	20.0%	30%	50%	-0.5%	25%	40%	
	S	7.0%	0%	0%	0.0%	0%	0%	5.0%	35%	50%	-1.0%	25%	30%	7.0%	35%	50%	-0.5%	25%	40%	
	A	3.0%	0%	0%	0.0%	0%	0%	3.0%	100%	120%	-1.0%	50%	60%	3.0%	100%	120%	-0.5%	80%	100%	
Offtake (%)																				
- /age class if length < 1 year																				
- /year if length >= 1 year	Female	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%
		S	5%	0%	0%	0.0%	0%	0%	5%	0%	0%	0.0%	5%	0%	5%	0%	0%	0.0%	0%	0%
		A	5%	0%	0%	0.0%	0%	0%	5%	0%	0%	0.0%	5%	0%	5%	0%	0%	0.0%	0%	0%
Male	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	
	S	20%	45%	70%	1.0%	45%	70%	5%	40%	60%	5.0%	45%	70%	20%	45%	70%	1.0%	45%	70%	
	A	90%	95%	95%	1.0%	95%	95%	75%	90%	95%	5.0%	95%	99%	90%	95%	95%	1.0%	95%	95%	
III. Production																				
Live weight (kg/animal)																				
Female	J	26.00	-10%	-20%	1.0%	-5%	-10%	21.00	-10%	-20%	1.0%	-5%	-10%	26.00	-10%	-20%	0.2%	-10%	-20%	
	S	85.00	-10%	-20%	2.0%	-5%	-10%	68.00	-10%	-20%	2.0%	-5%	-10%	85.00	-10%	-20%	0.2%	-10%	-20%	
	A	227.00	-10%	-20%	2.0%	-5%	-10%	182.00	-10%	-20%	2.0%	-5%	-10%	227.00	-10%	-20%	0.2%	-10%	-20%	
Male	J	26.00	-10%	-20%	1.0%	-5%	-10%	21.00	-10%	-20%	1.0%	-5%	-10%	26.00	-10%	-20%	0.2%	-10%	-20%	
	S	96.00	-10%	-20%	2.0%	-5%	-10%	68.00	-10%	-20%	2.0%	-5%	-10%	96.00	-10%	-20%	0.2%	-10%	-20%	
	A	297.00	-10%	-20%	2.0%	-5%	-10%	238.00	-10%	-20%	2.0%	-5%	-10%	297.00	-10%	-20%	0.2%	-10%	-20%	
Meat																				
Dressing percentage (%)		48%	-5%	-10%	0.5%	-3%	-5%	48%	-5%	-10%	0.5%	-3%	-5%	48%	-5%	-10%	0.0%	-5%	-10%	



Cattle models

		B2MR					B3LG					B3MR								
Model																				
I. Age classes																				
Length (months)		12					12					12								
	Female	Juvenile (J)	36					36					36							
		Sub-adult (S)	132					132					132							
		Adult (A)	12					12					12							
	Male	Juvenile (J)	36					36					36							
		Sub-adult (S)	72					72					72							
		Adult (A)																		
II. Demography		WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	
Reproduction		0.61	-17%	-25%	0.2%	-17%	-25%	0.78	-17%	-25%	0.5%	-17%	-25%	0.78	-17%	-25%	1.0%	-17%	-25%	
Parturition rate (/year)		1.00	-2%	-3%	0.0%	-2%	-3%	1.00	-2%	-3%	0.0%	-1%	-1%	1.00	-2%	-3%	0.0%	-1%	-1%	
Rate of net prolificacy																				
Mortality (%)																				
- /age class if length < 1 year		20.0%	25%	50%	-0.5%	20%	30%	22.0%	30%	50%	-2.0%	20%	30%	22.0%	30%	50%	-2.0%	20%	30%	
- /year if length >= 1 year	Female	J	5.0%	35%	50%	-0.5%	25%	30%	6.0%	35%	50%	-1.0%	25%	30%	6.0%	35%	50%	-1.0%	25%	30%
		S	3.0%	100%	120%	-0.5%	50%	60%	4.0%	100%	120%	-1.0%	50%	60%	4.0%	100%	120%	-1.0%	50%	60%
		A																		
- /year if length >= 1 year	Male	J	20.0%	25%	50%	-0.5%	20%	30%	24.0%	30%	50%	-2.0%	20%	30%	24.0%	30%	50%	-2.0%	20%	30%
		S	5.0%	35%	50%	-0.5%	25%	30%	6.0%	35%	50%	-1.0%	25%	30%	7.0%	35%	50%	-1.0%	25%	30%
		A	3.0%	100%	120%	-0.5%	50%	60%	6.0%	100%	120%	-1.0%	50%	60%	6.0%	100%	120%	-1.0%	50%	60%
Offtake (%)																				
- /age class if length < 1 year		0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	
- /year if length >= 1 year	Female	J	5%	0%	0%	0.0%	3%	0%	4%	0%	0%	0.0%	2%	0%	4%	0%	0%	0.0%	2%	0%
		S	5%	0%	0%	0.0%	3%	0%	4%	0%	0%	0.0%	2%	0%	4%	0%	0%	0.0%	2%	0%
		A																		
- /year if length >= 1 year	Male	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%
		S	5%	40%	60%	0.0%	40%	60%	5%	45%	70%	1.0%	45%	70%	5%	45%	70%	1.0%	45%	70%
		A	75%	90%	95%	0.0%	95%	99%	75%	95%	95%	1.0%	95%	95%	75%	95%	95%	1.0%	95%	95%
III. Production																				
Live weight (kg/animal)		21.00	-10%	-20%	0.2%	-10%	-20%	21.00	-10%	-20%	1.0%	-5%	-10%	21.00	-10%	-20%	1.0%	-5%	-10%	
Female	J	68.00	-10%	-20%	0.2%	-10%	-20%	68.00	-10%	-20%	2.0%	-5%	-10%	68.00	-10%	-20%	2.0%	-5%	-10%	
	S	182.00	-10%	-20%	0.2%	-10%	-20%	182.00	-10%	-20%	2.0%	-5%	-10%	182.00	-10%	-20%	2.0%	-5%	-10%	
	A																			
Male	J	21.00	-10%	-20%	0.2%	-10%	-20%	21.00	-10%	-20%	1.0%	-5%	-10%	21.00	-10%	-20%	1.0%	-5%	-10%	
	S	68.00	-10%	-20%	0.2%	-10%	-20%	68.00	-10%	-20%	2.0%	-5%	-10%	68.00	-10%	-20%	2.0%	-5%	-10%	
	A	238.00	-10%	-20%	0.2%	-10%	-20%	238.00	-10%	-20%	2.0%	-5%	-10%	238.00	-10%	-20%	2.0%	-5%	-10%	
Meat		48%	-5%	-10%	0.0%	-5%	-10%	48%	-5%	-10%	0.5%	-3%	-5%	48%	-5%	-10%	0.5%	-3%	-5%	
Dressing percentage (%)																				



Sheep models

Model		O1LG						O1MR						O2LG						O2MR					
I. Age classes																									
Length (months)																									
Female	Juvenile (J)	3						3						3						12					
	Sub-adult (S)	9						9						9						36					
	Adult (A)	120						120						120						132					
Male	Juvenile (J)	3						3						3						12					
	Sub-adult (S)	9						9						9						36					
	Adult (A)	32						32						32						72					
II. Demography																									
Reproduction		WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought	WOP	Mild drought	Major drought	WP (% change)	Mild drought	Major drought
Parturition rate (/year)		0.98	-15%	-25%	2.0%	-15%	-25%	1.18	-15%	-25%	2.0%	-15%	-25%	0.98	-15%	-25%	0.2%	-15%	-25%	1.18	-15%	-25%	2.0%	-17%	-25%
Rate of net prolificacy		1.02	-2%	-3%	0.0%	-1%	-1%	1.17	-2%	-3%	0.0%	-1%	-1%	1.02	-2%	-3%	0.0%	-2%	-3%	1.17	-2%	-3%	0.0%	-1%	-1%
Mortality (%)																									
- /age class if length < 1 year																									
Female	J	8.0%	25%	50%	-2.0%	20%	30%	10.0%	25%	50%	-2.0%	20%	30%	8.0%	25%	50%	-0.5%	20%	30%	10.0%	25%	50%	-0.5%	20%	30%
	S	17.0%	25%	50%	-1.0%	20%	30%	20.0%	25%	50%	-1.0%	20%	30%	17.0%	25%	50%	-0.5%	20%	30%	20.0%	25%	50%	-0.5%	20%	30%
	A	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%
Male	J	8.0%	25%	50%	-2.0%	20%	30%	10.0%	25%	50%	-2.0%	20%	30%	8.0%	25%	50%	-0.5%	20%	30%	10.0%	25%	50%	-0.5%	20%	30%
	S	17.0%	25%	50%	-1.0%	20%	30%	20.0%	25%	50%	-1.0%	20%	30%	17.0%	25%	50%	-0.5%	20%	30%	20.0%	25%	50%	-0.5%	20%	30%
	A	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%
Offtake (%)																									
- /age class if length < 1 year																									
Female	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%
	S	10%	5%	5%	0.0%	10%	10%	10%	0%	0%	0.0%	5%	5%	10%	5%	5%	0.0%	5%	5%	10%	0%	0%	0.0%	0%	0%
	A	15%	15%	5%	0.0%	15%	15%	25%	20%	0%	0.0%	25%	10%	15%	15%	5%	0.0%	15%	5%	25%	20%	0%	0.0%	20%	25%
Male	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%
	S	20%	60%	70%	2.0%	60%	70%	20%	60%	70%	2.0%	60%	70%	20%	60%	70%	2.0%	60%	70%	20%	60%	70%	1.0%	60%	20%
	A	90%	95%	95%	2.0%	95%	95%	90%	95%	95%	2.0%	95%	95%	90%	95%	95%	2.0%	95%	95%	90%	95%	95%	1.0%	95%	90%
III. Production																									
Live weight (kg/animal)																									
Female	J	3.00	-10%	-20%	1.0%	-5%	-10%	2.50	-10%	-20%	1.0%	-5%	-10%	3.00	-10%	-20%	0.2%	-5%	-10%	2.50	-10%	-20%	0.2%	-5%	-10%
	S	15.00	-10%	-20%	2.0%	-5%	-10%	9.00	-10%	-20%	2.0%	-5%	-10%	15.00	-10%	-20%	0.2%	-5%	-10%	9.00	-10%	-20%	0.2%	-5%	-10%
	A	29.00	-10%	-20%	2.0%	-5%	-10%	20.00	-10%	-20%	2.0%	-5%	-10%	29.00	-10%	-20%	0.2%	-5%	-10%	20.00	-10%	-20%	0.2%	-5%	-10%
Male	J	3.00	-10%	-20%	1.0%	-5%	-10%	2.50	-10%	-20%	1.0%	-5%	-10%	3.00	-10%	-20%	0.2%	-5%	-10%	2.50	-10%	-20%	0.2%	-5%	-10%
	S	15.00	-10%	-20%	2.0%	-5%	-10%	10.00	-10%	-20%	2.0%	-5%	-10%	15.00	-10%	-20%	0.2%	-5%	-10%	10.00	-10%	-20%	0.2%	-5%	-10%
	A	35.00	-10%	-20%	2.0%	-5%	-10%	25.00	-10%	-20%	2.0%	-5%	-10%	35.00	-10%	-20%	0.2%	-5%	-10%	25.00	-10%	-20%	0.2%	-5%	-10%
Meat																									
Dressing percentage (%)		50%	-3%	-5%	0.5%	-3%	-5%	52%	-3%	-5%	0.5%	-3%	-5%	50%	-3%	-5%	0.0%	-3%	-5%	52%	-3%	-5%	0.0%	-3%	-5%



