

Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD1752

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON PROPOSED GRANTS

IN THE AMOUNTS OF SDR7.1 MILLION (US\$10 MILLION EQUIVALENT) TO THE REPUBLIC OF GUINEA, SDR7.1 MILLION (US\$10 MILLION EQUIVALENT) TO THE REPUBLIC OF SIERRA LEONE. AND SDR14.2 MILLION (US\$20 MILLION EQUIVALENT) TO THE ECONOMIC COMMUNITY OF WEST AFRICAN STATES

AND PROPOSED CREDITS

IN THE AMOUNTS OF SDR14.2 MILLION (US\$10 MILLION EQUIVALENT) TO THE REPUBLIC OF GUINEA, EURO26.4 MILLION (US\$30 MILLION EQUIVALENT) TO THE REPUBLIC OF SIERRA LEONE, AND SDR14.2 MILLION (US\$20 MILLION EQUIVALENT) TO THE REPUBLIC OF SENEGAL

AND A MULTI-DONOR TRUST FUND FROM DEPARTMENT OF FOREIGN AFFAIRS, TRADE AND DEVELOPMENT IN CANADA IN THE AMOUNT OF US\$4.06 MILLION FOR THE ECONOMIC COMMUNITY OF WEST AFRICAN STATES

FOR A
REGIONAL DISEASE SURVEILLANCE SYSTEMS ENHANCEMENT PROGRAM IN WEST AFRICA (FIRST PHASE IN A SERIES OF PROJECTS)

June 6, 2016

Health, Nutrition, and Population Global Practice (GHNDR)
Food and Agriculture Global Practice (GFADR)
Africa Region

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

CURRENCY EQUIVALENTS
(Exchange Rate Effective April 30, 2016)

Currency Unit	=	FCFA, GNF, SLL
576 (FCFA0, 7,555 (GNF); 3,948.04 (SLL)	=	US\$1
US\$	=	SDR 1 = 0.70555199
US\$	=	EUR 1 = 0.87738539

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AAT	African Animal Trypanosomiasis
ACE	African Center of Excellence
ACGF	Africa Catalytic Growth Fund
AfDB	African Development Bank
AFENET	African Field Epidemiology Network
AHI	Avian and Human Influenza
AI	Avian Influenza
AMR	Antimicrobial Resistance
ASF	African Swine Fever
ASLM	<i>Société africaine pour la médecine de laboratoire</i> (African Society for Laboratory Medicine)
ASSL	Audit Service Sierra Leone
AU	African Union
AU-IBAR	Inter-African Bureau for Animal Resources of the African Union
AWP	Annual Work Plan
BMGF	Bill and Melinda Gates Foundation
BP	Bank Procedure
CBA	Cost benefit Analysis
CBPP	Contagious Bovine pleuropneumonia
CCISD	Centre for International Cooperation in Health and Development
CDC	Center for Disease Control and Prevention
CDs	Communicable Diseases
CERC	Contingent Emergency Response Component
CHAMPS	Child Health and Mortality Prevention Surveillance
CIDA	Canadian International Development Agency
CORDS	Connecting Organizations for Regional Disease Surveillance
CPS	Country Partnership Strategy
CRSA	<i>Centre Régional de Santé Animale</i> (Regional Animal Health Center)
CSO	Civil Society Organization
DAGE	Directorate for Financial Management of the Ministry of Health
DGS	<i>Direction Générale de la Santé</i>
DHS	Demographic and Health Survey
DON	Disease Outbreak Notification

DP	Development Partner
DSA	Daily Subsistence Allowance
DSR	Disease Surveillance and Response
EA	Environmental Assessment
EAC	East Africa Community
EAPHLN	East Africa Public Health and Laboratory Networking Project
ECOWAS	Economic Community of West African States
ECOWAS-RAHC	Regional Animal Health Center of the Economic Community of West African States
ECTAD	FAO Emergency Centre for Transboundary Animal Diseases
EERP	Ebola Emergency Response Project
EIDS	Emerging Infectious Diseases
EISMV	(<i>École Inter-États des Sciences et Médecine Vétérinaires de Dakar</i>) Dakar Inter-State School of Sciences and Veterinary Medicine
EOC	Emergency Operations Center
EPT	Emerging Pandemic Threat
EPT-2	Emerging Pandemic Threats 2
EROM	Emergency Response Operating Manual
ESMF	Environment and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Epidemiology Surveillance System
ESSAF	Environmental and Social Screening and Assessment Framework
EVD	Ebola Virus Disease
FAO	Food and Agriculture Organization of the United Nations
FCFA	<i>Franc de la Communauté Financière Africaine</i>
FELTP	Field Epidemiology and Laboratory Training Program
FETP	Field Epidemiology Training Program
FMD	Foot and Mouth Disease
FY	Fiscal Year
GAC	Governance and Anti-Corruption
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GF-TAD	FAO/OIE Global Framework for the Progressive Control of Transboundary Animal Diseases
GGE	Gross Government Expenditure
GHSA	Global Health Security Agenda
GIS	Geographic Information System
GNF	Guinean Francs
GPAI	Global Program for Avian Influenza Control and Human Pandemic Preparedness and Response
GPN	General Procurement Notice
GRM	Grievance Redress Mechanism
GRS	Grievance Redress System
H5N1	Avian Influenza Strain H5N1
HCWMP	Healthcare Waste Management Plan
HIS	Health Information System

HMIS	Health Management Information Systems
HNFP	Health and Nutrition Financing Project
HPAI	Highly Pathogenic Avian Influenza
HRH	Human Resources for Health
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
ICT	Information and Communication Technology
IDA	International Development Agency
IDSR	International Disease Surveillance and Response
IEG	Independent Evaluation Group
IFC	International Financial Corporation
IFMIS	Internal Financial Management Information System
IHPAU	Integrated Health Project Administration Unit
IHR	International Health Regulations
ILRI	International Livestock Research Institute
IMC	International Medical Corporation
INAP	Integrated National Action Plan
IPC	Infection Prevention and Control
IPF	Investment Project Financing
IPVMP	Integrated Pest and Vector Management Plan
IRCM	Integrated Regional Coordination Mechanisms for the Control of TADs and Zoonoses
ISR	Implementation Status Report
ISRA	<i>Institut Sénégalais de Recherches Agricoles</i> (Senegalese Institute of Agricultural Research)
JEE	Joint External Evaluation
JICA	Japan International Cooperation Agency
LSU	Livestock Unit
M&E	Monitoring and Evaluation
MAER	Ministry of Agriculture and Rural Equipment
MAFFS	Ministry of Agriculture Forestry and Food Security
MCMC	Markov Chain Monte Carlo
MDBS	Mekong Basin Disease Surveillance
MDTF	Multi-Donor Trust Fund
MECIDS	Middle East Consortium for Infectious Disease Surveillance
MEDD	Ministry of Environment and Sustainable Development
MEPA	Ministry of Livestock and Animal Production
MERS	Middle East Respiratory Syndrome
MERS-CoV	Middle East Respiratory Syndrome Coronavirus
MITS	Minimally Invasive Autopsy Tissue Sample
MOA	Ministry of Agriculture
MOH	Ministry of Health
MOHS	Ministry of Health and Sanitation (Sierra Leone)
MOHSA	Ministry of Health and Social Action
MoU	Memorandum of Understanding
MRRT	Multidisciplinary Rapid Response Team

MRU	Mano River Union
MSAS	Ministry of Health and Social Action
MWMP	Medical Waste Management Plan
NCB	National Competitive Bidding
NCDC	Nigeria Centre for Disease Control
NGO	Non-Governmental Organization
N-PCU	National Project Coordination Unit
NSC	National Steering Committee
NTD	Neglected Tropical Disease
OH	One Health
OIE	World Organization for Animal Health
OP	Operations Policy
PACE	Pan-African Program for the Control of Epizootics
PATH	Program for Appropriate Technology in Health
PASSP	Primary Health Services Improvement Project in Guinea
PCU	Project Coordination Unit
PDO	Project Development Objective
PEF	Pandemic Emergency Facility
PHEIC	Public Health Emergency of International Concern
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PPR	<i>Peste des Petits Ruminants</i> (Small Ruminants' Plague)
PRAPS	Regional Sahel Pastoral Support Project
PVS	Performance of Veterinary Services
RAP	Resettlement Action Plan
RCDC	Regional Center for Disease Control and Prevention (of ECOWAS)
RDSR	Regional Disease Surveillance and Response
REDISSE	Regional Disease Surveillance Systems Enhancement Project
REOI	Request for Expression of Interest
RESEPI	Regional Network of National Epidemio surveillance Systems for HPAI and other Priority Animal Diseases in West Africa
RESOLAB	Veterinary Laboratory Network for Avian Influenza and other Transboundary Animal Diseases in West Africa
RF	Results Framework
RHAC	Recovery Health Access Center
RIAS	Regional Integration Assistance Strategy
R-PCU	REDISSE Project Coordination Unit
RPF	Resettlement Policy Framework
R-PIU	Regional Project Implementation Unit
RRT	Rapid Response Team
RSC	Regional Steering Committee
RVF	Rift Valley Fever
SACIDS	South African Center for Infectious Disease Surveillance
SARS	Severe Acute Respiratory Syndrome
SDGs	Sustainable Development Goals
SESF	Social and Environment Focal Point

SLL	Sierra Leonean Leones
SMP	Social Management Plan
SOP	Series of Projects
SPN	Specific Procurement Notice
SWEDD	Sahel Women Economic Empowerment and Demographic Dividend project
SWOT	Strengths, Weaknesses, Opportunities and Threat
TAD	Transboundary Animal Disease
TB	Tuberculosis
ToR	Terms of Reference
UHC	Universal Health Coverage
UN	United Nations
UNDB	United Nations Development Business
UNDG	United Nations Development Group
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
US	United States
US CDC	United States Centers for Disease Control and Prevention
USAID	United States Agency for International Development
V-FETP	Veterinarian Field Epidemiology Training Program
WAEMU	West African Economic and Monetary Union
WAHO	West Africa Health Organization
WANIDS	West African Network of Infectious Diseases Surveillance
WARDS	West Africa Regional Disease Surveillance Project
WB	World Bank
WHO	World Health Organization
WHO/IST/WA	World Health Organization – Inter-Country Support Team for West-Africa
WHO-AFRO	World Health Organization – Africa Region
WMP	Waste Management Plan

Regional Vice President:	Makhtar Diop
Country Director:	Rachid Benmessaoud
Senior Global Practice Directors:	Timothy Grant Evans/Juergen Voegele
Practice Managers:	Trina S. Haque/Simeon Kacou Ehui
Task Team Leaders:	John Paul Clark/Hadia Nazem Samaha/Nicaise Bleoue Ehoue

REGIONAL DISEASE SURVEILLANCE SYSTEMS ENHANCEMENT PROJECT IN WEST AFRICA

Contents

I.	STRATEGIC CONTEXT.....	1
A.	Regional Context	1
B.	Sectoral and Institutional Context.....	5
C.	Higher Level Objectives to which the Project Contributes	10
II.	REDISSE PROGRAMATIC APPROACH.....	12
III.	PROJECT DEVELOPMENT OBJECTIVES.....	13
A.	Project Development Objectives (PDO).....	13
B.	Project Beneficiaries	13
C.	PDO Level Results Indicators.....	13
IV.	PROJECT DESCRIPTION.....	14
A.	Project Components	14
B.	Project Financing	21
C.	Series of Project Objective and Phases.....	21
D.	Lessons Learned and Reflected in the Project Design.....	21
V.	IMPLEMENTATION.....	23
A.	Institutional and Implementation Arrangements	23
B.	Results Monitoring and Evaluation	26
C.	Sustainability.....	27
VI.	KEY RISKS	29
A.	Risk Ratings Summary Table	29
B.	Overall Risk Explanation.....	29
VII.	APPRAISAL SUMMARY	29
A.	Economic and Financial Analysis.....	29
B.	Technical.....	33
C.	Financial Management.....	34
D.	Procurement	35
E.	Social (including Safeguards).....	36
F.	Environment (including Safeguards).....	36
G.	Public Consultation and Participation and Citizen Engagement	37