Goat models

Model	G1LG						G1MR						G2LG						G2MR						
I. Age classes																									
Length (months)																									
Female	Juvenile (J)	3						3						3						3					
	Sub-adult (S)	9						9						9						9					
	Adult (A)	120						120						120						120					
Male	Juvenile (J)	3						3						3						3					
	Sub-adult (S)	9						9						9						9					
	Adult (A)	32						32						32						32					
II. Demography																									
Reproduction																									
Parturition rate (/year)		0.98	-15%	-25%	2.0%	-15%	-25%	1.20	-15%	-25%	2.0%	-15%	-25%	0.98	-15%	-25%	0.2%	-15%	-25%	1.20	-15%	-25%	0.2%	-15%	-25%
Rate of net prolificacy		1.16	-2%	-3%	0.0%	-1%	-1%	1.16	-2%	-3%	0.0%	-1%	-1%	1.16	-2%	-3%	0.0%	-2%	-3%	1.16	-2%	-3%	0.0%	-2%	-3%
Mortality (%)																									
- /age class if length < 1 year																									
Female	J	8.0%	25%	50%	-2.0%	20%	30%	15.0%	25%	50%	-2.0%	20%	30%	8.0%	25%	50%	-0.5%	20%	30%	15.0%	25%	50%	-0.5%	20%	30%
	S	17.0%	25%	50%	-1.0%	20%	30%	20.0%	25%	50%	-1.0%	20%	30%	17.0%	25%	50%	-0.5%	20%	30%	20.0%	25%	50%	-0.5%	20%	30%
	A	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%
Male	J	8.0%	25%	50%	-2.0%	20%	30%	15.0%	25%	50%	-2.0%	20%	30%	8.0%	25%	50%	-0.5%	20%	30%	15.0%	25%	50%	-0.5%	20%	30%
	S	17.0%	25%	50%	-1.0%	20%	30%	20.0%	25%	50%	-1.0%	20%	30%	17.0%	25%	50%	-0.5%	20%	30%	20.0%	25%	50%	-0.5%	20%	30%
	A	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-1.0%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%	10.0%	45%	100%	-0.5%	40%	60%
Offtake (%)																									
- /age class if length < 1 year																									
Female	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%
	S	15%	0%	0%	0.0%	8%	0%	15%	0%	0%	0.0%	8%	5%	15%	0%	0%	0.0%	0%	0%	15%	5%	0%	0.0%	5%	0%
	A	25%	5%	0%	0.0%	13%	0%	25%	5%	0%	0.0%	13%	8%	25%	5%	0%	0.0%	5%	0%	25%	5%	0%	0.0%	5%	0%
Male	J	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%	0%	0%	0%	0.0%	0%	0%
	S	20%	40%	70%	2.0%	60%	70%	20%	60%	70%	2.0%	60%	70%	20%	40%	70%	1.0%	60%	70%	20%	60%	70%	0.5%	60%	70%
	A	90%	95%	95%	2.0%	95%	95%	90%	95%	95%	2.0%	95%	95%	90%	95%	95%	1.0%	95%	95%	90%	95%	95%	0.5%	95%	95%
III. Production																									
Live weight (kg/animal)																									
Female	J	3.00	-10%	-20%	1.0%	-5%	-10%	2.00	-10%	-20%	1.0%	-10%	-20%	3.00	-10%	-20%	0.2%	-5%	-10%	2.00	-10%	-20%	0.2%	-5%	-10%
	S	10.00	-10%	-20%	2.0%	-5%	-10%	7.00	-10%	-20%	2.0%	-10%	-20%	10.00	-10%	-20%	0.2%	-5%	-10%	7.00	-10%	-20%	0.2%	-5%	-10%
	A	24.00	-10%	-20%	2.0%	-5%	-10%	17.00	-10%	-20%	2.0%	-10%	-20%	24.00	-10%	-20%	0.2%	-5%	-10%	17.00	-10%	-20%	0.2%	-5%	-10%
Male	J	3.00	-10%	-20%	1.0%	-5%	-10%	2.00	-10%	-20%	1.0%	-10%	-20%	3.00	-10%	-20%	0.2%	-5%	-10%	2.00	-10%	-20%	0.2%	-5%	-10%
	S	10.00	-10%	-20%	2.0%	-5%	-10%	8.00	-10%	-20%	2.0%	-10%	-20%	10.00	-10%	-20%	0.2%	-5%	-10%	8.00	-10%	-20%	0.2%	-5%	-10%
	A	27.00	-10%	-20%	2.0%	-5%	-10%	20.00	-10%	-20%	2.0%	-10%	-20%	27.00	-10%	-20%	0.2%	-5%	-10%	20.00	-10%	-20%	0.2%	-5%	-10%
Meat																									
Dressing percentage (%)		52%	-3%	-5%	0.5%	-3%	-5%	50%	-3%	-5%	0.5%	-3%	-5%	52%	-3%	-5%	0.5%	-3%	-5%	50%	-3%	-5%	0.5%	-3%	-5%



Table A4.5: Indicative financial returns for subprojects

		Cattle fattening	Sheep fattening
		<i>subproject</i>	<i>IGA</i>
Initial investment	US\$	31,305	533
Yearly income	US\$	8,194	94
NPV (@10%, 15-y)	US\$	22,821	128
IRR	%	22.1	14.3

Economic results

28. **The overall benefits of the Project have been aggregated using the economic results of the identified benefit streams, against the Project costs and including phasing aligned to the results framework.** For each participating country, the total economic costs of the Project have been estimated using the Costab software, by removing the taxes, and including all costs (for a grand total of US\$460.2 million, i.e. IDA country allocations: US\$355.0 million, project beneficiary financing: US\$60.8 million, national budget financing: US\$24.4 million, and regional IDA allocation to CILSS: US\$20.0 million). Conversion factors have been considered as 1.0, as the inputs and outputs considered in the analysis are generally not taxed and are not subject to market distortions.

29. **Overall, the PRAPS-2 interventions as a whole are economically justified,** generating an NPV (at 6 percent¹⁶⁵) of the additional benefits of US\$528.7 million and an economic rate of return (EIRR) of 20.7 percent (over a 20-year period and on a total budget of US\$460.2 million), not accounting for environmental externalities. These economic results are very satisfying, given that several other Project benefits (such as better public services for the livestock sector, better governance of natural resources and subsequent conflict mitigation, increased human capital, spillover effects outside the core intervention areas, etc.) could not be quantified due to limited data availability. **Disaggregated per country, the economic results are equally satisfying as all participating countries exhibit EIRR higher than 6 percent, and positive and significant NPVs, as summarized in Table A4.6.**

Table A4.6: Economic results of PRAPS-2

Economic results		Burkina Faso	Chad	Mali	Mauritania	Niger	Senegal	Regional
NPV @ 6%, 20-y	US\$ mn	50.7	191.7	90.3	44.1	72.2	79.5	528.7
EIRR	(%)	18.4%	25.2%	18.8%	17.5%	18.0%	22.3%	20.7%

30. **The overall economic results are robust when testing several sensitivity scenarios, including reduced animal coverage, delays in implementation, cost overruns, etc.** Nevertheless, the interplay between these risk scenarios can reduce the Project’s economic justification.

¹⁶⁵ In line with the *Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects*.



Table A4.7: Sensitivity analysis

	NPV @ 6%, 20-y	EIRR
	(US\$ mn.)	(%)
Baseline scenario	528.7	20.7%
Increased project costs +5%	509.9	19.7%
Increased project costs +10%	491.2	18.8%
Increased project costs +20%	453.7	17.2%
Delayed benefits +1 year	432.1	17.2%
Delayed benefits +2 year	376.8	14.9%
Delayed benefits +3 year	308.0	13.0%
Reduced animal coverage -5%	470.1	19.7%
Reduced animal coverage -10%	425.6	18.7%
Reduced animal coverage -20%	336.7	16.4%

31. The valuation of environmental externalities further enhances the economic justification of PRAPS-2.

As presented in Annex 5 (GHG Accounting), the Project is marginally increasing GHG emissions from livestock production by 0.1 percent (84,502 t CO₂eq per year), but it will sequester 484,330 t CO₂eq per year through sustainable rangelands management. This yearly total environmental benefit of 744,509 t CO₂eq has been included in the economic calculations in a phased manner, assuming that its full realisation will follow the gradual implementation of the Project (i.e. 100 percent of environmental gains will only be achieved in year 7). In line with the World Bank guidelines¹⁶⁶, the GHG emissions results have been valued using the social price of carbon, using the gradually increasing estimates at both low and high ranges. As such, when evaluating these environmental benefits using the social price of carbon estimates, the overall economic results of the Project increase to an NPV of US\$694.9 million and an EIRR of 24.4 percent (assuming the low range pricing – increasing from 41 US\$/tCO₂eq in 2021 to 63 US\$/tCO₂eq in 2040) and to an NPV of US\$860.8 million and an EIRR of 27.8 percent (assuming the high range pricing – increasing from 82 US\$/tCO₂eq in 2021 to 125 US\$/tCO₂eq in 2040).

Table A4.8: Economic results including the valuation of environmental externalities

Economic results		Base Scenario	+ Env. Ext (low)	+ Env. Ext (high)
NPV @ 6%, 20-y	US\$ mn	528.7	694.9	860.8
EIRR	(%)	20.7%	24.4%	27.8%

¹⁶⁶ Based on the World Bank *Guidance note on shadow price of carbon in economic analysis* (Nov 2017).



ANNEX 5: Greenhouse Gas Accounting

Corporate mandate

1. The World Bank has adopted, in its 2012 Environment Strategy, a corporate mandate to conduct GHG emissions accounting for investment lending in relevant sectors. The ex-ante quantification of GHG emissions is an important step in managing and ultimately reducing GHG emissions, and it is becoming a common practice for many international financial institutions.

Methodology

2. To estimate the impact of agricultural investment lending on GHG emissions and carbon sequestration, the World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), developed by FAO in 2010. EX-ACT allows the assessment of a project's net carbon-balance based on Tier 1 emission factors provided by the tool. However, in order to estimate the impact of technical improvements in livestock production, such as the ones proposed in PRAPS-2, Tier 2 emission factors are necessary to take into account improvements in animal herd dynamics (for example fertility and mortality rates), animal weights, milk production and animal feed. Emissions from producing feed -including forages- also need to be accounted. For this reason, the GLEAM-*i*, developed at FAO¹⁶⁷, was used to carry out PRAPS-2 GHG accounting. It allowed to estimate precisely Tier 2 emission factors and emission reductions for cattle, sheep and goats in the 14 (agro)pastoralist systems found in the Project areas¹⁶⁸.

3. GLEAM-*i* is a publicly available and free tool specific to estimating the GHG emissions from different livestock species and production systems from all countries in the world. The livestock species covered in GLEAM-*i* are four ruminant species (cattle, buffalo, sheep and goat); and two monogastric species (chicken and pigs). The production systems embedded in the tool are grassland-based and mixed for ruminants; backyard, broiler and layers for chicken; and backyard, intermediate and industrial for pigs (FAO, 2019;¹⁶⁹ MacLeod et al., 2018¹⁷⁰). The sources of emissions covered by the tool are listed in 19, and the details regarding the background calculations in GLEAM-*i* can be found in the GLEAM manual (FAO, 2018). The Project implementation phase is 5 years of actual implementation and the capitalization phase is assumed to be 15 years.

4. GLEAM-*i* can be coupled with the LSIPT used for the EFA of livestock projects and investments (tool used for the EFA of PRAPS-2). In particular, and with a similar methodology as the one in LSIPT, GLEAM-*i* has an embedded herd dynamic model that estimates animal numbers based on demographic parameters such as age at first parturition, fertility and mortality rates and replacement rates. In addition, GLEAM-*i* estimates feed requirements for each animal species, system and cohort based on their weights, activity, reproduction status and level of production. Direct emissions resulting from the consumption of these feed resources (enteric methane and emissions from manure) are based on their digestibility and nitrogen content. Indirect emissions coming from the production of these feed resources depend on their origin and nature (e.g. pastures, crop residues, grains and their by-products, produced domestically or imported).

5. The method for estimating carbon sequestration in rangelands was based on a case study¹⁷¹ in the Ferlo, a pastoral area located in the North of Senegal, by Assouma et al. (2017). The author measured a sequestration rate of 0.37 tC/ha/year, or 1.36 CO₂eq/ha/year, under current practices. A 6 percent increase

¹⁶⁷ See <http://gleami.org/>

¹⁶⁸ EX-ACT recommends the use of the GLEAM-*i* tool to estimate TIER2 parameters (see the Livestock & Manure module of EX-ACT).

¹⁶⁹ FAO. 2018. Global Livestock Environmental Assessment Model. Revision 5. Food and Agriculture Organization of the United Nations (FAO), Rome.

¹⁷⁰ FAO. 2018. Global Livestock Environmental Assessment Model. Revision 5. Food and Agriculture Organization of the United Nations (FAO), Rome.

¹⁷¹ Assouma, M.H., Serça, D., Guérin, F., Blanfort, V., Lecomte, P., Touré, I., Ickowicz, A., Manlay, R.J., Bernoux, M. and Vayssières, J., 2017. Livestock induces strong spatial heterogeneity of soil CO₂, N₂O and CH₄ emissions within a semi-arid sylvo-pastoral landscape in West Africa. *Journal of Arid Land*, 9(2), pp.210-221.



to this rate was applied to the rangeland area under concerted management in each country. This increase is rather conservative compared to the 25 percent from Chen et al. (2015)¹⁷² or the one from Conant et al. (2017)¹⁷³ for improved grazing management (10 percent) and it results in a sequestration rate in the range of the ones reported for improved grazing management in East Africa by Tessema et al. (2020).¹⁷⁴ The area of rangelands under improved management ranges between 4 percent and 8 percent of total rangeland area at national level¹⁷⁵.

Table A5.1: Sources of emissions covered in GLEAM-i

Sources of emissions	Description	
Feed CO ₂ ¹	field operations	CO ₂ emissions arising from the use of fossil fuels during field operations
	fertilizer production	CO ₂ emissions from the manufacture and transport of synthetic nitrogenous, phosphate and potash fertilizers
	pesticide production	CO ₂ emissions from the manufacture, transport and application of pesticides
	processing and transport	CO ₂ generated during the processing of crops for feed and the transport by land and/or sea
	blending and pelleting	CO ₂ arising from the blending of concentrate feed
Feed LUC ² CO ₂	soybean cultivation	CO ₂ emission due to LUC associated with the expansion of soybean
	palm kernel cake	CO ₂ emission due to LUC associated with the expansion of palm oil plantations
	pasture expansion	CO ₂ emission due to LUC associated with the expansion of pastures
Feed N ₂ O ³	applied and deposited manure	Direct and indirect N ₂ O emissions from manure deposited on the fields and used as organic fertilizer
	fertilizer and crop residues	Direct and indirect N ₂ O emissions from applied synthetic nitrogenous fertilizer and crop residues decomposition
Feed CH ₄ ⁴	Rice production	CH ₄ emissions arising from the cultivation of rice used as feed
Enteric fermentation	CH ₄	CH ₄ emissions caused by enteric fermentation
Manure management	CH ₄	CH ₄ emissions caused by manure management
Manure management	N ₂ O	N ₂ O emissions arising from manure storage and management
Direct energy use	CO ₂	CO ₂ emissions arising from energy use on-farm for ventilation, heating, etc.
Embedded energy use	CO ₂	CO ₂ emissions arising from energy use during the construction of farm buildings and equipment

¹ Carbon dioxide ² Land use change ³ Nitrous oxide ⁴ Methane

6. Data sources. The primary data sources were collected together with the Project preparation team in each country. The same data were used for the EFA (see Annex 4) and for the carbon balance analysis.

¹⁷² Chen, W., Huang, D., Liu, N., Zhang, Y., Badgery, W.B., Wang, X. and Shen, Y., 2015. Improved grazing management may increase soil carbon sequestration in temperate steppe. *Scientific reports*, 5, p.10892.

¹⁷³ Conant, R.T., Cerri, C.E., Osborne, B.B. and Paustian, K., 2017. Grassland management impacts on soil carbon stocks: a new synthesis. *Ecological Applications*, 27(2), pp.662-668.

¹⁷⁴ Tessema, B., Sommer, R., Piikki, K., Söderström, M., Namirembe, S., Notenbaert, A., Tamene, L., Nyawira, S. and Paul, B., 2020. Potential for soil organic carbon sequestration in grasslands in East African countries: A review. *Grassland Science*

¹⁷⁵ It is important to note that sequestration taking in the overall area of rangelands in each country was not included in the carbon balance, and the assessment focused on the area targeted by the project. If this had been done, the balance in baseline and in project would be even more negative.