H. Implementation Arrangement for Social and Environmental (including Safeguards)	37
I. World Bank Grievance Redress	38
Annex 1: Results Framework and Monitoring.....	39
Annex 2: Project Description.....	57
Annex 3: Implementation Arrangements.....	86
Annex 4: Implementation Support Plan.....	131
Annex 5A: Economic and Financial Analysis	134
Annex 5B: References	152
Annex 5C: Human outbreaks by disease and country in West Africa	154
Annex 5D: Expected Rate of Return on Investments in Prevention.....	155
Annex 6: Systematic Operations Risk-Rating Tool (Sort)	156
Annex 7: Alignment with Other World Bank-Supported and Other Partners Projects	161
Annex 8: Enhanced Project Accountability Framework	172

TABLES:

Table 1. Human Development index and selected components countries targeted by REDISSE I2	
Table 2. Poverty headcount Rate at 1.90 dollar per day (2011 PPP).....	4
Table 3. Key health financing indicators 2012 in five countries	5
Table 4. State of Play of PVS Pathway Implementation in the 5 Countries under Consideration .	8
Table 5: Funding allocation by Sub-Component, Component 1	62
Table 6: Funding allocation by Sub-Component, Component 2	65
Table 7: Funding allocation by Sub-Component, Component 3	68
Table 8: Funding allocation by Sub-Component, Component 4	71
Table 9: Possible progressive approach towards the implementation of OH at the national level	73
Table 10: Funding allocation by Sub-Component, Component 5	76
Table 11: IDA budget breakdown per country	76
Table 12: Proposed budget breakdown per component.....	77
Table 13: Summary of findings from literature review on evidence of value and impact of regional networking in disease surveillance and response	82
Table 14: Accounting Arrangements	95
Table 15: Designated and Project Bank Accounts.....	97
Table 16: Financial Management Action Plan.....	103
Table 17: Thresholds*, Procurement Methods, and Prior Review	112
Table 18: Procurement Risk Assessment and Mitigation Action Plan.....	117
Table 19: Support in implementation during project period.....	132
Table 20: Annual probabilities of outbreak of each category of disease	139
Table 21: Estimated costs to bring the surveillance and response systems up to OIE/WHO standards - West Africa countries (US\$)	144
Table 22: Expected Economic Impacts - West Africa, 50 years, 100% preventive effort,	148

Table 23: Annual Benefit-Cost Ratio, not cumulative - West Africa, 5 years, 100% preventive effort, Annual US\$.....	148
Table 24: Estimated Impacts in terms of LSU losses avoided, West Africa	151

FIGURES:

<i>Figure 1: Linkages between communities' action and regional surveillance and response.....</i>	77
<i>Figure 2: ECOWAS/WAHO Regional Institutional Arrangements</i>	104
<i>Figure 3: Guinea Institutional Arrangements</i>	89
<i>Figure 4: Senegal Institutional Arrangements</i>	89
<i>Figure 5: Senegal Flow of Funds</i>	91
<i>Figure 6: Sierra Leone Institutional Arrangements</i>	92
<i>Figure 7: Funds Flow Diagram.....</i>	97
<i>Figure 8: Early Control of zoonotic diseases is cost-effective and prevents human diseases ...</i>	137
<i>Figure 9: Broad Channels of Short-Term Economic Impact.....</i>	142
<i>Figure 10: Distribution of Expected Number of Outbreaks in 50 years, West Africa.....</i>	146
<i>Figure 11: Distribution of Expected Economic Losses Due to Outbreaks in 50 Years, West Africa</i>	147
<i>Figure 12: Return on Investment for REDISSE.....</i>	149

PAD DATA SHEET

Africa

Regional Disease Surveillance Systems Enhancement (REDISSE) (P154807)

PROJECT APPRAISAL DOCUMENT

AFRICA

0000009322

Report No.: PAD1752

Basic Information			
Project ID P154807	EA Category B - Partial Assessment	Team Leader(s) John Paul Clark, Bleoue Nicaise Ehoue, Hadia Nazem Samaha	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects [X]		
Project Implementation Start Date 27-Jun-2016	Project Implementation End Date 31-Jan-2023		
Expected Effectiveness Date 30-Nov-2016 (Senegal and Sierra Leone) 30-Oct-2016 (Guinea)	Expected Closing Date 31-Jan-2023		
Joint IFC No			
Practice Manager/Manager Trina S. Haque	Senior Global Practice Director Timothy Grant Evans	Country Director Rachid Benmessaoud	Regional Vice President Makhtar Diop
Borrower:			
Republic of Sierra Leone Contact: Mr. Momodu L. Kargbo Telephone No.: 232 22 222 211		Title: Minister, Ministry of Economy and Finance Email: acole@mofed.gov.sl	
Republic of Senegal Contact: Mr. Maye Diuof Telephone No.: 221 33 823 70 92		Title: Chargé de Programme Email: mayediouf@hotmail.com	
Republic of Guinea			

Contact: Madame Malado Kaba Telephone No.: 244 43108230	Title: Minister, Ministry of Economy and Finance Email: sp.srp@sotelgui.net
--	---

Responsible Agency: WAHO

Contact: Dr Xavier Crespin Telephone No.: (226) 20 97 57 72	Title: Director General Email: wahooas@wahooas.org
--	---

Project Financing Data(in USD Million)

<input type="checkbox"/> Loan	<input checked="" type="checkbox"/> IDA Grant	<input type="checkbox"/> Guarantee	
<input checked="" type="checkbox"/> Credit	<input checked="" type="checkbox"/> Grant	<input type="checkbox"/> Other	
Total Project Cost:	114.06	Total Bank Financing:	110.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	70.00
IDA Grant	40.00
CANADA Canadian International Development Agency (CIDA)	4.06
Total	114.06

Expected Disbursements (in USD Million)

Fiscal Year	2017	2018	2019	2020	2021	2022	2023	
Annual	8.00	15.00	20.00	20.00	22.00	20.00	5.00	
Cumulative	8.00	23.00	43.00	63.00	85.00	105.00	110.00	

Institutional Data

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

Agriculture

Cross Cutting Topics

- Climate Change
- Fragile, Conflict & Violence
- Gender
- Jobs
- Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Health and other social services	Health	50	10	
Health and other social services	Other social services	30		
Agriculture, fishing, and forestry	Animal production	20	10	
Total		100		
I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.				
Themes				
Theme (Maximum 5 and total % must equal 100)				
Major theme	Theme	%		
Human development	Other communicable diseases	40		
Human development	Health system performance	40		
Rural development	Rural services and infrastructure	15		
Rural development	Rural policies and institutions	5		
Total		100		
Proposed Development Objective(s)				
The objectives of the Project are: (i) to strengthen national and regional cross-sectoral capacity for collaborative disease surveillance and epidemic preparedness in West Africa; and (ii) in the event of an eligible crisis or emergency, to provide immediate and effective response to said eligible crisis or emergency.				
Components				
Component Name	Cost (USD Millions)			
Component 1: Surveillance and Information Systems	27.91			
Component 2: Strengthening of Laboratory Capacity	17.03			
Component 3: Preparedness and Emergency Response	25.96			
Component 4: Human Resource Management for Effective Disease Surveillance and Epidemic Preparedness.	14.10			
Component 5: Institutional Capacity Building, Project Management, Coordination, and Advocacy	29.06			
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	Substantial		
5. Institutional Capacity for Implementation and Sustainability	High		
6. Fiduciary	Substantial		
7. Environment and Social	Substantial		
8. Stakeholders	Substantial		
9. Other			
OVERALL	Substantial		
Compliance			
Policy			
Does the project depart from the CAS in content or in other significant respects?	Yes [] No [X]		
Does the project require any waivers of Bank policies?	Yes [] No [X]		
Have these been approved by Bank management?	Yes [] No []		
Is approval for any policy waiver sought from the Board?	Yes [] No [X]		
Does the project meet the Regional criteria for readiness for implementation?	Yes [X] No []		
Safeguard Policies Triggered by the Project	Yes	No	
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04		X	
Forests OP/BP 4.36		X	
Pest Management OP 4.09	X		
Physical Cultural Resources OP/BP 4.11		X	
Indigenous Peoples OP/BP 4.10		X	
Involuntary Resettlement OP/BP 4.12		X	
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50		X	
Projects in Disputed Areas OP/BP 7.60		X	
Legal Covenants			
Name	Recurrent	Due Date	Frequency
Sierra Leone : Inter-Ministerial Committee		28-Feb-2017	
Description of Covenant			
SCHEDULE 2. SECTION I. A.2. The Recipient shall establish within the Ministry of Health and Sanitation (MoHS), not later than three (3) months after the Effective Date, an inter-ministerial committee on disease surveillance, epidemic preparedness and response to be responsible for providing policy			

orientation and oversight of the Project and determining the allocation of Project financing. The Inter-Ministerial Committee shall be chaired by the Recipient's Minister of Health and Sanitation and co-chaired by the Recipient's Minister of Agriculture, Forestry and Food Security with powers, role and detailed composition as further described in the Project Implementation Manual, all in a manner acceptable to the Association.

Name	Recurrent	Due Date	Frequency
Sierra Leone: National Steering Committee		28-Feb-2017	

Description of Covenant

SCHEDULE 2. SECTION I.A.3. The Recipient shall: (i) not later than (3) months after the Effective Date, establish within MoHS; and (ii) thereafter, maintain during Project implementation, a One Health Committee to function as the policy advisory and oversight body for the national program for disease surveillance, preparedness and response, of which the Project shall be an integral part. The One Health Committee shall be chaired by the Chief Medical Officer of the Recipient's Ministry of Health and Sanitation and co-chaired by the Chief Agriculture Officer of the Recipient's Ministry of Agriculture Forestry and Food Security, and include other relevant ministries, departments and agencies involved as well as senior representatives of donor partners. The One Health Committee so established shall serve as the National Steering Committee and shall be vested with responsibility, inter alia, for overseeing the yearly planning of Project activities and monitoring Project implementation. The One Health Committee shall meet at least once monthly to undertake, inter alia, the review and approval of the draft annual work program and budget (AWP&B) and the approval of the annual report to be prepared by the Project Coordinator not later than October 31 each year to follow-up on, and assess the progress in, the carrying out of the precedent AWP&B.

Name	Recurrent	Due Date	Frequency
Sierra Leone: Project Implementation Manual		28-Feb-2017	

Description of Covenant

SCHEDULE 2. SECTION I.E.(b). The Recipient shall, not later than three (3) months after the Effective Date, revise and update the Project Implementation Manual in form and substance satisfactory to the Association.

Name	Recurrent	Due Date	Frequency
Senegal: National Steering Committee		28-Feb-2017	

Description of Covenant

SCHEDULE 2. SECTION I.A.2. The Recipient, through the office of its Prime Minister, shall create no later than three months after the Effective Date and thereafter maintain, throughout Project implementation, the multisectoral steering committee of the Global Health Security Program of Senegal assisted by its executive secretariat and a multisectoral technical committee, all supported by qualified and experienced staff in adequate numbers, and under terms of reference satisfactory to the Association to serve as the National Steering Committee and vested with responsibility for overseeing the yearly planning of Project activities and monitoring Project implementation, including the preparation by the Project Coordinator of an annual report not later than October 31 each year on the carrying out of the precedent Annual Work Program and Budget (AWP&B). The National Steering Committee shall be chaired by the Recipient's Prime Minister and its composition shall include, inter alia, representatives from the MoHSA, the Ministry of Livestock and Animal Protection, the Ministry of Agriculture and Rural Equipment, and the Ministry of Environment and Sustainable Development. The National Steering Committee shall meet at least twice each Fiscal Year to undertake, inter alia, the review and approval of the draft AWP&B and the approval of the annual report to be prepared by the Project Coordinator not

later than October 31 each year to follow-up on, and assess the progress in, the carrying out of the precedent AWP&B.