7. **Activity data.** The same assumptions as for the EFA conducted with LSIPT were used to obtain the parameters for the situation with Project, which are used for activity data:

- a. Livestock numbers of cattle, sheep and goats are expected to increase as a result of improvements in animal health (reduced mortality and increased fertility rates). The analysis is considered separately herds with and without vaccination for PPR and PPCB, using the same numbers as the EFA analysis conducted with LSIPT.
- b. Droughts are expected to occur during the Project lifespan. The droughts occurrence was based on the World Bank study from Haan et al. (2016):¹⁷⁶ *Prospects for Livestock-Based Livelihoods in Africa's Drylands*. The impact of droughts on livestock demographic parameters was based on the same assumptions as the ones used for LSIPT (reduced fertility and increase mortality, reduced animal weights and milk production).
- c. Offtake rates are expected to increase due to an improved access to markets/ enhanced livestock commercialization (same rates as the ones used in the EFA).
- d. Increased offtake rates (but also droughts) compensate partly or entirely the impact of improvements on the number of reproductive animals.
- e. Animal weights (and milk production) are expected to increase, mostly as a result of better animal health. This results in higher production, despite limited or null growth in animal numbers.
- f. The Project will support the improvement in management of rangelands through concerted action and planning (see results framework, PDO indicator 3 target). The area under concerted management are the following: 500,000 ha in Burkina Faso, 2,400,000 ha in Chad, 1,500,000 ha in Mali, 2,000,000 ha in Mauritania, 500,000 ha in Niger, and 240,000 ha in Senegal.
- g. Marginal improvements in feed quality are expected through the production of fodder (cattle) and through the concerted management of rangelands (all species). These improvements were modeled in GLEAM-*i* the following way: for cattle, a 5 percent increase in hay and silage from grass and legumes, a 5 percent increase of fresh mixture of grass and legumes and a 5 percent decrease of crop residues; for small ruminants, a 3 percent increase of fresh mixture of grass and legumes and a 3 percent decrease of leaves (for pastoral) and crop residues (for agro-pastoral).
- h. Emissions from new markets/ infrastructures for live animals built for the Project were very marginal, therefore neglected in the assessment. Constructions are expected to use mostly locally sourced material and existing estimates for emissions from infrastructures in pastoral and agro-pastoral systems in SSA are estimated to account for less than 2 percent of total emissions (FAO, 2013)

8. Details of herd parameters are presented in Table A5.2. The carbon balance is estimated as the difference between the annual average over the 20 years of baseline (without Project) and the annual average over the 20 years with Project.

Results

9. The ex-ante analysis shows a **net negative balance of 399,828 tCO₂-eq/year** in average for the 6 countries. This includes a very marginal increase in emissions from animals and their feed (including forage) by 84,502 tCO₂-eq/year in average (+0.1 percent) and a sequestration of 457,197 tCO₂-eq/year in rangelands (see results in Table A5.3). The almost non change in emissions from animals and their feed (+0.1 percent in annual average) is due to a number of factors: improvements in productivity, impacts of droughts that limit the growth in animal numbers and marginal improvements in the quality of feed that slightly reduce emissions of enteric methane per head. These improvements result in an increase of total protein

¹⁷⁶ de Haan, C. ed., 2016. *Prospects for Livestock-Based Livelihoods in Africa's Drylands*. The World Bank.



production (meat + milk) of 20 percent while emissions per kg of protein (or emission intensities) are reduced by 17 percent.

10. The largest contributors to emissions are cattle, in pastoral and agro-pastoral systems. However, the largest gains in productivity and reduction in emissions intensities are in small ruminants, both in pastoral and agro-pastoral systems. This is partly due to the large animal numbers covered by the Project.



Table A5.2: Herd parameters used in GLEAM-*i* for baseline and Project in the various production systems

	Parameters	Unit	Pastoral							Agropastoral						
			Cattle	Cattle PPCB	Dairy cattle	Sheep	Sheep PPR	Goat	Goat PPR	Cattle	Cattle PPCB	Dairy cattle	Sheep	Sheep PPR	Goat	Goat PPR
BASELINE	Age at the first parturition	months	57	57	55	17	17	17	17	55	55	55	17	17	17	17
	Litter size	#				1.0	1.0	1.2	1.2				1.2	1.2	1.2	1.2
	Parturition interval	day				365	365	365	365				365	365	365	365
	Death rate of adult animals	%	3.96	3.96	5.28	11.9	11.9	11.9	11.9	7.92	7.92	5.28	11.9	11.9	11.9	11.9
	Death rate of young females	%	7.84	7.84	6.72	18.7	18.7	18.7	18.7	7.84	7.84	6.72	22	22	22	22
	Death rate of young males	%	7.84	7.84	6.72	18.7	18.7	18.7	18.7	7.84	7.84	6.72	22	22	22	22
	Fertility rate (Adult Female)	%	0.47	0.48	0.71	0.89	0.89	0.89	0.89	0.53	0.56	0.71	1.08	1.08	1.10	1.10
	Live weight (Adult Females)	kg	217.92	217.92	174.72	27.84	27.84	23.04	23.04	174.72	174.72	174.72	19.2	19.2	16.32	16.32
	Live weight (Adult Males)	kg	285.12	285.12	228.48	33.6	33.6	25.92	25.92	228.48	228.48	228.48	24	24	19.2	19.2
	Milk Yield	kg	320	320	320	90	90	105	105	650	650	650	85	85	85	85
	Number of animals (Adult Females)	#	2172782	6776924	165323	2245494	11079310	1840359	11820414	685045	4992875	152844	481273	6680700	551293	7088443
	Number of animals (Adult Males)	#	45188	142755	10258	177450	874144	178194	1144522	42685	324837	9483	48896	678736	53610	692172
	Replacement rate of adult females	%	9.1	9.1	10.9	10.0	10.0	10.0	10.0	10.9	10.9	10.9	10.9	10.9	13.3	13.3
Weight at birth	kg	24.96	24.96	20.16	2.88	2.88	2.9	2.9	20.2	20.2	20.2	2.4	2.4	1.9	1.9	
PROJECT	Age at the first parturition	months	57	57.0	55.0	17.0	17.0	17.0	17.0	55	55	55	17.0	17.0	17.0	17.0
	Litter size	#				1.0	1.0	1.2	1.2				1.2	1.2	1.2	1.2
	Parturition interval	day				365	365	365	365				365	365	365	365
	Death rate of adult animals	%	3.33	3.7	4.4	10.9	11.2	10.9	11.2	6.67	6.81	4.45	10.9	11.6	10.9	11.2
	Death rate of young females	%	7.24	7.5	6.2	17.4	17.8	17.4	17.8	7.24	7.40	6.21	20.5	21.4	20.5	20.9
	Death rate of young males	%	7.25	7.5	6.2	17.5	17.8	17.5	17.8	7.24	7.40	7.24	20.5	21.5	20.5	20.9
	Fertility rate (Adult Female)	%	0.52	0.5	0.7	1.0	0.9	1.0	0.9	0.57	0.56	0.74	1.2	1.1	1.2	1.1
	Live weight (Adult Females)	kg	242.07	219.8	194.1	30.9	28.7	25.6	23.7	194.08	176.21	194.08	21.3	20.2	17.8	16.8
	Live weight (Adult Males)	kg	316.72	287.5	253.8	37.3	34.6	28.8	26.7	253.80	230.42	253.80	26.7	25.2	20.9	19.8



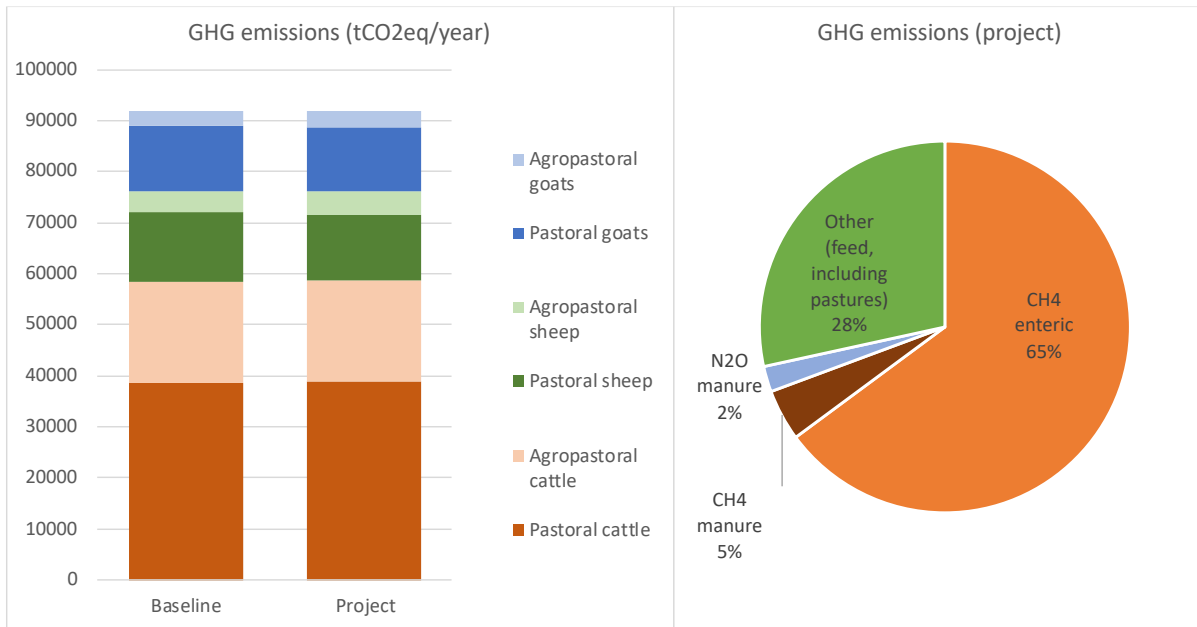
Milk Yield	kg	465	320	359	131	131	152	152	720	650	730	123	123	123	123
Number of animals (Adult Females)	#	2084948	6765039	163069	2197368	11107538	1814089	11870057	654581	5006547	153772	464744	6662960	527003	7041698
Number of animals (Adult Males)	#	39231	117292	9436	119478	555653	113753	898902	25986	321060	8740	32345	625072	35681	643573
Replacement rate of adult females	%	9	9	11	10	10	10	10	11	11	11	11	11	13	13
Weight at birth	kg	26.58	25.2	21.5	3.1	3.0	3.1	3.0	21.47	20.33	21.47	2.6	2.5	2.0	2.0