Name	Recurrent	Due Date	Frequency
Senegal: Project Coordination Unit		28-Feb-2017	

Description of Covenant

SCHEDULE 2. SECTION I.A.3. The Recipient shall maintain, throughout Project implementation and within the Ministry of Health and Social Affairs (MoHSA), the Project Coordination Unit headed by the Project Coordinator, under terms of reference and supported by qualified and experience staff in adequate numbers, all satisfactory to the Association, thereby ensuring that the PCU oversee and take all measures necessary for the suitable coordination and management of Project activities pursuant to the provisions of this Agreement, including without limitation: (i) in general, the coordination and management of the Credit and the carrying out of the procurement, monitoring, evaluation and reporting functions; and (ii) in particular, the transfer of Credit funds and monitoring of the use of Credit proceeds by other implementing ministries and partners. For such purposes, the Recipient shall, not later than three (3) months after the Effective Date, recruit for the PCU one (1) procurement specialist, one (1) financial management specialist, one (1) monitoring and evaluation officer, and one (1) safeguards specialist, all on the basis of terms of reference and with qualifications and experience satisfactory to the Association.

Name	Recurrent	Due Date	Frequency
Senegal: Project Implementation Manual		28-Feb-2017	

Description of Covenant

SCHEDULE 2. SECTION I.E.(b). The Recipient shall, not later than three (3) months after the Effective Date, revise and update the Project Implementation Manual in form and substance satisfactory to the Association.

Name	Recurrent	Due Date	Frequency
Guinea: National Steering Committee		31-Jan-2017	

Description of Covenant

SCHEDULE 2. SECTION I.A.2. The Recipient, shall; (i) not later than three (3) months after the Effective Date, entrust the overall supervision of the Project to the National Steering Committee; and (ii) thereafter maintain throughout Project implementation, under terms of reference and supported by qualified and experience staff in adequate numbers, all satisfactory to the Association satisfactory to the Association, said multisectoral National Steering Committee vested with responsibility for overseeing the yearly planning of Project activities and monitoring Project implementation, including the preparation by the Project Coordinator of an annual report not later than October 31 each year on the carrying out of the precedent AWP&B. The National Steering Committee shall be chaired by the Secretary General of the MoH co-chaired by the Secretary General of MoLAP, and its composition shall include directors from the MoH, MoLAP, the Recipient's Ministry of Finance and development partners. The National Steering Committee shall meet at least twice each Fiscal Year to undertake, inter alia, the review and approval of the draft AWP&B and the approval of the annual report to be prepared by the Project Coordinator not later than October 31 each year to follow-up on, and assess the progress in, the carrying out of the precedent AWP&B.

Name	Recurrent	Due Date	Frequency
Guinea: Project Implementation Manual		30-Nov-2016	

Description of Covenant

SCHEDULE 2. SECTION I.E.(b). The Recipient shall, not later than one (1) months after the Effective Date, revise and update the Project Implementation Manual in form and substance satisfactory to the Association.

Conditions

Source Of Fund	Name	Type
IDA	Conditions for Guinea and Senegal	Disbursement

Description of Condition

SECTION IV.B.1.(b). No withdrawal shall be made under Cat 2, until/unless the Recipient (i) shall have adopted the ESMP and/or WMP, and the same documents have been consulted upon and disclosed as approved by the Association; and (ii) shall have verified, through its own staff, outside experts, or existing environmental/social institutions, that the activities under Part 2.1 meet the environment, social and waste management.

Source Of Fund	Name	Type
IDA	Conditions for Participating Countries	Disbursement

Description of Condition

SECTION IV.B.1. (c). No withdrawals shall be made: for Emergency Expenditures under Part 3.3 of the Project, unless and until the Association is satisfied, and has notified the Participating Country of its satisfaction, that all of the following conditions have been met in respect of said Emergency Expenditures.

Source Of Fund	Name	Type
IDA	Conditions for Sierra Leone	Disbursement

Description of Condition

SECTION IV.B.1. (b). No withdrawal shall be made under Cat2, until/unless the Recipient shall have verified, through its own staff, outside experts, or existing environment./social institutions, that the activities under Part 2.1 of the Project meet the environment, social, and waste management requirements of appropriate national and local authority and they comply with the review procedures set forth in the ESMP and/or WMP.

Source Of Fund	Name	Type
IDAT	Conditions for ECOWAS	Effectiveness

Description of Condition

ARTICLE V. 5.01. The Additional Conditions of Effectiveness consists of the following, namely, that the Subsidiary Grant Agreement has been executed on behalf of the Recipient and West Africa Health Organization (WAHO).

Source Of Fund	Name	Type
IDAT	Conditions for ECOWAS	Effectiveness

Description of Condition

ARTICLE V. 5.02. The Additional Legal Matter consists of the following, namely, that the Subsidiary Grant Agreement has been duly authorized or ratified by the Recipient and WAHO and is legally binding upon the Recipient and WAHO in accordance with its terms.

Source Of Fund	Name	Type
IDAT	Conditions for ECOWAS	Disbursement

Description of Condition

SECTION IV.B.1 (b). No withdrawals shall be made under Category (2), until/unless the Participating Country in whose territory Part 5.2 (iii) of the Project is proposed to be carried out: (i) shall have adopted the Environment and Waste Management Plan (ESMP) and/or waste management plan (WMP, as the case may be, and the same documents have been consulted upon and disclosed as approved by the Association; and (ii) shall have verified, through its own staff outside experts, or existing environmental/social institutions, that the activities under Part 5.2 (iii) of the Project meet the environmental, social, and waste management requirements of appropriate national and local authorities and that they comply with the review procedures set forth in the ESMP and/or WMP, as the case may be, and the provisions of the Project Implementation Manual.

Team Composition**Bank Staff**

Name	Role	Title	Specialization	Unit
John Paul Clark	Team Leader (ADM Responsible)	Senior Health Specialist	Communicable Disease	GHN07
Bleoue Nicaise Ehoue	Team Leader	Senior Agriculture Economist	Agriculture and Food Security	GFA01
Hadia Nazem Samaha	Team Leader	Senior Operations Officer	Health Systems and service delivery	GHN07
Elzbieta Sieminska	Procurement Specialist (ADM Responsible)	Lead Procurement Specialist	Procurement	GGO01
Daniel Rikichi Kajang	Procurement Specialist	Senior Procurement Specialist	Procurement	GGO01
Innocent Kamugisha	Procurement Specialist	Procurement Specialist	Procurement	GGO01
Komana Rejoice Lubinda	Procurement Specialist	Senior Procurement Specialist	Procurement	GGO01
Mahamadou Bambo Sissoko	Procurement Specialist	Senior Procurement Specialist	Procurement	GGO07
Mamadou Mansour Mbaye	Procurement Specialist	Consultant	Procurement	GGO07
Mamata Tiendrebeogo	Procurement Specialist	Senior Procurement Specialist	Procurement	GGO01
Moustapha Ould El Bechir	Procurement Specialist	Senior Procurement	Procurement	GGO07

		Specialist		
Bella Diallo	Financial Management Specialist	Sr Financial Management Specialist	Financial Management	GGO25
Abdoulaye Toure	Team Member	Lead Agriculture Economist	Agriculture Economics	GFA01
Abimbola Adubi	Team Member	Sr Agricultural Spec.	Agriculture	GFA01
Abou Gueye	Safeguards Specialist	Consultant	Social Safeguards	GSU01
Adetunji A. Oredipe	Team Member	Senior Agriculture Economist	Agriculture Economics	GFA01
Aissatou Chipkaou	Team Member	Operations Analyst	Operations	GHN07
Akinrinmola Oyenuga Akinyele	Team Member	Sr Financial Management Specialist	Financial Management	GGO25
Amadou Alassane	Team Member	Sr Agricultural Spec.	Agricultural and Food Security	GFA01
Amos Abu	Safeguards Specialist	Senior Environmental Specialist	Environment	GEN07
Ayodeji Oluwole Odutolu	Team Member	Senior Health Specialist	Reproductive, Maternal and Child Health	GHN07
Benjamin P. Loevinsohn	Team Member	Lead Public Health Specialist	Public Health	GHN07
Brahim Sall	Team Member	Senior Rural Development Specialist	Rural Development	GFA01
Caroline Aurelie Plante	Team Member	Livestock Specialist	Livestock	GFA04
Cheick Traore	Team Member	Senior Procurement Specialist	Procurement	GGO07
Cheikh A. T. Sagna	Safeguards Specialist	Senior Social Development Specialist	Social Development	GSU01
Christophe Lemiere	Team Member	Senior Health Specialist	Health Service Delivery	GHN07

Edson Correia Araujo	Team Member	Senior Economist	Economics	GHN04
El Hadj Adama Toure	Team Member	Lead Agriculture Economist	Agricultural Policy	GFA01
Enias Baganizi	Team Member	Senior Health Specialist	Public Health	GHN07
Erick Herman Abiassi	Team Member	Senior Agriculture Economist	Agriculture Economics	GFA01
Faly Diallo	Team Member	Finance Officer	Finance and Disbursement	WFALN
Francisca Ayodeji Akala	Team Member	Senior Health Specialist	Health, Nutrition and Population	GHN06
Francois G. Le Gall	Team Member	Adviser	Animal Health	GFA01
Haidara Ousmane Diadie	Team Member	Senior Health Specialist	Public Health	GHN07
Hardwick Tchale	Team Member	Senior Agriculture Economist	Agriculture Economics	GFA01
Ibrahim Magazi	Team Member	Senior Health Specialist	Public Health	GHN07
Isabella Micali Drossos	Counsel	Senior Counsel	Legal	LEGAM
Jean-Philippe Tre	Team Member	Senior Agriculture Economist	Agriculture Economics	GFA01
Michael Sexton	Team Member	E T Consultant	Health Service Delivery	GHN07
Moussa Dieng	Team Member	Consultant	Health	GHN07
Ngor Sene	Team Member	Financial Management Specialist	Financial Management	GGO13
Nicole Hamon	Team Member	Temporary	Operations Support	GHNDR
Noroso Andrianaivo	Team Member	Senior Program Assistant	Operations	GHN03
Oluwayemisi Busola Ajumobi	Team Member	Consultant	Health	GHNDR
Patrick Lumumba Osewe	Peer Reviewer	Lead Health Specialist	Health	GHNDR
Patrick Piker Umah Tete	Team Member	Sr Financial Management Specialist	Financial Management	GGO25

Rianna L. Mohammed-Roberts	Team Member	Senior Health Specialist	Health Service Delivery	GHN03	
Salamata Bal	Safeguards Specialist	Senior Social Development Specialist	Social Safeguards	GSU01	
Salimatou Drame-Bah	Team Member	Program Assistant	Operations Support	AFMGN	
Shiyong Wang	Team Member	Senior Health Specialist	Public Health	GHN07	
Shunsuke Mabuchi	Team Member	Senior Health Specialist	Results Based Financing	GHN07	
Stephane Forman	Peer Reviewer	Senior Livestock Specialist	Livestock	GFA02	
Sydney Augustus Olorunfe Godwin	Team Member	Financial Management Specialist	Financial Management	GGO31	
Upulee Iresha Dasanayake	Safeguards Specialist	Consultant	Social Safeguards	AFCF1	
Extended Team					
Name	Title	Office Phone	Location		
Locations					
Country	First Administrative Division	Location	Planned	Actual	Comments
Consultants (Will be disclosed in the Monthly Operational Summary)					
Consultants Required? Yes					

I. STRATEGIC CONTEXT

A. REGIONAL CONTEXT

1. The recent Ebola Virus Disease (EVD) epidemic in West Africa has confirmed the critical importance of strengthening national disease surveillance systems and inter-country collaboration in order to detect disease outbreaks earlier and respond more swiftly and effectively, such that the loss of human lives and economic costs are minimized. The West Africa Ebola outbreak also demonstrated that there can be rapid and large spill-over effects of disease that can transcend local and national boundaries. Ebola emerged in a remote rural area of Guinea, but spread rapidly not only to densely populated urban centers within the country, but also to neighbouring nations given porous borders (Liberia, Sierra Leone), within the broader sub-region (Mali, Nigeria, Senegal), and then to other parts of the globe given the interconnectedness of today's commerce and transport systems¹. The concept of the proposed Regional Disease Surveillance Systems Enhancement Program (REDISSE) is thus linked to the commitment that the global community has made to the countries of West Africa in light of the huge human and economic costs of Ebola, to strengthen weak human health, animal health, and disaster response systems to improve the preparedness of the region to handle future epidemics, and thereby minimize the national, regional, and potential global effects of such disease outbreaks.

2. The regional benefits and positive externalities of effective disease surveillance and response are substantial. The West African Health Organization (WAHO) and the Regional Animal Health Center (RAHC) (*Centre Régional de Santé Animale-CRSA*, based in Bamako)², both of which are affiliated with the Economic Community of West African States (ECOWAS), will be responsible for the regional coordination of REDISSE program, as well as for the implementation of specific regional activities and day-to-day oversight of the Project. Collective action and cross-border collaboration are essential and emphasized throughout the Project: (i) the Project will support countries' efforts to harmonize policies and procedures; (ii) countries will be empowered to engage in joint planning, implementation and evaluation of program activities across borders at regional, national and district levels, and; (iii) the Project will promote resource sharing of high-cost specialized assets such as reference laboratories and training centers and difficult to access commodities. The surveillance and response capacity of the regional system depends on the strength of the individual national systems and the front-line or community-level capacities that need to be in place throughout the countries. In other words, a regional disease surveillance network is only as strong as its weakest link. The REDISSE thus proposes to

¹ The World Bank (WB) financial support following the Ebola crisis amounted to US\$1.62 billion. This support included International Development Agency (IDA) financing of US\$1.17 million and \$450 million from International Financing Corporation (IFC), which supported critical emergency and humanitarian response control efforts in Guinea, Liberia, and Sierra Leone. The proposed REDISSE project is part of the Bank's longer-term support following the Ebola crisis.

² REDISSE will contribute to the operationalization of RAHC which is in its early stages of development. The World Organization for Animal Health (OIE) will assist RAHC as it moves toward assuming its responsibilities as the ECOWAS Specialized Agency for Animal Health, in conformity with the 2012 decision of ECOWAS Heads of State. The OIE would assume core functions for coordination, implementation, and oversight of the project regional animal health activities for an initial period of 2 years (with possible extension depending on RAHC capacity evaluation results after this interim period before transferring responsibilities).

strengthen the full “value-chain” of disease surveillance across community, national, and regional institutions.

3. The REDISSE program is being prepared as a series of interdependent projects (SOP). Such an approach is deemed necessary given high country demand for participation in the program, the multiple and complex issues involved, the large number of stakeholders, and the need for an accelerated project preparation schedule. The series of projects support a program involving multiple borrowers (the ECOWAS member states), all of which would need to participate for the program’s objectives to be achievable. This approach provides a platform for high-level policy and regulatory harmonization, cooperation, and coordination between countries aiming toward achieving benefits that will go beyond each country’s boundaries; they create regional public goods, generate positive externalities, or mitigate negative ones.³ The first of these SOPs (REDISSE I) will focus on Guinea, Senegal and Sierra Leone.

4. The countries of West Africa belong to the Economic Community of West Africa States (ECOWAS), which comprises 15 countries and is home to more than 310 million people. ECOWAS is a regional organization that serves to promote economic integration across the West Africa region. The region is very heterogeneous in terms of cultural, economic and human development. Overall, member states rank low on the United Nations Development Programme’s (UNDP) human development index⁴; as of 2015, life expectancy at birth and gross national income per capita of countries in the region ranged from 45.6 to 75.1 and 873 to 6,365 respectively. (Table 1).

Table 1. Human Development index and selected components countries targeted by REDISSE I

Country	Human Development Index	Life expectancy at birth	Gross national income per capita
Cape Verde	0.64	75.1	6,365
Ghana	0.57	61.1	3,532
Nigeria	0.50	52.5	5,353
Senegal	0.49	63.5	2,169
Benin	0.48	59.3	1,726
Togo	0.47	56.5	1,129
Côte d'Ivoire	0.45	50.7	2,774
Gambia	0.44	58.8	1,557
Liberia	0.41	60.6	752
Mali	0.41	55.0	1,499
Guinea-Bissau	0.40	54.3	1,090
Guinea	0.39	56.1	1,142
Burkina Faso	0.39	56.3	1,602
Sierra Leone	0.37	45.6	1,815
Niger	0.34	58.4	873

³ Investment Project Financing-Series of Projects Guidance Note, World Bank, OPSPQ. July 1, 2014.

⁴ Human Development index is defined as the summary measure of average achievement of countries in key dimensions of human development: a long and health life; knowledge; and having a decent standard of living (UNDP, 2014).

Source: Data adopted from UNDP Human development report (2015)

5. Most recent estimates show that communicable diseases (CDs) account for more than one third of the global disease burden and that most of this burden falls on the countries of West Africa⁵. Countries in this region are at high-risk for infectious disease outbreaks including those of animal origin (zoonotic diseases). The World Health Organization (WHO) has documented that of the 55 disease outbreaks that were reported in Africa over the last decade, 42 took place in West Africa. Some common outbreaks in the region include cholera, dysentery, haemorrhagic fevers (e.g. Ebola virus disease, Rift Valley fever, Crimean-Congo fever, Lassa fever, and Yellow fever), and meningococcal meningitis. West Africa also bears a disproportionate burden of malaria, tuberculosis (TB), human immunodeficiency virus (HIV) and neglected tropical diseases, many of which are at risk of resurgence due to drug and insecticide resistance.

6. Over the last four decades, the world has witnessed one to three newly emerging infectious diseases annually. Of infectious diseases in humans, the majority has its origin in animals, with more than 70 percent of emerging zoonotic infectious diseases coming from wildlife⁶. Recent outbreaks such as Ebola viral disease (EVD), H7N9 avian influenza, Middle East respiratory syndrome (MERS-CoV), Marburg virus, Nipah virus infection, bovine spongiform encephalopathy and HIV/AIDS provide abundant evidence of the catastrophic health and economic effects of emerging zoonotic diseases. The West Africa region is both a hotspot for emerging infectious diseases (EIDS) and a region where the burden of zoonotic diseases is particularly high. In this region, emerging and re-emerging diseases at the human-animal-ecosystems interface are occurring with increased frequency. As evidenced by the recent Ebola epidemics in Guinea, Sierra Leone, and Liberia, and the re-occurrence and spread of highly pathogenic avian influenza (HPAI) (H5N1)⁷, highly contagious diseases can easily cross borders in the region through the movements of persons, animals and goods.

7. The major drivers of the emergence of novel infectious diseases are human behaviour, demographic change, technology and industry, economic development, land use, international travel and trade, microbial adaptation and change, and breakdown of public health measures. The population of sub-Saharan Africa doubled between 1975 and 2001, and the African Population and Health Research Centre predicts a further increase, up to 1.9 billion by 2050. Urban population densities have dramatically increased (by 223 percent in Guinea between 1960 and 2012; and by 178 percent, and 275 percent respectively in Sierra Leone and Liberia between 1961 and 2013) due largely to migration from rural to urban areas. The link between deforestation and infectious disease outbreaks is well documented⁸; deforestation and encroachment into natural habitats is also claimed to be responsible for EVD outbreak in West Africa. According to Food and Agriculture Organization of the United Nations (FAO) data, Western Africa is suffering deforestation at twice the world rate approximately⁹. Deforestation has been particularly severe in Guinea and Sierra Leone, with much of the landscape being

⁵ The Lancet (2013): Global Burden of Disease Study.

⁶ In “Anthropogenic Drivers of Emerging Infectious Diseases”, quoting Taylor et al. 2001 and Jonas et al. 2008 (Machalaba, C, and all – 2015.

⁷ H5N1 was declared in January 2015 in Nigeria, followed by Burkina Faso, Niger, Ghana and Cote d’Ivoire. A previous H5N1 epidemic had occurred between 2006 and 2009 in the region and triggered international response which contributed to eradicating the disease.

⁸ Wolfe, 2005; Karesh et al., 2012 ; Wallace et al., 2014 ; Bausch & Schwartz, 2014

⁹ Keenan et al., 2015.

replaced with forest-agricultural mosaics. Civil war and social turmoil have also been common in West Africa. The social instability and its consequent population relocation and breakdown of government services provide fertile ground for the rampant spread of infectious diseases.

8. Most of the countries in West Africa are among the lowest income countries and poverty is highly prevalent. On average, more than 40 percent of the population in sub-Saharan African countries lives on less than US\$1.9 per day. Of the countries under consideration, poverty is most severe in Sierra Leone (Table 2).

Table 2. Poverty headcount Rate at 1.90 dollar per day (2011 PPP)

Country	Prevalence of Poverty (%)
Guinea	35.3*
Senegal	38***
Sierra Leone	52.3**
Sub-Saharan African countries average	42.7*

Source: <http://povertydata.worldbank.org/poverty/country>

Note: *2012; ** 2011;***2009

9. The impacts of infectious disease outbreaks can be devastating to the fragile social and economic situation of countries. The World Bank (WB) estimates a global cost of US\$3 trillion¹⁰ in the event of a severe global pandemic such as the 1918 Spanish Flu. This is comparable to the impact of the 2008 global financial crisis. In the West Africa region, the recent EVD outbreak clearly eroded hard-won gains in the fight against poverty, including gains in human development and economic growth in Guinea, Liberia and Sierra Leone and the region as a whole. In these three countries, the estimated forgone output reached US\$1.6 billion, which represents over 12 percent of the countries' combined outputs. The outbreak also resulted in school closure for at least 6 months in the three countries and over 16,600 children lost one or both parents to the epidemic. Overall, the estimated loss in Gross Domestic Product (GDP) for the 15 countries in the ECOWAS region was approximately US\$1.8 billion in 2014, and was expected to rise to US\$3.4 billion in 2015 and US\$4.7 billion in 2016¹¹. These economic losses were over and above the day to day burden that endemic human and animal diseases, including zoonoses, inflict on the people of West Africa.

10. Animal health is critical to public health and to the sustainable growth of the livestock sector. Livestock farming plays an important role in the ECOWAS region, contributing an average of 44 percent to its agricultural GDP¹². Livestock farming concerns virtually all rural households and is a crucial factor in combating rural poverty, both directly, through the income it generates, and indirectly, in allowing agriculture intensification and contributing to food security, nutrition and broader economic development. ECOWAS as a whole has a trade deficit in animal

¹⁰ Burns et al. (2008) Evaluating the economic consequences of avian influenza (http://siteresources.worldbank.org/EXTAVIANFLU/Resources/EvaluatingAHIeconomics_2008.pdf).

¹¹ UNDG (2015) Socio-Economic impacts of EVD in West African Countries: A call for national and regional containment, recovery and prevention.

¹² Feasibility study for a program to improve veterinary governance and the control of priority trans-boundary animal diseases in West Africa (OIE, September 2013).

products and this trade deficit is particularly acute in the coastal countries. Demand for livestock products is expected to continue to grow significantly in the next decades, based on demographic trends, and propelled by increased urbanization and incomes.¹³ This evolution implies higher risks of occurrence of disease (frequency and/or severity), and higher impact of these diseases.

B. SECTORAL AND INSTITUTIONAL CONTEXT

Human Health

11. The performance of health systems in many countries in West Africa is weak. They suffer from chronic insufficient financial and human resources, limited institutional capacity and infrastructure, weak health information systems, prevailing inequity and discrimination in availability of services, absence of community participation, lack of transparency and accountability, and a need for management capacity building. Public sector spending on health is generally low. None of ECOWAS member states exceeds the Abuja target of 15 percent¹⁴ of Gross Government Expenditure (GGE) allocated to health. Out of pocket spending on health is high throughout the sub-region, for the REDISSE I countries, the out of pocket spending ranges from a low of 34 percent in Senegal to a high of 76 percent of total health expenditure in Sierra Leone (Table 3). Guinea and Sierra Leone have low density and inequitable distribution of health services and health workers as a result of low production, low motivation, inadequate training, lack of quality supplies and the loss of health workers, particularly physicians and nurses to emigration (a.k.a. brain drain). This was further aggravated during the EVD outbreak, which took a high toll on the lives of health workers.

Table 3. Key health financing indicators in three countries (2012)

Country	GGHE as % of GGE	OOP as % of THE	THE Per capita	GGE as % of GDP
Guinea	7	67	32	2
Senegal	10	34	51	3
Sierra Leone	12	76	96	2

Source: WHO, WHO African Region Expenditure Atlas, 2014.

Note: GGHE, gross government health expenditure; GGE, gross government expenditure; OOP, out of pocket payment; THE, total health expenditure.