Table A5.3: Results of GLEAM-i

	Unit	Pastoral cattle	Agropastoral cattle	Pastoral sheep	Agropastoral sheep	Pastoral goats	Agropastoral goats	ALL
Emissions livestock BASELINE	tCO2-eq/year	38,627,158	19,711,774	13,717,488	4,057,498	12,831,019	2,814,990	91,759,927
Emissions livestock PROJECT	tCO2-eq/year	38,947,171	19,705,762	12,964,918	4,649,927	12,503,871	3,072,779	91,844,429
Difference emissions	tCO2-eq/year	320,013	-6,012	-752,570	592,429	-327,147	257,789	84,502
% Difference emissions	%	1%	0%	-5%	15%	-3%	9%	0.1%
Total production BASELINE	t protein/year	135,647	154,417	72,847	36,980	65,734	30,226	495,852
Total production PROJECT	t protein/year	148,574	157,520	102,966	52,040	92,837	41,985	595,923
% Total production	%	10%	2%	41%	41%	41%	39%	20%
Emission intensity BASELINE	kgCO2eq/kg prot	285	128	188	110	195	93	185
Emission intensity PROJECT	kgCO2eq/kg prot	262	125	126	89	135	73	154
% Emission intensity	%	-8%	-2%	-33%	-19%	-31%	-21%	-17%
Sequestration (rangelands management)	tCO2-eq/year							484,330
Total GHG balance for Project								-399,828



Figure A5.1: GHG emissions, results





ANNEX 6: Gender Action Plan

Background and Introduction

1. Gender inequalities have been shown to fuel fragility, underdevelopment, and to a certain degree conflict in the Sahel Region, where persistent gender disparities give women and girls in pastoral communities an even narrower set of opportunities than are available to men. Throughout the region, gender gaps are present in almost all areas, with “unequal access to basic social services, unequal property rights and persistent gender gaps in the labor market and in the public sphere”(OECD). Pastoral communities experience gender gaps in access to income potential, in the capacity to have a voice in the disposition of community resources, and in access to productive resources that would enable better livelihoods.

2. The relationship between gender inequalities and state fragility is mutually reinforcing in the Sahel, where increased insecurity continues to disempower women. Additionally, “gender inequalities within the Sahel pose a very real challenge for adaptation and resilience strategies to climate change” and NRM.¹⁷⁷ Tackling gender gaps and inequalities within pastoral communities will not only contribute to the sustainability of investments and female empowerment but mitigate conflict and instability.

3. A report commissioned by CILSS contains an in-depth analysis of gender gaps common to the region and identifies entry points for the Project to reduce them. The Gender MTR of PRAPS-1 conducted by ILRI provides supplemental information, many lessons, and independent recommendations for significant gender inclusion in a follow-up project (PRAPS-2).

Analysis of Gender Gaps

4. Multiple factors increase the economic and social vulnerability of women in PRAPS-2 countries. Social norms contribute to high levels of domestic violence against women, and women’s human capital is constrained by limited access to training and information. Women cannot easily access productive resources and services to generate additional income, and the burden of their domestic and productive (unpaid) activities also limits their participation in economic activities. For example, in Mauritania, the rate of women's participation in economic activity was 22 percent in 2014. In rural areas, women’s limited employment opportunities and ownership of productive assets causes them to be disproportionately affected by food insecurity. Women's vulnerability within households in Chad is correlated with their lack of financial autonomy. The Survey on Consumption and the Informal Sector in Chad (ECOSIT3) found that only 23 percent of women were responsible for deciding whether to work or not, and only 21 percent were able to decide whether to access financing. In Niger, female-owned businesses have 61 percent lower profits than male-owned businesses nationwide. The gender pay gap is estimated at 29 percent when comparing similar male and female workers. These disparities make it more difficult for women to engage in viable economic activities.

5. The very heavy workload carried by women in pastoral Sahel leaves insufficient time to devote to IGAs. Women and sometimes young girls take on the full range of domestic chores, such as fetching water (women travel long distances to provide water for the family and to water animals), cooking, collecting wood for cooking, and caring for children and relatives. Women also play important unpaid productive roles in livestock production, including watering, milking, feeding, milk processing, and herd maintenance. Very high fertility rates particularly affect opportunities for women to participate in economic activities (not to mention the health impacts). In Senegal, for example, young girls are encouraged to marry early; they abandon the education system and

¹⁷⁷ McOmber, C. (2020).



disappear into their domestic chores, with little time left for productive activities. Women in Mali reportedly spend more time on domestic chores (more than three hours a day, compared to 35 minutes for men) in addition to processing and selling fish, milk, and hides. Women in polygamous marriages and female heads of households also work more.

6. Women—with generally lower social and legal status and incomes—are systematically disadvantaged compared to men in accessing productive resources and services to pursue income-generating avenues in pastoral communities. For example:

- **VS and vaccination:** The inadequacy of VS limits women's access to livestock care and vaccination, which can lead to heavy losses in their herds. Limited access to services is reinforced by a lack of awareness of the value of VS, the tacit prohibition on women consulting VS themselves (these services are generally staffed by men), and limited access to extension advice, animal production technologies (feeding, disease prevention), and meat and dairy processing technologies.
- **Livestock:** Women have limited access to livestock ownership, and men mostly have financial control of the herd. Compared to men, women own fewer animals, particularly cattle, because they do not have the financial resources to acquire them. In Burkina Faso, for instance, animal owners are mainly men—at least 65 percent for all species. Men are considered physically more responsible and capable of managing livestock. Although women often care for the animals on a daily basis (and keep a limited number of livestock with them during transhumance of the rest of the herd), they do not decide whether to sell livestock or what to do with the income generated by the sale. In Chad, the lack of inputs such as fodder and feed supplements during periods of low rainfall and the dry season pushes the poorest women to sell their meager livestock at low prices to survive.
- **Credit:** Credit institutions are scarce, and even if they were not, most women have little access to credit because they lack a regular income and collateral. Women's lack of information on the actual conditions for granting credit is also a problem, and they are additionally stymied by the rigid legal and regulatory framework, illiteracy, and the difficult social environment.
- **Land:** Traditional attitudes and gender discrimination in customary and religious law cause women to access land mainly through male relatives and family, which means that widows are particularly vulnerable to land-grabbing. Customary authorities govern agricultural and pastoral lands, natural resources, and water points. Women have few rights of inheritance or possession in these customary and religious systems.
- **Water:** Women have difficulty accessing water for animals mainly because water points are scarce and often distant. By exacerbating these problems, desertification contributes to women's loss of autonomy.

7. Women engaged in animal husbandry have limited marketing activities and are excluded from managing the income. Social norms prevent women from engaging in the live animal trade. Women are responsible for selling milk, but they derive limited benefits from this activity because of unproductive animal breeds and feeding practices. Money from the sale of the family's animals is unanimously recognized as the husband's prerogative to manage, as he is not only the owner of the animals but the household head.

8. Women suffer from low human capital due to high illiteracy rates and limited access to training. In Mali, only 25 percent of adult women are literate, compared to 43 percent of men, and in Chad the literacy rate for men is double that of women. In Niger, 27.3 percent of men are literate compared to 11 percent of women. The length of schooling is six years for boys and five years for girls. It not easy for women in pastoral areas to participate in training: opportunities are limited, women have little time outside of their expected domestic and productive activities, and women are generally excluded from training that favors men.



9. Outside of training opportunities, women's access to information is limited for other reasons. Social and cultural norms limit women's movements, they cannot easily access services that provide information and advice (extension, animal health services, human health services), and many cannot read (information is not always disseminated in other formats). Women therefore lack critical information on markets, market prices, animal health risks, animal disease management, productivity-enhancing practices for livestock and NRM, processing of animal products, and human health. These gaps place women at a clear disadvantage compared to men in terms of production and marketing.

10. Women's participation in management and leadership structures is also limited. Their participation in institutions supporting pastoralism and livestock is often low or non-existent, reducing their contributions to decision making. Women's lack of capacity (technical and managerial know-how) and the lack of norms and standards can prevent them from actively participating in infrastructure management committees.