12. The World Health Organization, together with other partners, has developed a Joint External Evaluation Tool-International Health Regulations (2005) (JEE-IHR) to assess country capacity to prevent, detect, and rapidly respond to public health threats. The tool allows countries to identify the most urgent needs within their health security system, to prioritize opportunities for enhanced preparedness, response and action, and, through regular evaluations, will help monitor the progress by country in implementation of the International Health Regulations

¹³ By 2050, demand for meat and milk in Africa is projected to increase 145 and 155 percent respectively, over 2005/07 levels (from FAO, ILRI, and AU-IBAR (2013), “Investing in African Livestock: Business Opportunities in 2030–2050”).

(2005)¹⁵. The JEE tool is organized around 4 components (Prevent, Detect, Respond, other related IHR hazards and Points of Entry), and each core capacity is assessed using 5 levels of advancement (1-no capacity to 5-sustainable capacity)¹⁶. The JEE tool makes use of findings from an animal health equivalent assessment tool (OIE-PVS evaluations, see description in animal health section). Country-led self-assessment¹⁷ on disease surveillance, preparedness and response capacity in Guinea, Senegal and Sierra Leone as well as the lessons learnt from the EVD outbreak revealed some key weaknesses of health systems in terms of infectious disease surveillance, epidemic preparedness and response. These include: (i) a fit for purpose health workforce for disease surveillance, preparedness and response is lacking at each level of the health pyramid; (ii) community level surveillance and response structures either do not exist or need significant improvement; (iii) there is limited availability of laboratory infrastructure in place for timely and quality diagnosis of epidemic-prone diseases; (iv) lack of interoperability of different information systems hampers analysis and utilization of information for decision making and disease mitigation measures; (v) infection prevention and control standards, infrastructure and practices are generally inadequate; (vi) management of the supply chain system is weak and inefficient; and (vii) there are significant gaps in regional level surge capacity for outbreak response, stockpiling of essential goods, information sharing and collaboration. Similar findings were also documented by the Global Health Security Agenda (GHTSA) baseline assessments in a number of countries including Liberia, and Sierra Leone.

13. After the EVD outbreaks, health system recovery and strengthening plans were developed for at least the next five years in Guinea, Liberia and Sierra Leone. Building up a resilient health system to effectively respond to health emergencies has universally been identified as one of the strategic pillars in the plans. At the national level, broad-based health system strengthening committees or similar structures have been established to lead and coordinate the efforts for strengthening the national health system in the three countries. With assistance from the United States Agency for International Development (USAID), a plan for health system strengthening was also developed in Senegal. In the three REDISSE I countries, the Project will build on and complement the ongoing health system strengthening initiatives of the national governments that are supported by the World Bank and other development partners (DP).

Animal Health

14. The animal health sector in the ECOWAS region is characterized by a high incidence and prevalence of infectious¹⁸ communicable diseases, both zoonotic and non-zoonotic, impacting veterinary and public health, trade, rural development and livelihoods. Among the most serious infectious diseases, contagious bovine pleuropneumonia (CBPP), foot and mouth disease (FMD), African swine fever (ASF), Rift Valley fever (RVF), *Peste des Petits Ruminants* (PPR), African

¹⁵ http://apps.who.int/iris/bitstream/10665/204368/1/9789241510172_eng.pdf.

¹⁶ So far, the JEE hasn't been applied in REDISSE countries ; recent external evaluations done consists essentially in GHTSA assessments that were carried out between August 2015 February 2016 by the US government in the context of the Global Health Security Agenda, in Senegal, Guinea, Liberia and Sierra Leone. These assessments are closely related to those of the JEE tool.

¹⁷. These self-assessments were conducted between December 2015 and February 2016 as part of the project preparation.

¹⁸ Remark: Communicable and Infectious Disease are used interchangeably in this document.

animal trypanosomiasis (AAT), highly pathogenic avian influenza (HPAI), and rabies are highlighted by ECOWAS¹⁹ and the FAO/OIE Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs)²⁰ for Africa. A recent summary of evaluations of Veterinary Services by the World Organization for Animal Health (OIE) in ECOWAS countries²¹ highlighted the services' lack of budgetary resources and mismatch between the human resources required and those actually available for preventing and controlling animal diseases. In terms of the strategic action required to sustain animal health, all of the countries identified the need to improve the coverage of their surveillance programs as well as the control of high-priority animal diseases. Lack of preparedness, insufficient human, physical and financial resources, and the lack of cross-sector collaboration were again emphasized by the FAO and OIE as causes for failure to address promptly and efficiently the resurgence of highly pathogenic avian influenza in the region.

15. Improvement of animal health requires increased and sustained investments in national Veterinary Services to meet international standards of quality defined by the OIE²². Any country failing to prevent, detect, inform, react and control sanitary issues, such as infectious diseases or antimicrobial resistance places other countries at risk, hence the importance of regional approaches. All countries in the region have engaged in the OIE Performance of Veterinary Services (PVS) Pathway, a program which provides independent qualitative (PVS evaluation) and quantitative (PVS Gap Analysis) evaluations of Veterinary Services, identifying their strengths and weaknesses, prioritizing interventions and costing activities needed to address deficiencies. Some countries have also received support to review their veterinary legislation. The PVS evaluation tool²³ is composed of 46 critical competencies, grouped in 4 components (Human, Physical, and Financial Resources, Technical Authority and Capability, Interaction with Interested Parties, Access to Markets), each being evaluated on a scale of 1 (no compliance) to 5 (full compliance). The evaluations of VS are expected to be done regularly in order to measure progress made and establish recommendations for continuous improvement. This tool, and the JEE, will be central to project monitoring and evaluation activities.

¹⁹ Operationalization of the Regional Animal Health Centre of Bamako (ECOWAS, August 2014).

²⁰ GF-TADs (FAO-OIE Global Framework for the Progressive Control of Transboundary Animal Diseases) is a facilitating mechanism which endeavors to empower regional alliances in the fight against transboundary animal diseases (TADs), to provide for capacity building and to assist in establishing programs for the specific control of certain TADs based on regional priorities.

²¹ Feasibility study for a program to improve veterinary governance and the control of priority transboundary animal diseases in West Africa (OIE, September 2013).

²² <http://www.oie.int/en/international-standard-setting/overview/>

²³ http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/PVS_A_Tool_Final_Edition_2013.pdf.

Table 4. State of Play of PVS Pathway Implementation in the 3 Countries under Consideration (as of March 2016)

	Guinea	Senegal	Sierra Leone
OIE PVS evaluation	May 2007 (public)	Feb. 2008	Feb. 2010
PVS Gap Analysis	June 2009 (public) Sep. 2012 (public)	March 2010	March 2012
Legislation support	July 2011	July 2014	-

16. Insufficient government funding and limited interest from donors to support Veterinary Services have not allowed significant progress to date in addressing systemic issues. However, some important programs are worth noting in the animal health sector, such as the Emerging Pandemic Threats (EPT2) program²⁴, financed by United States Agency for International Development (USAID) and implemented in many of the ECOWAS countries through FAO and other implementing agencies; FAO support to HPAI infected countries²⁵; and Inter-African Bureau for Animal Resources of the African Union (AU-IBAR) support through the Vet-Gov program²⁶. In the last 15 years, two main regional and global programs significantly contributed to strengthening national Veterinary Services, namely the Pan-African Program for the Control of Epizootics (PACE)²⁷ program and the World Bank financed Avian Influenza Global Program²⁸ which were implemented in many countries of the region. The lessons and best practices derived from these two programs are reflected in this project. The Regional Network of National Epidemic surveillance Systems for HPAI and other Priority Animal Diseases in West Africa (RESEPI) and Veterinary Laboratory Network for Avian Influenza and other Transboundary Animal Diseases in West Africa (RESOLAB)²⁹ networks were also supported and facilitated by FAO under different projects and handed over in 2012 to ECOWAS.

²⁴ The EPT2 (Emerging Pandemic Threats 2) program's objective is to build on the operational platforms, institutional partnerships, and an expanded knowledge base developed over the past decade by USAID's EPT 1 and the Avian Influenza (AI) portfolios to pre-empt or combat, at their source, newly emerging diseases of animal origin that could threaten human health, which are key objectives of the Global Health Security Agenda and the IHR.

²⁵ Emergency Assistance to control H5N1 outbreaks and mitigate risks for virus spread (in Burkina Faso, Cote d'Ivoire, Ghana and Nigeria), worth 1.82 million Euros.

²⁶ The Vet-Gov program (31.2 million Euros) covering all African Union Member States aims at improving the institutional environment at national and regional levels to provide effective and efficient animal health services in Africa.

²⁷ The Pan-African Program for the Control of Epizootics –PACE- (1999-2007) had among its main objectives the eradication of Rinderpest and the improvement of the control of other epizootic disease; it contributed to build epidemic surveillance network.

²⁸ Since 2005, the World Bank financed 72 operations for avian and human influenza (AHI) response in 60 countries, with a commitment value of US\$1.3 billion (including US\$0.1 billion from trust funds). This contributed to a \$3.9 billion program of international assistance to developing countries to control avian influenza and prepare for a pandemic.

²⁹ RESEPI: network of national epidemic-surveillance systems for HPAI and other priority animal disease in West and Central Africa; RESOLAB: West and Central Africa Veterinary Laboratory Network for Avian Influenza and other Transboundary Diseases: these programs developed in the context of the HPAI outbreaks that hit the region in

17. Animal health is seen as a priority by the two regional economic communities in West Africa. ECOWAS and West African Economic and Monetary Union (WAEMU)³⁰ have set a target of harmonizing national animal health systems. WAEMU, which covers 8 countries in the region, has moved forward on a number of fronts in particular on the harmonization of regulations on veterinary medicinal products, but progress has been slow due to administrative, human, organizational and financial constraints. In 2012, ECOWAS member countries declared the RAHC—an informal platform originally set up in 2006 by OIE, FAO and AU-IBAR—as the ECOWAS specialized technical centre for animal health³¹. An operational plan for RAHC was developed in August 2014. However, delays in staff recruitment and establishment of a dedicated operational budget have kept the institution from implementing this plan and rolling-out activities in accordance with its mandate. The RAHC is currently supported through a limited number of initiatives with specific objectives, including to further develop the One Health agenda in the region, and to develop Integrated Regional Coordination Mechanisms for the control of transboundary animal diseases (TADs) and Zoonoses (IRCM). The International Development Association (IDA)-financed Regional Sahel Pastoral Support project (PRAPS), which supports the improvement of animal health in six West African Sahel countries, specifically aims at contributing to the operationalization of the RAHC³².

18. Tackling multisectoral issues efficiently requires working across sectors and disciplines. Yet, very few countries have adopted coordinated approaches, along the lines of the “One Health” (OH) concept. The response to the HPAI crisis since 2005 contributed to enhancing cooperation between the human and veterinary health sectors in many countries in the region, but in the absence of a dedicated program incentivizing such a joint approach, a silo approach still prevails. Nonetheless, important lessons have been learned and experience gained, and successful regional programs for the control of selected priority diseases, both within and outside the region, have demonstrated the efficiency of a regionally coordinated approach to diseases surveillance and response.

19. Partner Coordination: The Development Partner landscape in the sub-region is complex, particularly in the countries most affected by the 2014-2015 EVD epidemic. The Ebola outbreak triggered a significant international response that brought many partners together to address the

2006-2009, aim at revitalizing epidemic-surveillance networks and improve the capacity of all sub-regional national veterinary diagnostic laboratories to become able to process locally suspected samples and thereby will contribute in an efficient manner to early warning and early reaction system for the better control of HPAI and other TADs.

³⁰ West African Economic and Monetary Union.

³¹The 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). Its mission is to contribute to the fight against poverty and food insecurity through the improvement of animal health and the sustainable development of animal production at the national and regional level. The RAHC aims to offer expertise, information, and training to facilitate the development, coordination, and implementation of animal health policies. As of March 2016, it was staffed by one technical expert (financed by AU-IBAR) and was going to receive 2 additional technical experts and 2 administrative staff (financed by USAID).