11. Violence against women is pervasive. For example, in Chad, 41 percent of women reported being beaten by their husbands. The impact on poor women is particularly severe given their limited access to health care, justice, and social welfare facilities. Widespread sexual violence is exacerbated by conflict and displacement. In Mali, social norms contribute to high levels of domestic violence, with 89 percent of women believing that a man has the right to beat his wife for reasons such as going out without permission, refusing to have sex, and neglecting children. Female genital mutilation affects 94 percent of women. Violence against women is also of concern in Senegal, with up to 60 percent of the country's women suffering from some form of violence (verbal, psychological, or physical). The persistence of forced marriages of underage girls should also be noted. The Project will seek to empower women to change norms related to violence, and Component 4 of PRAPS-2 will address pastoral women's inclusion in civil and social registries to expand the legal and social resources and rights available to them (with significant variation by country).

Addressing Gender Gaps

12. PRAPS-2 will address the following gender gaps:

- **Women's more limited access to economic opportunities.** PRAPS-2 will support the development of IGAs targeting women and youth in particular, with the objective of reducing gender disparities in economic activities. This effort will be implemented through specific targets and quotas to benefit women, extensive communication on women and IGAs, gender-specific training and technical assistance (for market identification, management and finance, access to mobile money, leadership, and so on), and consistent channels of support.
- **Female pastoralists' more limited access to animal health, such as VS and vaccination.** PRAPS-2 will support the improvement of national vaccination coverage and strengthen the capacity of VS. Additionally, the Project will pursue opportunities to reduce gender disparities by increasing the presence of women in VS at all levels, increasing the understanding in ministries and communities of the constraints on women livestock keepers, adopting gender-sensitive communication strategies, and targeting women livestock owners.
- **The gap in participation of women in management and leadership structures.** PRAPS-2 will strengthen the capacity of participating ministries at all levels (national and local), and all infrastructure development will include management committees. These activities will strengthen gender capacity within the ministries through training and hiring of female staff, and at the community level, they will give voice and decision-making power to women in the various committees that will be formed to develop infrastructure and manage natural resources. PRAPS-2 will also finance activities that build women's capacity to play a decision-making role by increasing functional, digital, and financial literacy and financing of IGAs led and



owned by women.

Actions Proposed by the Project

13. Given the gender gaps in access to economic and productive activities, access to animal health products, and representation, the Project proposes to address these gaps through all components, with an emphasis on Component 4 (women's empowerment and youth activity).

14. Robust information campaigns, sensitization, and training will accompany almost all activities to increase inclusion so as to foster better community buy-in (as a whole, but especially from men), and to ensure that representation quotas for women work in their best interest. Targets can be met only through activities that are designed specifically to take gender, especially the constraints on women, into account.

15. The inclusion of women in PRAPS-2 and the efforts made to ensure that the Project helps to reduce gender gaps will build on the experience and lessons from PRAPS-1. Gender mainstreaming under PRAPS-1 was acceptable and intensified in the run-up to the MTR and afterward, as the investigation of gender gaps was requested and then implemented. The report of the PRAPS-1 Gender MTR outlined three specific objectives that were taken into consideration in developing PRAPS-2:

- **Institutionalize gender approaches in PRAPS planning, implementation, and M&E** by improving training for all Project staff, ministries, and implementing partners. This training, undertaken at the beginning of PRAPS-1, should be continuous. Gender messaging should be consistent and reinforced through such events. Gender (and youth) targets should be set for major activities, differentiating between reach (for instance, women accessing animal vaccinations), access to resources and benefits (women controlling income from livestock), and women's empowerment. To achieve these targets, the Project should budget for gender activities up-front, with a minimum threshold for activities with a gender component, and also allocate resource for information dissemination, including gender success stories (at least one per country per agreed period).
- **Strengthen capacity for women and youth in on-farm production, processing, and marketing, for both livestock and non-livestock activities**, by targeting women and youth for IGAs, both individual women and women's groups, including interprofessional (multi-actor) organizations. Collect data on capacity building for women (and youth) and aggregate the data at the regional level (for example, the percentage of women and percentage of youth benefiting from training).
- **Improve women and youth participation in community decision-making (livestock markets, collection centers, management of infrastructure)** by considering women's needs in some of the designs (for instance, separate men's and women's toilets) and setting targets for the percentage of women on the boards of organizations and committees.

16. PRAPS-2 has also taken on board five broad recommendations for gender from PRAPS-1:

- **Recommendation 1: As PRAPS is increasing the visibility of pastoralism in the region, it must increase the visibility of women.** Based on this advice, PRAPS-2 has proposed to dedicate Component 4 mostly to women and has included a regional strategic role for women's empowerment in Component 5.
- **Recommendation 2: Make women part of the solution; empower them to create more viable and resilient communities.** The voice of women and the positive outcomes (both on the ground and strategic) of women's inclusion were evident in PRAPS-1. PRAPS-2 will reinforce these gains by including specific quotas for decision-making roles, targets for training and employment in VS, numbers and additional outreach for veterinary training, and goals for roles, units, and national strategies at the ministerial level.



- **Recommendation 3: Invest in IGAs, but more strategically.** This advice is fully reflected in PRAPS-2, which will accompany the IGAs in Component 4 (and subprojects financed under Component 3) with a wider array of support to ensure organized and sustainable business ventures. The success for women's IGAs is more broadly supported in PRAPS-2, with all countries participating in this phase, with majority targets and within more strategic community networks of pastoralism.
- **Recommendation 4: Continue the work on increasing the access to PPR vaccines for women.** The success and tailoring of this roll-out in PRAPS-1 (home-vaccination in Burkina Faso, free-deworming incentives in Mali, and so on) will be continued and emphasized with efforts to capture the benefits of vaccination campaigns on women's lives and livelihoods in the Sahel.
- **Recommendation 5: Support the gender work from the top and the bottom.** This recommendation is reflected in PRAPS-2 through more formally structured interactions between gender focal points and by planning for Gender staff at the regional level to support and coordinate the regional gender program. High targets and stand-alone indicators have been incorporated into the Results Framework to hold the Project accountable and ensure that gender work becomes a collective responsibility under PRAPS-2. Crucially, this includes both regional and national gender strategies and targets for women's jobs in ministries.

17. Several broad elements will contribute to closing gender gaps and including women in each component of PRAPS-2. They are broadly defined to allow for differences in application across the six countries, which have all defined gender actions and targets under an overarching set of actions.

- **Component 1:** In the animal health component, there will be a concerted effort to increase the presence of female staff at all levels of animal health institutions, including ministries, VS, and institutions supporting pastoralists. Effective means to reach women with vaccination services, demonstrated under PRAPS-1, will be repeated and leveraged through information campaigns designed to inform women who care for or own livestock about the benefits and means to vaccinate their animals. Counting of women beneficiaries of vaccination campaigns will continuously be monitored and strengthened.
- **Component 2:** This component on enhancing SLM and the governance of natural resources will include key work on women's voice and agency within their communities, and committees formed in the context of NRM and pastoral concerns will have targets for women's participation. The achievement of these targets will be supported by efforts to strengthen institutional acceptance, training for participation, training on questions related to management, and close attention to governance and women's inclusion in decision-making.
- **Component 3:** In this component, to improve livestock VCs, the inclusion of women in committees related to infrastructure management and POs will also be reflected in quotas for female presence and participation. As successfully implemented in PRAPS-1, market infrastructure will include consultations to obtain women's input, and infrastructure design and accessibility features that reflect women's requirements (safety, hygiene, mobility, and so on) will be actively promoted.
- **Component 4:** This component on social inclusion and IGAs has specific targets and quotas for providing grants and income to women. Extensive communication campaigns will be supported to reach women, who will receive specific training and technical assistance (for market identification, management and finance, access to mobile money, leadership, and so on), coupled with consistent channels of support. Some specific measures include: (i) diagnostic studies to assess training needs and potential candidates; (ii) field-based coaching and mentoring during training and the development of IGAs; (iii) the delivery of demand-driven technical skills training; (iv) technical assistance to develop innovative training materials;



(v) stipends to participate in training; (vi) grants (for IGAs); and (vii) quality assurance mechanisms and monitoring of training outcomes.

18. At the regional level, activities will first and foremost include the staffing of a regional Gender Coordinator who will assume a central role in PRAPS-2, coordinating the six national gender focal points, monitoring activities across beneficiary countries, and creating a community of practice to exchange experience, approaches, methodologies, issues and possible solutions, and guide and generate lessons. CILSS will continue to commission reporting on the effectiveness and sustainability of the approach to reach disadvantaged women—for example, a study estimating the sustainability and impacts (additional income) of IGAs supported by the Project, and a report on the achievements of PRAPS-2 in the development of IGAs for youth and women from pastoral areas. This work will illustrate the extent to which PRAPS-2 has made it possible to orient actions very specifically toward women and youth, especially those ages 18–24, in pastoral areas.

Indicators to Track Gender Gaps

19. As detailed above, many activities will be tailored to address women’s needs and constraints in PRAPS-2 countries, but they will vary by country and may be difficult to tabulate at a regional level. To better assess the Project’s overall efforts to enhance women’s economic participation and close gender gaps, two separate indicators are proposed, in addition to the ambitious targets set for women’s individual inclusion in specific activities. Thus, the sex-disaggregated indicators for Subcomponents 3.3, 4.1, 4.2, 4.3, and 5.2 will be supplemented by the following indicators:

- **Women’s participation in committees managing community resources.** The target is at least 15 percent of women participating in at least 70 percent of community resource management committees. This target has a baseline of zero, as women’s participation has not been documented previously. This indicator will measure the improvement in inclusion of women in decision-making bodies (committees established through the Project to inform the selection, design, operation, planning, and future management of pastoral infrastructure and land, mainly under Components 2 and 3). The Project will also conduct qualitative surveys of women involved in these committees to obtain feedback for improving the support provided to them.
- **Number of women who participated in specific financial training in the context of VC subprojects and income-generating activities.** This indicator and target highlight the specific accompaniment offered to women in rolling out sustainable, pastoral-focused productive VCs and developing IGAs. It will be tabulated across six countries and defined as the number of women benefitting from enhanced and targeted financial training to ensure greater sustainability in incomes and the accrual of household benefits. This training will also contribute to women’s empowerment by enabling women to make better-informed decisions related to incomes, investments, and spending, which should also contribute to their resilience and that of their communities.

20. Table A6.1 presents the gender tag results chain.



Table A6.1: Gender Tag Results Chain

Gap	Action	Indicator	World Bank Gender Strategy Pillar
<p>Women’s more limited access to economic opportunities</p>	<p>High targets of 30–80 percent for access to activities in Component 3.3 and 60–80 percent for access to activities in Component 4.3, accompanied by an adapted, wide array of information, sensitization, mobility, and outreach activities that are put into place for women in pastoral communities to gain income.</p> <p>Given the importance of financial literacy to manage businesses, an indicator is specifically designed to monitor this aspect of the training received by women.</p> <p>The financial sustainability of these business activities will be planned and monitored as part of the components and tracked by a specific indicator that will measure the consumption of financial training tailored to women’s business needs.</p>	<p>% of women having received adapted financial literacy training (in the context of the developing productive VCs and IGAs); target: at least 80 percent</p> <p># of women beneficiaries of productive subprojects</p> <p># of women beneficiaries of IGAs</p>	<p>Pillar 3: Access to Productive Resources</p>
<p>Gap in participation of women in management and leadership structures</p>	<p>There will be a target for inclusion of women in decision-making bodies (committees established through the Project to inform the selection, design, operation, planning, and future management of pastoral infrastructure and land, mainly under Components 2 and 3.</p>	<p>% of women participating in management committees – target: at least 15 percent (in at least 70 percent of management committees)</p>	<p>Pillar 4: Enhancing Voice and Agency</p>



ANNEX 7: Adaptations to Insecurity in Project Supervision and Implementation

1. **The PRAPS-2 will finance activities covering areas that are in part affected by active conflict and violence.** The security actors are: (i) violent extremist groups affiliated with the Islamic State, Al Qaeda, or Boko Haram; (ii) community self-defense militias; (iii) rebel groups not motivated by extremist ideologies who may resort to violence to gain control of territory; (iv) national security and defense forces operating independently or as part of the G-5 Sahel Joint Force; and (v) international military contingents, notably French troops deployed under Operation Barkhane and UN peacekeepers in Mali (MINUSMA). While the security context is volatile, violent events are concentrated primarily in two hotspots:

- **The Tri-border area between Mali, Burkina Faso, and Niger**—known as Liptako-Gourma or *Zone des Trois Frontières*—is the epicenter of violence in Central Sahel. More than 5,000 people died in 2020 as a result of active conflict, most of them civilians. About 1.6 million people have been forcefully displaced.¹⁷⁸
- **The Lake Chad Basin:** Confrontations between armed forces and Boko Haram fighters, but also inter-communal conflict over scarce resources, have affected 5.5 million people, comprising current internally displaced persons (2.9 million), returning internally displaced persons (1.7 million), and refugees (260,000).¹⁷⁹ Overall fatalities are estimated at 40,000 over the past 10 years.¹⁸⁰

2. **As shown in Figure A7.1, the epicenters of violence in the Sahel coincide with hotspots of food insecurity.** Consequently, Project access to highly vulnerable populations may be reduced, and security risks for potential beneficiaries, assets, and implementing partners operating in the Lake Chad Basin or Liptako Gourma are high. Most of these risks are residual, meaning that they lie outside of the direct control of the Project. More specifically:

- For Project beneficiaries:** Safety and protection risks include loss of life and assets; physical injuries and trauma; forced displacement; abuse by security forces, community militias, or foreign stabilization troops; extortion, assault, theft of assets; and SEA/SH.
- For the Government and implementing partners:** Limited access to subproject sites, as well as safety and protection risks such as kidnapping, extortion, assault, theft of assets, or sexual violence. Failure to deliver on Project activities due to lack of access or temporary suspensions could undermine community support and, to some extent, achievement of the PDO.
- For the World Bank:** Safety risks limit the mobility and direct access to Project sites to verify progress toward the PDO. Operational risks caused by insecurity are high and include temporary or longer-term disruption of activities due to: (i) possible attacks against Project beneficiaries and/or assets; (ii) an overall deterioration of the security context that does not allow the PCUs to operate effectively and monitor activities; and (iii) higher costs of supervision. Furthermore, any violent incidents in Project areas resulting from the implementation of Project activities, and any form of attacks against communities, beneficiaries, or PCU members on Project sites could be a potential reputational risk that could halt Project implementation in the area.

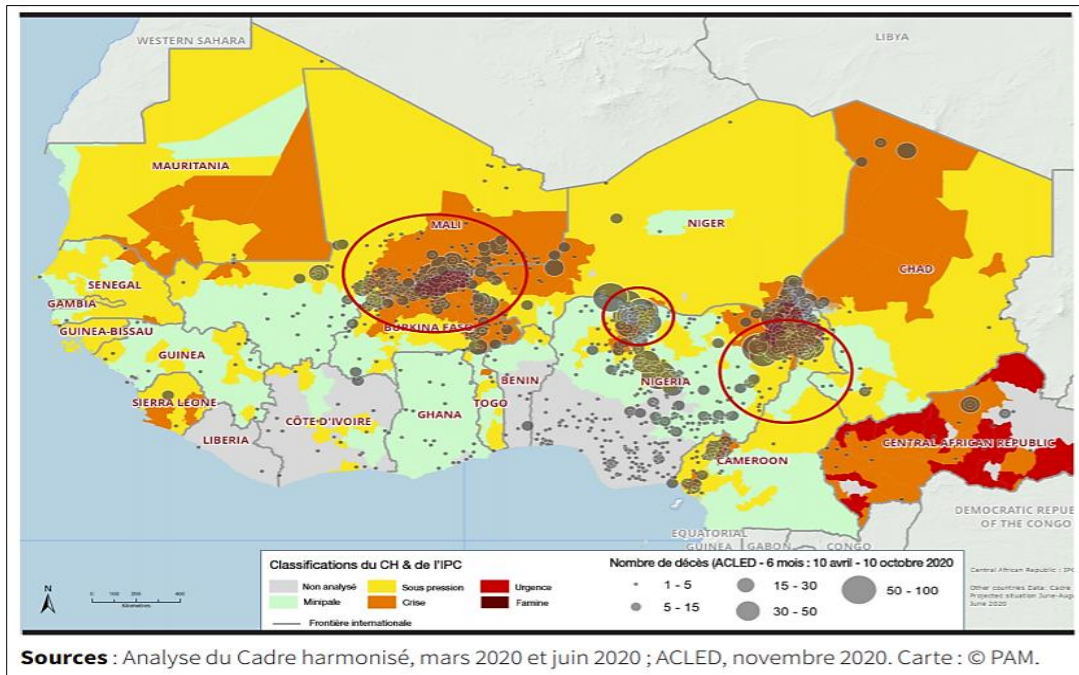
¹⁷⁸ See <https://reliefweb.int/report/burkina-faso/matrice-de-suivi-des-d-placements-dtm-sahel-central-liptako-gourma-tableau-de>.

¹⁷⁹ See https://displacement.iom.int/system/tdf/reports/LCBC_Monthly_Dashboard_January_2021_v2.pdf?file=1&type=node&id=10627.

¹⁸⁰ See <https://www.cfr.org/nigeria/nigeria-security-tracker/p29483>.



Figure A7.1: Violence and food insecurity in West Africa (OECD)¹⁸¹



3. **Risk mitigation measures during implementation.** The following mitigation measures will be used to ensure PRAPS-2 implementation in a difficult FCV context:

- Collaboration within the World Bank:** The Project will ensure regular check-ins and information sharing with Projects that implement activities in the same area, to ensure that everyone has up-to-date information on security constraints in the area and to learn from successful Project implementation practices.
- Collaboration with partners:** Even if the Project may not be operating in all high-threat environments in the Sahel, effective partnerships with humanitarian, development and security stakeholders, as well as real-time security analysis, will be crucial for effective implementation. The Project will develop good connections on the ground and strong partnerships and collaboration with humanitarian and development actors, as well as UN agencies. This will allow the Project to assess quickly where and if the Project can be implemented, by carefully considering the volatile security situation to help manage the deployment of Project activities, but also to develop operational access strategies based on the right combination of acceptance, protection, and deterrence. Main partners and key stakeholders will be: (i) state authorities; (ii) local authorities as an entry point to beneficiaries and to facilitate ownership of the Project at the local level; (iii) defense and security forces—subject to due diligence and only if necessary; (iv) within the UN system: IOM, UNOCHA, UNHCR, UNHAS, UNICEF, WFP, and UNDSS for information sharing, logistics, securing on-site missions; and (v) NGOs for information sharing, logistics, and possible implementation of certain activities.
- Conflict monitoring during implementation:** When operating in violence hotspots, PCUs will monitor the violence/security situation (conflict scans) and develop close relationships with partners on the ground

¹⁸¹ See https://www.oecd.org/fr/csao/cartes/Food-nutrition-crisis-2020-Sahel-West-Africa_FR.pdf.



for information sharing and coordination on security-related issues. Table A7.1 presents a questionnaire to factor security issues into different aspects of implementation.