³² PRAPS (P147674, approved in May 2015) will “strengthen CRSA to fulfill its mandate to coordinate, support, and harmonize animal health strategies and activities across countries within the region. The World Organization for Animal Health (OIE) assumes the interim responsibility for the coordination of the animal health component of the project, by delegation of CILSS (the regional implementing agency of the project) and will assist CRSA in this task as CRSA moves toward assuming its responsibilities as the ECOWAS Specialized Agency for Animal Health, in conformity with the 2012 decision of ECOWAS Heads of State”.

crisis and support the post-Ebola agenda of health systems recovery and strengthening. It also highlighted the need to focus attention on building the capacity for disease surveillance and response in the sub-region for both human and zoonotic diseases. The development partners engaged on these issues in the sub-region include development banks, multilateral and bilateral donors and private foundations; UN systems agencies; technical agencies such as the US Centers for Disease Control and Prevention and the Chinese Center for Disease Control and Prevention; academic and research institutions, and large numbers of international and local non-governmental organizations.

20. As noted in Annex 2, in this type of environment duplication of effort, inefficient use of resources and failure to address resource, policy and programmatic gaps is a substantial risk. It is expected that there will continue to be an influx of funds and other forms of support to the region, in particular, to the three EVD affected countries (Guinea, Sierra Leone, and Liberia) in the next three to five years. As a result, coordination of resources and activities offered by the various partner organizations will remain a significant challenge for national governments. Therefore, coordination mechanisms at both national and regional levels that engage both the human and animal health sectors need to be developed to maximize the impacts of the increasing support and foster sustainability of the anticipated outcomes. The World Bank's convening power will be highly instrumental in forging and sustaining a coalition of national, regional, and global technical and financial institutions to support the disease surveillance and epidemic preparedness agenda in West Africa. The REDISSE program will furthermore fill an important gap by providing regional and financial support, which will build on all existing investment and will serve as a platform for alignment and harmonization.

21. The World Bank is well placed to mobilize substantial financing for support for this multi-sector initiative and to convene premier technical and financial partners engaged in the field of disease surveillance and epidemic preparedness. The World Bank has strategically engaged with a core group of development partners including those implementing the GHSA in the development of the REDISSE program. The REDISSE program itself will provide resources to regional institutions and national governments to establish the needed coordinating mechanisms.

C. HIGHER LEVEL OBJECTIVES TO WHICH THE PROJECT CONTRIBUTES

22. The project is in line with the WB's mission to end extreme poverty and promote shared prosperity. Communicable and non-communicable diseases are a major constraint on the health, education and potential earnings of people living in the ECOWAS region and have the greatest impact on the most vulnerable population. Hence, mitigating the economic burden not only on individuals but also on the region as a whole is key to the economic rationale for investing in these interventions. The Country Partnership Strategies (CPS) for the three countries targeted by this project emphasize the need to strengthen the capacity of health systems, of which disease surveillance is a key pillar, in order to improve health outcomes and reduce vulnerability. The Guinea CPS for the period 2014-2017 emphasizes the importance of strengthening human capital and specifically notes that, for Guinea, progress towards achieving the MDGs hinges on improving the health care system. The Senegal CPS for the period 2013-2017 supports priorities established under the *Stratégie Nationale de Développement Economique et Sociale* including the

improvement of service delivery, regional cooperation, resilience and disaster risk management. The most recent country strategy for Sierra Leone dates from 2010-2013 which identifies the need to invest in human development.

23. The project complements both WB and development partner investments in health systems strengthening, disease control and surveillance (see Annex 7 for details). Establishing this complementarity is particularly important in the countries most affected by the EVD outbreak where there has been a significant and rapid influx of development assistance. For example, in the context of this outbreak, the Government of Sierra Leone is eager to dramatically improve national disease surveillance and response capacity. Having experienced first-hand the devastating consequences of the cross-border spread of Ebola virus, the government also acknowledges the paramount importance of regional disease surveillance and institutions for cross-border and inter-country collaboration. This is also true for Guinea. Yet, the proposed REDISSE program is one of the few initiatives that emphasize the regional and cross-border elements of disease surveillance, epidemic preparedness and response.

24. The project is aligned with pillar III of the Regional Integration Assistance Strategy (RIAS) for the region (2008/rev 2011), building coordinated interventions to provide regional public goods. The RIAS specifically identifies regional and sub-regional programs to address the cross-border dimensions of disease prevention and control as an area of focus.

25. The program contributes to the implementation of IHR (2005) and the OIE terrestrial animal health Code and Manual, the One Health Agenda, the Global Health Security Agenda, the Universal Health Coverage and attainment of the Sustainable Development Goals (SDG).

26. The recently approved World Bank Climate Change Action Plan stresses the importance of climate smart surveillance and early warning systems. The climate informed surveillance systems supported by this project will reduce the vulnerability and increase the resilience of the population and of domestic animals to the impact of climate change in disease transmission, providing climate adaptation co-benefits

27. The World Bank and its key partners have been working on the Global Pandemic Emergency Facility (PEF). PEF, which has been approved by the World Bank in May 2016, aims to provide immediate support to countries experiencing any infectious disease outbreak that meets predefined triggers, either defined as a public health emergency of international concern (PHEIC) or a certain disease outbreak notification (DON) event, through both an insurance funding mechanism and a public funding mechanism. The PEF initially targets seventy seven IDA countries and aims to get the funds to a country within a maximum of one to two days. The REDISSE program complements the PEF in the following ways by: (i) focusing on capacity for disease surveillance and epidemic preparedness countries will be better able to contain outbreaks before they develop into PHEIC or DON events and trigger the PEF; and (ii) including a contingent emergency response component (CERC), countries will be able to mobilize funds quickly from within the project in the event of an outbreak which may also assist in preventing the need to trigger PEF.

28. Ultimately, the project will contribute towards significantly reducing the burden of diseases particularly among poor and vulnerable populations. Thus, mitigating the public health and economic risks posed by infectious diseases in humans and animals, and decreasing the threats of future disease outbreaks, thereby promoting global health security. On a global scale, the creation of a regional network in West Africa will serve to harness the power of other regional networks to improve regional and global cooperation of the ECOWAS member countries for the attainment of better population health outcomes and to promote global health security.

II. REDISSE PROGRAMATIC APPROACH

29. The program meets the four regional criteria for utilizing the regional International Development Association (IDA) funds: (i) involves three or more countries: the project involves three countries: Senegal, Guinea, and Sierra Leone in the first phase as it is being prepared as a series of integrated project. Phase 2 will include Liberia, Nigeria, Ghana, Togo, Benin, Guinea Bissau and Cote d'Ivoire. Potentially phase 3 would include the Gambia, Mali, Niger, Cape Verde, and Burkina Faso; (ii) has benefits, either economic or social, that spill over country boundaries; (iii) reflects strong interest from regional bodies and the region's countries in the project; and (iv) provides a platform for a high level of policy harmonization between countries. With these minimum criteria addressed it is important to note that collaboration and collective action across borders to address disease threats is one of the clearest examples of a global public good. The increasing frequency of disease outbreaks and the rapidity of spread demands regionally aligned information and surveillance systems, harmonized policies and standard operational procedures.

30. The REDISSE program will be implemented as an interdependent series of projects that will eventually engage and support all 15 ECOWAS member countries. This is the first project in the series, REDISSE I, which targets both extremely vulnerable countries (Guinea and Sierra Leone) and one country with a more effective surveillance systems and which serves as hosts for important regional assets (Senegal).

31. REDISSE II is expected to be delivered in Fiscal Year 17 (FY17). The estimated project financing for REDISSE-II is US\$212 million. FY17 delivery of this project will allow additional time for consultations, assessments and planning needed to ensure country readiness. REDISSE II countries will include: Liberia, Nigeria, Cote d'Ivoire, Guinea Bissau, Ghana, Togo, and Benin. Most of the REDISSE II countries have participated in a project preparation forum together with phase 1 countries and several of the REDISSE II countries (notably Liberia and Nigeria) are far advanced in the project preparation and planning process. Together, REDISSE I and II constitute a block of equatorial, coastal countries with shared borders and similar epidemiologic profiles which extends from Senegal in the west to Nigeria in the east. Pending funding availability, REDISSE III would be delivered in Q4 of FY17 and would target Niger, Burkina Faso, Cape Verde, Mali and The Gambia.

32. The series of projects will be implemented in the context of the African Integrated Disease Surveillance and Response (IDSR) Strategy, international standards and guidelines of WHO, OIE, and Food and Agriculture Organization of the United Nations (FAO), fostering a

One Health Approach. It will support the countries to establish a coordinated approach to detecting and swiftly responding to regional public health threats. Cooperation among West African countries to prevent and control potential cross-border diseases is a regional public good.

III. PROJECT DEVELOPMENT OBJECTIVES

A. PROJECT DEVELOPMENT OBJECTIVES (PDO)

33. The objectives of the REDISSE I are: (i) to strengthen national and regional cross-sectoral capacity for collaborative disease surveillance and epidemic preparedness in West Africa, thereby addressing systemic weaknesses within the animal and human health systems that hinder effective disease surveillance and response; and (ii) in the event of an Eligible Emergency³³, to provide immediate and effective response to said Eligible Emergency. The Project will address systemic weaknesses within the animal and human health systems that hinder effective disease surveillance and response. The Project will also include a contingent emergency response component (CERC) to improve the Government's response capacity in the event of an emergency, following the procedures governed by paragraph 13 of OP 10.00 (Investment Project Finance), which allows for disaster prevention and preparedness and capacity-building activities to be supported by a stand-alone Project with a contingent financing feature, through a CERC subject to the exceptional policy requirements set out in paragraph 12 of OP 10.00.

B. PROJECT BENEFICIARIES

34. The main beneficiaries of the REDISSE program will be the overall population of ECOWAS countries. Under REDISSE I, all 15 countries will participate in regional policy and standard setting activities led by WAHO and RAHC. In addition, Guinea, Senegal and Sierra Leone will receive financing for systems strengthening. Hence, REDISSE I is expected to benefit over 33.3 million people³⁴ (12.3 million in Guinea; 14.7 in Senegal and 6.3 in Sierra Leone) whose livelihoods may be affected by diseases.

35. Secondary beneficiaries include service providers (both public and private), as well as national and regional institutions involved in human and animal health. WAHO will be a major institutional beneficiary of this project, alongside the RAHC as well as the Regional Center for Disease Control and Prevention (RCDC) and other regional technical partners. Hence the population of the region will also benefit from the strengthened regional capacity to prevent, detect and react promptly to sanitary events of importance.

C. PDO LEVEL RESULTS INDICATORS

³³ An "Emergency Response Operational Manual" (EROM) will be prepared by each country to ensure that the Contingent Emergency Response Component (CERC) is in place as soon as possible in the event that an emergency occurs early in the implementation of the Project. Triggers for the CERC will be clearly outlined in the EROM acceptable to the World Bank.

³⁴ Based on 2014 World Development Indicators.

36. Four of the six PDO level indicators will be based on the periodic Joint External Evaluation (JEE) for monitoring progress in the implementation of the International Health Regulations (See Annex 1). The following key indicators will be used to track progress towards the PDOs:

- a. Progress towards establishing an active, functional regional One Health Platform (Number based on 5 point likert scale);
- b. Laboratory testing capacity for detection of priority diseases: number of countries that achieve a JEE score of 4 or higher out of 5;
- c. Progress in establishing indicator and event-based surveillance systems: number of countries that achieve a JEE score of 4 or higher out of 5;
- d. Availability of human resources to implement IHR core capacity requirements; number of countries that achieve a JEE score of 3 or higher out of 5;
- e. Multi-hazard national public health emergency preparedness and response plan is developed and implemented: number of countries that achieve a JEE score of 4 or higher out of 5;
- f. Progress on cross-border collaboration and exchange of information across countries: number of countries that achieve a score of 4 or higher out of 5.

IV. PROJECT DESCRIPTION

A. PROJECT COMPONENTS

37. The REDISSE project design incorporates a shift from a paradigm grounded in crisis response to one that embraces a disaster risk reduction approach and better risk management. It does so by building support for the animal health and human health systems, and the required linkages at country and regional level to manage infectious disease threats. As such the project will comprise 5 components as follows: (1) Surveillance and Information Systems; (2) Strengthening of Laboratory Capacity; (3) Preparedness and Emergency Response; (4) Human Resource Management for Effective Disease Surveillance and Epidemic Preparedness; and (5) Institutional Capacity Building, Project Management, Coordination and Advocacy.

38. Countries will prioritize their interventions using the framework and options provided below so as to ensure that the REDISSE project reinforces existing interventions and complements what is being funded under existing projects supported by IDA or other partners. Proposed interventions under the components are based on thorough consultation with the government, regional entities, and other key partners.

39. Across all project activities, the project will promote partnership with the private sector to improve areas of known weaknesses in the provision of public goods across all project activities.

Component 1: Surveillance and Information Systems. Total costs including contingencies US\$27.91 million equivalent, of which US\$23.85 is financed by IDA and US\$4.06 million is financed by the MDTF.

40. The first component will support the enhancement of national surveillance and reporting systems and their interoperability at the different tiers of the health systems. This component will support national and regional efforts in the surveillance of priority diseases (including emerging, re-emerging and endemic diseases) and the timely reporting of human public health and animal health emergencies in line with the IHR (2005) and the OIE Terrestrial Animal Health Code. Based on in-depth disease surveillance systems assessments that will be carried out during the first months of implementation, activities under this component will support (i) the establishment of appropriate linkages between national animal health and human health surveillance information systems, and between national systems to regional/international disease surveillance and reporting systems; (ii) cross-border collaboration in surveillance (including active/event-based, passive and syndromic surveillance) for the early detection of cases; (iii) timely reporting by community-level surveillance agents as well as district health and veterinary facilities, and minimization of turnaround time from specimen collection to laboratory confirmation and reporting; (iv) the use of surveillance data for risk analysis (assessment, management and communication) to implement appropriate outbreaks prevention and control interventions across the sub-region. Component 1 will have three sub-components.

Sub-Component 1.1 Support coordinated community-level surveillance systems and processes across the animal and human health sectors. Total costs including contingencies US\$11.04 million equivalent, of which US\$7.63 million is financed by IDA and US\$3.41 million is financed by the MDTF.

41. This sub-component will involve the strengthening of community-level surveillance structures and processes in countries where gaps exist for detecting events in communities (human and animal). This will entail improving community-level surveillance capacity for active, passive and rumor surveillance including in cross-border areas, and the development and implementation of a plan to ensure adequate territorial coverage for surveillance from the community to the central level.

Sub-Component 1.2 Develop capacity for interoperable surveillance and reporting systems. Total costs including contingencies are US\$10.32 million equivalent financed by IDA.

42. The second sub-component will support: (i) assessment of existing human and animal health surveillance systems and networks for prioritization of interventions within and across key sectors; (ii) review and update of national and regional disease priorities, and review and development of harmonized guidelines, protocols and tools to enhance surveillance and reporting processes; (iii) development of common methodologies and protocols for efficient flow and utilization of surveillance data (applicable to both public and private actors involved in disease surveillance); (iv) development of the required information communication and technology (ICT) infrastructure to facilitate cross-sectoral interoperability of surveillance and reporting systems at the national and regional level; and (v) establishing the necessary linkage of surveillance and reporting systems to national incidence management systems.

Sub-Component 1.3 Establish an early warning system for infectious disease trends prediction. Total costs including contingencies are US\$6.55 million equivalent, of which US\$5.9 million is financed by IDA and US\$0.65 million is financed by MDTF.

43. This sub-component will involve the establishment of an early warning system including the use of Geographic Information Systems (GIS) to study infectious disease patterns and make predictions on evolution of disease outbreaks, including zoonoses; and, identify potential high risk areas for disease outbreaks in the region. Activities under this will support the monitoring of trends that occur in infectious diseases such as antimicrobial resistance (AMR) and insecticide resistance, and the impact of climate change on infectious disease outbreaks in the region.

Component 2: Strengthening of Laboratory Capacity. Total costs including contingencies are US\$17.03 million equivalent financed by IDA.

44. The objective of this component is to establish networks of efficient, high quality, accessible public health, veterinary and private laboratories for the diagnosis of infectious human and animal diseases, and to establish a regional networking platform to improve collaboration for laboratory investigation. The project seeks to address critical laboratory systems weaknesses across countries, fostering cross-country and cross-sectoral (at national and regional levels) collaboration. It aims to do this through effective public health and animal health laboratory networks which would follow regionally harmonized policies, strategies, and protocols, aligned with internationally recognized practices, to ensure prompt and high quality results. This component is divided into three sub-components.

Sub-Component 2.1 Review, upgrade and support network laboratory facilities. Total costs including contingencies are US\$5.81 million equivalent financed by IDA.

45. This sub component will include: (i) assessment of existing human and animal health laboratory facilities and networks for prioritization of interventions; (ii) increasing laboratories services, and biosafety and biosecurity; (iii) support for improved supply chain management including the establishment of efficient inventory tracking and management systems; (iv) technical support for integrated laboratory information systems and the interoperability with disease surveillance and reporting systems; and (v) support to the strengthening of quality assurance systems for diagnostic services.

Sub-Component 2.2 Improve data management and specimen management. Total costs including contingencies are US\$7.21 million equivalent financed by IDA.

46. This sub-component will support strengthening specimen management including: (i) streamlining the laboratory specimen referral process, including use of strengthened sub-national laboratories for diagnosis rather than relying on a central laboratory; where possible and (ii) improving efficiency of specimen transport and disposal systems including through the use of private sector partnerships, and the use of accredited private laboratory networks for case confirmation. In addition, measures to improve data management will include: (i) strengthening the competencies of laboratory personnel to analyze and use laboratory surveillance data;

(ii) strengthening laboratory data management systems to ‘report up’ and ‘report down’ more effectively; (iii) achieving interoperability between data management systems, where possible.

Sub-Component 2.3 Enhance regional reference laboratory networking functions. Total costs including contingencies are US\$4.01 million equivalent financed by IDA.

47. This sub-component will provide support to improve quality assurance, notably (i) the development of common standards, quality assurance systems, procedures and protocols; (ii) the introduction of peer review mechanisms; (iii) the application of the World Health Organization – Africa Region (WHO/AFRO) five-step accreditation process and technical assistance to support accreditation of laboratories; and (iv) support inter-laboratory external quality assessments among the participating countries and recruitment of experts to provide mentorship to laboratories. It will (i) strengthen existing and possibly identify new regional reference laboratories for specific diseases or diagnostic techniques; (ii) strengthen regional networking and information sharing between countries; and (iii) harmonize laboratory quality assurance policies across countries in the region, based on international standards.

Component 3: Preparedness and Emergency Response. Total costs including contingencies are US\$25.96 million equivalent financed by IDA.

48. This component will support national and regional efforts to enhance infectious disease outbreak preparedness and response capacity. Activities under this component will support the (i) updating and/or development of cross-sectoral emergency preparedness and response plans (national and regional) for priority diseases, and ensuring their integration into the broader national all-hazards disaster risk management framework; (ii) regular testing, assessment, and improvements of plans; (iii) expansion of the health system surge capacity including the allocation and utilization of existing pre-identified structures and resources (at the national and regional level) for emergency response, infection prevention and control (IPC). Component 3 will be made up of three sub-components:

Sub-Component 3.1 Enhance cross-sectoral coordination and collaboration for preparedness and response. Total costs including contingencies are US\$6.01 million equivalent financed by IDA.

49. This sub-component will support: (i) partnership building activities (including the private sector) for outbreak preparedness and disaster risk management; (ii) improvement and harmonization of policies, legislation, and operating procedures that includes representation from other relevant sectors including environment, customs/immigration, education, law enforcement; and (iii) explore the establishment of national and regional financing mechanisms to ensure swift mobilization of resources for animal health and public health emergencies.

Sub-Component 3.2 Strengthen Capacity for emergency response. Total costs including contingencies are US\$19.95 million equivalent financed by IDA.

50. This sub-component will support the strengthening of emergency operations centers (EOC) and surge capacity at the national and regional levels. Activities under this sub-

component will support (i) the establishment and management of a database of multidisciplinary rapid response teams (MRRTs) that will be available for rapid deployment; (ii) the development and management of regional stockpiling mechanisms (virtual and physical) to ensure availability of supplies to countries during an emergency response; and (iii) the swift mobilization and deployment of resources in response to major infectious disease outbreaks.

Sub-Component 3.3 Contingent Emergency Response (US\$0).

51. The objective of this sub-component is to improve the Government's response capacity in the event of an emergency, following the procedures governed by OP/BP 10.00 paragraph 13 (Rapid Response to Crisis and Emergencies). There is a moderate to high probability that during the life of the project that one or more countries will experience an epidemic or outbreak of public health importance or other health emergency which causes a major adverse economic and/or social impact (e.g. Ebola), which would result in a request to the World Bank to support mitigation, response, and recovery in the region(s) affected by such an emergency. In anticipation of such an event, this contingent emergency response component (CERC) provides for a request from REDISSE I participating countries to the World Bank to support mitigation, response, and recovery in the district(s) affected by such event. The CERC will serve as a first line financing option during an emergency response and only country IDA will be reallocated from the other components to finance such emergency response.

52. An "Emergency Response Operational Manual" (EROM) will be prepared by each country as a condition of disbursement. Countries will begin drafting the EROM immediately to ensure that the CERC is in place as soon as possible in the event that an emergency occurs early in the implementation of the Project. Triggers for the CERC will be clearly outlined in the EROM acceptable to the World Bank. Disbursements will be made against an approved list of goods, works, and services required to support crisis mitigation, response and recovery.

Component 4: Human Resource Management for Effective Disease Surveillance and Epidemic Preparedness. Total costs including contingencies are US\$14.1 million equivalent financed by IDA.

53. Component 4 is cross-cutting given that animal and human health workers form the backbone of Disease Surveillance (Component 1), Laboratories (Component 2) and Preparedness and Response (Component 3). Effective human resource management aims at bringing the right people with the right skills to the right place at the right time. This component will include two sub-components.

Sub-Component 4.1 Health workforce mapping, planning and recruitment. Total costs including contingencies are US\$2.5 million equivalent financed by IDA.

54. This sub-component includes: (i) assessments of current workforce in terms of quantity, geographical distribution and capacity (including private actors); (ii) strengthening capacity for human resource management for disease surveillance and response; (iii) supporting the capacity of governments to recruit health workers and create an incentive environment which encourages

skilled individuals to work for the public sector; and (iv) using private actors to deliver public sector activities through delegation of power (e.g. sanitary mandates for veterinarians).

Sub-Component 4.2 Enhance health workforce training, motivation and retention. Total costs including contingencies are US\$11.6 million equivalent financed by IDA.

55. This sub-component includes training to develop human resource capacity in surveillance, preparedness and response. Cognizant of the importance of community involvement in disease surveillance, a key lesson from the Ebola crisis, the project places emphasis on training at the community level, rather than focusing solely on higher level cadres.

56. The project will analyse and seek to address the incentive environment within which healthcare workers operate. Armed with an improved understanding of this environment, the project will seek to implement activities which create incentives which not only draw those with relevant skills to the public sector, but also improve staff motivation and retention.

Component 5: Institutional Capacity Building, Project Management, Coordination, and Advocacy. Total costs including contingencies are US\$29.06 million equivalent financed by IDA.

57. This component focuses on all aspects related to project management. It includes fiduciary aspects (financial management and procurement), monitoring and evaluation (M&E), knowledge generation and management, communication, and management (capacity building, monitoring and evaluation) of social and environmental safeguard mitigation measures. It also provides for critical cross-cutting institutional support, meeting capacity-building and training needs identified in the five countries and at WAHO and RAHC on top of specific technical capacity-building activities undertaken within the four technical components (including support to the management of operational research). It will support the routine external independent assessment of critical animal health and human health capacities of national systems using reference tools (such as OIE PVS and JEE) to identify weaknesses and monitor progress. This component will build on, and complement other projects and initiatives such as the West Africa Regional Disease Surveillance Project (WARDS) (which has been supporting the development of the institutional capacity of WAHO), East Africa Public Health and Laboratory Networking Project (EAPHLN), Global Health Security Agenda (GHSA), and Emerging Pandemic Threat (EPT2) and other discrete activities to foster the harmonization of a functional regional disease surveillance and response network in the ECOWAS region.

58. Support will also be provided for the establishment of national and regional One Health coordination platforms for the purpose of developing synergies, joint planning, implementation and communication. Strategies will be adopted for generating evidence to be used to advocate for increased and sustained financing for disease surveillance and preparedness from domestic sources

Component 5 will include two sub-components:

Sub-component 5.1 Project coordination, fiduciary management, monitoring and evaluation, data generation, and knowledge management. Total costs including contingencies are US\$20.83 million equivalent financed by IDA.