- d. **Continuous “do no harm” approach:** Given the challenging areas in which the Project will operate, the Project will be careful not to inadvertently exacerbate tensions. To this end, the Project will continue to engage inclusively with local powerbrokers, existing institutions, including informal ones, and communities. The ability of the Project to safely operate in sensitive areas will depend on the reputation and trust it will build on the ground and the local knowledge of Project teams, as well as the adequate implementation and monitoring of mitigation measures.
- e. **PCU responsibilities and third-party monitoring (TPM):** The PCUs will establish mechanisms for identifying risks of violence at various stage of Project implementation. If necessary, and in coordination with the World Bank, each national PCU may recruit a TPM agency to support monitoring of the implementation of Project activities, including safeguards. The TPM agency shall have a dual accountability line, reporting information and findings both to the Government as well as the World Bank.
- f. **Remote supervision by the World Bank:** When insecurity renders field supervisions impossible, the World Bank team will use the GEMS method and integrate its remote supervision capacities in the M&E system of the Project. Building on PRAPS-1 experience, PRAPS-2 will use KBT to conduct surveys in hard-to-reach areas and will use GIS for the works that have been financed by the Project. Digitizing the M&E system will complement the physical supervision of Project activities. If necessary, the World Bank will explore the use of TPM providers for its own supervision.
- g. **Corporate security:** The World Bank Security Specialists for PRAPS-2, as well as the Regional Security Specialist, will be included as Project team members and will be consulted for each field mission. All team members will take the SSAFE (Safe and Secure Approaches in Field Environments) and other mission security training. Periodic analysis regarding the security situation will be provided by Corporate Security to the team, especially after major events.

Table A7.1: Factoring security issues into project activities

Topic	Questions
1. Overall security due diligence	<ul style="list-style-type: none"> • What are the types, frequency, intensity, and spatial distribution of incidents of violence? • What are the probability and potential impact of violent incidents involving beneficiaries, Project assets, contractors, or PCU personnel? • What organizations monitor violence and insecurity? Are data public, accessible, and accurate? Can this data be used to establish an overall baseline of security levels?
2. ESF instruments and risk management measures	<ul style="list-style-type: none"> • Have the ESMF, ESCP, and other instruments/assessments covered threats to human security? Are the risk mitigation/management measures robust? • What are the risks associated with the potential presence of security forces on/in the vicinity of Project sites? Is this issue covered in the ESCP? • How will GM be adapted to respond to security risks? • How will security incidents be reported to the World Bank? Is there a response escalation plan if the situation deteriorates?
3. Project supervision (World Bank)	<ul style="list-style-type: none"> • How can smart implementation support be used to help monitor security risks: GEMS, iterative beneficiary monitoring (IBM), remote sensing, etc.? • Since reputational risks will be significant, how will security feature in any Project community outreach strategy? • What UN agencies, bilateral or multilateral partners, NGOs, or faith-based groups can serve as a potential third-party monitor (TPM) for the World Bank? How much would that cost? • How would potential security incidents be handled? At what point would Project activities be suspended temporarily or for a longer period?



Topic	Questions
4. Project implementation (Borrowers)	<ul style="list-style-type: none">• Do the PCUs have a track record of operating effectively in insecure environments?• Do PCUs have focal points in defense or security ministries for liaison in case of emergencies or simply to share data?• What UN Protection Cluster agencies are present in the field? What protocols for data sharing related to security incidents, emergency procedures, and contingency plans can be set up?• What UN agencies, bilateral or multilateral partners, NGOs, or faith-based groups could help build the capacity of PCUs to monitor and response to human security risks?• What UN agencies, bilateral or multilateral partners, NGOs, or faith-based groups could serve as (i) TPM providers to the governments; and/or (ii) third-party execution (TPE) agents if PCU staff cannot access insecure areas?• Do contractors have clear Duty of Care language in their ToRs and contracts?• Do contractors have security protocols to enable their staff to travel frequently in insecure environments? Do they have contingency plans or escalation models? Are contractors insured against security incidents?



ANNEX 8: World Bank Group Regional Integration Program Adjustment in Response to COVID-19

(February 2021)

IMPACT OF THE COVID-19 PANDEMIC ON AFRICA AND CONTINENTAL RESPONSE

1. **According to the Africa Centers for Disease Control (CDC), as of January 29, 2021, there have been over 3.5 million confirmed cases and 88,900 deaths caused by COVID-19 across Africa.** While the first wave of infection was relatively milder compared to other continents, many African countries have been badly hit by the ongoing second wave. Great uncertainty continues surrounding the exact scale and trajectory of the pandemic in the region due to poor mortality data in several countries of the continent. Beyond the health toll, the pandemic has taken a large toll on economic activity in SSA, putting a decade of hard-won economic progress at risk. Economic output is estimated to have contracted by 3.7 percent in 2020 in the SSA region. The recovery is expected to be weak, with growth reaching only 3 percent in 2021, according to the World Bank Group (WBG) latest projections. Moreover, COVID-19 is likely to weigh on growth for a long period, as the rollout of vaccines is expected to lag that of advanced economies.

2. **Regional economic communities contributed to the coordinated response to the ongoing health, economic and social shock.** For example, the ECOWAS created a Committee of Experts that made recommendations on how to ease Transport, Logistics, Free Movement and Trade in the context of the COVID-19 pandemic. The Common Market for Eastern and Southern Africa (COMESA) developed an online portal for member states to exchange information on availability of essential products in the region. For the currency unions, the convergence criteria on the deficit level has been temporarily suspended within the WAEMU and Central African Economic and Monetary Community (CEMAC). Both the Central Bank of West African States (BCEAO) and The Bank of Central African States (BEAC) have taken actions to maintain access to liquidity within the banking and financial sectors. At the continental level, the African Union (AU) and its bodies responded swiftly to complement and coordinate the measures taken at the national level to cope with the health, economic and social shocks created by the COVID-19 pandemic. The Africa Joint Continental Strategy for COVID-19 has been adopted, which notably established an AU COVID-19 Response Fund to assist member states in funding an effective response. Coordination and cooperation among African countries has also been facilitated by the Africa Centers for Disease Control and Prevention (CDC), which benefited from WBG support.

3. **The Regional Disease Surveillance Systems Enhancement Program (REDISSE) is a regional program that has been instrumental in providing emergency support to member countries.** More than US\$200 million of IDA resources from REDISSE Projects have been mobilized so far to support immediate COVID-19 related activities in 12 member countries. In countries like Chad, Liberia and Angola, the CERC were also activated. The REDISSE support builds on the lessons from the Ebola crisis to address the immediate health-related response to the pandemic on the region.

SUPPORT FOR RESPONDING TO THE CRISIS

4. The Regional Integration Strategy Update is well aligned with the pillars of the COVID-19 Response Framework Approach Paper - *“Saving Lives, Scaling-up Impact and Getting Back on Track”*. Under its implementation, the regional envelope under IDA19 will be mobilized to enhance a resilient recovery and contribute to reigniting growth and job creation through market integration and economic transformation:



- **Saving Lives:** Since the 2014 West Africa Ebola outbreak, the Regional Integration program has committed US\$1.5 billion in disease surveillance operations covering over 20 SSA countries. Plans are in place to work with country clients to extend the REDISSE Program to cover several additional countries in the continent.
 - **Protecting Livelihoods:** Maintaining free flows of food and medication, as well as protecting livelihoods, particularly in landlocked regions and countries, is critically important. Enhanced engagement in priority areas afflicted by FCV, including the Sahel, Lake Chad and the Horn of Africa, will also contribute to protecting livelihoods under the *Resilience* pillar of the Regional I Strategy Update in line with IDA19 commitments. Multisectoral and integrated territorial approaches will notably support the rehabilitation of livelihoods, such as pastoral activities in the Sahel with the Regional Sahel Pastoralism Support Project (PRAPS), small-scale trade in borderlands in the Horn which is particularly beneficial to women, and small-scale irrigation work in the Lake Chad region with the Lake Chad Region Project (PROLAC).
 - **Ensuring private sector growth and job creation:** The first and second pillars of the Regional Integration Strategy Update are highly complementary since they focus on developing *Connectivity infrastructure* and enhancing *Trade and market integration*. Under IDA19, enhanced support will be provided to support economic transformation, notably through the development of regional markets and regional VCs, through regional power pools, digital access and trade facilitation along renovated economic corridors, such as the Horn of Africa Gateway Development Project. It is currently exploring how regional synergies and economies of scale could be exploited further to support Small and Medium Enterprise (SME) financing and private sector financing more broadly, in close coordination with IFC.
5. **Building back better:** The regional integration portfolio will contribute to building back better notably by supporting *Human Capital Development* under the third pillar of the RI Strategy Update. It will support women's empowerment with the extension of the Sahel Women's Empowerment and Demographic Dividend (SWEDD) Project and support to Centers of Excellence for Development Impact.



ANNEX 9: Technical Team

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	Lilian Puech	Senior Livestock Specialist
	Patricia Oonagh Van de Velde	Gender Specialist, consultant
FAO Investment Center	Marc Moens	Senior Livestock Investment Officer
	Julien Vallet	Economist, FAO Technical Mission Leader
	Gabriel Boc	Economist
	Bernard Bonnet	Expert on Pastoralism, IRAM
	Bertrand Guibert	Expert on Pastoralism, IRAM
	Niels Morel	Senior Agronomist and Institutions Specialist
	Clarisse Ingabire	Animal Production Officer
	Anne Mottet	Livestock Development Officer



ANNEX 10: Project Map