59. WAHO will host the REDISSE coordination unit (R-PCU) at the regional level, while line ministries in charge or other institutions supporting REDISSE implementation in the three countries will each host a national coordination unit (N-PCU). REDISSE will: (i) strengthen the capacities of national and regional institutions (RAHC) to efficiently perform core project management functions including operational planning, financial management, procurement arrangements, and environmental and social safeguards policies in accordance with WB guidelines and procedures. Particular emphasis will be placed on building the capacity of the RAHC to provide regional leadership in the area of animal health; (ii) enhance M&E systems including routine health management and information systems (HMIS) and other data sources, including regular Joint External Evaluations (JEE) of IHR (2005) and the PVS pathway evaluations; (iii) manage operational research program and economic analysis of disease outbreaks and epidemics in the ECOWAS region implemented by national and regional institutions; (iv) promote the design of impact evaluation studies to measure impact of project interventions; and (v) coordinate the roles of existing national and regional institutions to better support the planned project activities. Both the R-PCU and the individual N-PCUs will work closely with national environmental and social agencies to ensure due consideration of their respective legislations.

60. REDISSE will also finance the generation of data on animal and human health activities in the ECOWAS countries, which is critical to guide and calibrate investments.

Sub-component 5.2 Institutional support, capacity building, advocacy, and communication. Total costs including contingencies are US\$8.23 million equivalent financed by IDA.

61. REDISSE will help assess and build capacities at national and regional level. It will provide technical and investment support to enhance provision of services by WAHO³⁵ and other cross-cutting regional institutions or organizations relevant to animal and human health sector development. To this end, the project will support: (i) the conduct of capacity gap analysis (including staffing, skills, equipment, systems, and other variables); (ii) identify potential synergies and cross-fertilization possibilities among various operations pertaining to disease surveillance and response, using a progressive pathway for One Health (OH) operationalization at country level, supported by regional institutions; and (iii) upgrading of national public health institutions. REDISSE will also assist in supporting greater engagement and coordination of the three countries in regional decision- and policy-making processes in ECOWAS, as well as among regional public and non-public organizations.

³⁵ WAHO will be the overall project implementing agency and will be primarily responsible for regional coordination, guided by the decisions of the REDISSE Regional Steering Committee under the political leadership of ECOWAS. For regional oversight of specific technical areas where WAHO is not the most competent regional partner, WAHO may delegate operational coordination to other accredited regional bodies, such as RAHC (animal health).

62. The project will support advocacy and communication for a sustained One Health approach. This will include: (i) generation and dissemination of lessons learned at the national and regional levels through One Health (OH) national and regional platforms respectively; and (ii) raising awareness on strategic issues at the decision and policy levels of countries, and regional economic communities to increase and sustain allocation of resources for disease surveillance, preparedness and response.

B. PROJECT FINANCING

63. The lending instrument is an Investment Project Financing (IPF). It is financed under IDA credits and grants in an aggregate amount of US\$90 million equivalent (see table below per country allocation) and an IDA regional grant in the amount of US\$20 million equivalent to finance activities managed by WAHO. The total IDA grant and credit allocation is US\$110 million equivalent for Phase I of the project. In addition, a proposed grant in an amount of US\$4.06 million to be financed under the Disease Surveillance and Response in West Africa Multi-Donor Trust Fund (MDTF) will be used to finance activities under component 1. The World Bank support is planned for six fiscal years (FY2016-FY2022).

The proposed IDA budget breakdown per country for the project is the following:

Country / Regional Institution	Country IDA	Regional IDA	Total
ECOWAS/WAHO/		20.0	20.0
Senegal	15.0	15.0	30.0
Sierra Leone	10.0	20.0	30.0
Guinea	10.0	20.0	30.0
Phase 1 total	35.0	75.0	110.0

C. SERIES OF PROJECT OBJECTIVE AND PHASES

64. The first in the series of projects (SOP) will be delivered in FY16. REDISSE I includes three countries that are at a high state of readiness for investments in surveillance systems enhancement. These include two extremely vulnerable countries and one country with a more effective surveillance systems and which serves as hosts for important regional assets. Guinea and Sierra Leone, which (together with Liberia) bore the greatest burden of the EDV outbreak, and Senegal are included in the first project of the series. The post-Ebola countries are in urgent need of assistance to establish core public health capacity including disease surveillance and response. A significant influx of technical and financial assistance associated with the EVD crisis has allowed these countries to assess their needs, identify priorities and lay plans for health systems recovery and strengthening. Senegal, which weathered the EVD crisis by quickly identifying and containing imported cases of the disease, has better functioning disease surveillance systems from which good practices can be derived for the sub-region.

D. LESSONS LEARNED AND REFLECTED IN THE PROJECT DESIGN

65. The design of the REDISSE program benefits from a rich set of lessons drawn from a variety of sources. These include:

- a. The achievements and challenges faced by World Bank health systems strengthening and disease control operations and ongoing regional projects that are contributing to disease surveillance capacity for human and animal health including the EAPHLN; WARDS, and the PRAPS.
- b. A comprehensive literature review of existing regional disease surveillance and response networking arrangements from other regions including the: (i) Pacific Public Health Network in the Pacific Island Region; (ii) East Africa Infectious Disease Surveillance Network in the East Africa Community (EAC); (iii) Mekong Basin Disease Surveillance (MBDS) network in the Mekong Basin region; (iv) Middle East Consortium for Infectious Disease Surveillance (MECIDS) network in the Middle East; and (v) the South Africa Center for Infectious Disease Surveillance (SACIDS) network. Annex 2 provides a summary of key findings and lessons learned from the analytical studies.
- c. Best practices and lessons learned from international initiatives and development partner projects with similar objectives such as the Global Health Security Agenda (GHS) and associated projects such as the USAID financed EPT2, which is focused on mitigating the impact of novel “high consequence pathogens” of zoonotic origins.
- d. Lessons learned from major infectious disease outbreaks, including the present Zika virus epidemic, the 2014-2015 EVD epidemic in West Africa, the outbreaks of Severe Acute Respiratory Syndrome (SARS) and MERS-CoV, cholera, and meningitis among others. The Global Program for Avian Influenza Control and Human Pandemic Preparedness and Response (GPAI) that was developed to address the H5N1 HPAI epidemic and rolled out as from 2006 in 62 countries through 83 operations, offers particularly pertinent lessons to the REDISSE project. These lessons were captured in a 2014 World Bank Independent Evaluation Group (IEG) evaluation report, titled “*Responding to Global Public Bads – Learning from evaluation of the World Bank experience with Avian Influenza 2006-2013*”.

66. A detailed set of lessons learned and reflected in the Project design are included in Annex 2. Some of the most salient experiences and lessons learned and incorporated are noted below:

- a. Institutional Capacity building: The project design properly takes into account the need to build institutional capacity at both national and regional level.
- b. Address weaknesses in the M&E/Results Framework: the quality-at-entry issues most commonly cited in IEG reviews are: weaknesses in monitoring and evaluation systems, including indicators that measure outputs rather than capacity building and the use of too many indicators, which overwhelm the limited capacity of project management units. The REDISSE project focuses on a set of PDO-level indicators that can assess the progress in improving institutional capacity and the results framework makes use of existing tools such as the Joint external evaluation tool used to assess the capacity of countries to implement the IHR (2005) and the OIE PVS (Performance of Veterinary Services) tool.

- c. Clearly outlined project activities: the REDISSE project addresses the importance of identifying both country-implemented activities and activities implemented by regional institutions that contribute to the global public good nature, and therefore the regionality of the project.
- d. Improving cooperation across sectors, among countries and with development partners: the design of the REDISSE promotes cooperation across sectors through adoption of a One Health and linkages between disease surveillance and epidemic preparedness systems and all hazard disaster management systems at country and regional levels. Collaboration among countries and with development partners will be facilitated through the establishment of national and regional platforms for joint planning and resource coordination.
- e. Building better health systems: the project design thus contributes to long-term systems capacity building across the two sectors to effectively detect and respond to infectious diseases of zoonotic nature in a more integrated manner.
- f. Private sector engagement: adopting lessons learned from other regional projects, the project also promotes partnership with the private sector to improve performance in areas where the private sector may have a comparative advantage over the public sector such as logistics and supply chain management or information technology development.
- g. Ensuring cost-effectiveness of interventions: the IEG report highlights that while many projects supported significant improvement in disease diagnostic capacity, there was a tendency for projects to focus too much on investing in laboratory infrastructure and equipment rather than in systems development and human capacity. REDISSE will apply cost-effectiveness considerations in all aspects of strategic planning and implementation.
- h. Client ownership: another important lesson is that along with the support from donor partners and other international agencies, individual countries are central to ensuring a coordinated regional program that successfully addresses the threats posed by infectious diseases. REDISSE communications activities are intended to keep the issue high on the agendas of Ministers and Heads of State in the region and promote domestic investment in systems maintenance for sustainability.
- i. Sustainability plans: while WB performance in developing and managing the GPAI was overall successful, the failure to sustain its support to infectious disease prevention and control left countries insufficiently prepared to face recurrent or new threats. Moving away from emergency response, and working toward long-term capacity building to support health systems using a cross-sectoral interventions, was identified as the proper approach, which is incorporated in the REDISSE project design.

V. IMPLEMENTATION

A. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

67. Project implementation will be coordinated by WAHO, an affiliate organization of ECOWAS, which will host the regional secretariat of the project. Under this regional coordination, Governments of the three participating countries will implement country-level

tasks. WAHO will also provide support to countries both directly and through service agreements and Memoranda of Understanding (MoUs) with technical organizations such as the RAHC, which is also an affiliate organization of ECOWAS, WHO and OIE. This proposed arrangement is fully in line with IEG's recommendations on regional projects³⁶. Annex 2 describes the various project activities as well as the entities (Governments or partners) responsible for their implementation.

68. WAHO meets all the eligibility criteria for receiving regional IDA funding: Recipient is a bona fide regional organization that has the legal status and fiduciary capacity to receive grant funding and the legal authority to carry out the activities financed. As confirmed by the international protocol creating WAHO (ECOWAS protocol A/P.2/7/87), WAHO is a bona fide regional organization and has legal capacity for pursuing the activities proposed under the Project. Indeed, the objective of WAHO, as per Article III of the above mentioned Protocol is the following: "The objectives of West African Health Organization (hereinafter called "the Health Organization") shall be the attainment of the highest possible standard and protection of health of the peoples in the sub-region through the harmonization of the policies of Member States, pooling of resources, co-operation with one another and with others for a collective and strategic combat against the health problems of the sub-region."

69. Project governance will be provided through a Regional Steering Committee (RSC). The RSC will include representatives of involved Ministries from all the three countries and will meet twice a year. WAHO will serve as the secretariat of the RSC. A regional project implementation unit (R-PIU) has been established within WAHO and reports to the Director General of WAHO and World Bank. The R-PIU will be responsible for day-to-day administration of regional activities, procurement, financial management, programming as well as monitoring and evaluation and will monitor and supervise project implementation. WAHO will also support knowledge management and regional learning. In addition to REDISSE, the R-PIU supports the implementations of three additional IDA supported regional projects the WARDS, Sahel Women Economic Empowerment and Demographic Dividend project (SWEDD), and the Sahel Malaria and Neglected Tropical Disease (NTD) project. The R-PIU has recently been strengthened through the recruitment of additional staff. There will be a project coordinator specifically responsible for REDISSE who will be responsible for technical coordination at regional level. WAHO and RAHC, the latter initially supported by OIE, will also be responsible for the execution of identified regional activities (e.g. regional harmonization of surveillance protocol and reporting of health workers curricula, etc.) and of supporting countries regarding specific issues.

70. As for financial flows, IDA funds will be made available to WAHO through a direct regional IDA grant. The financial agreement will be signed between the World Bank and ECOWAS which will establish a subsidiary agreement with WAHO. WAHO will allocate part of the regional grant proceeds to support the implementation of regional animal health activities and targeted technical assistance to the countries to be carried out by the Bamako Regional Animal

³⁶ "What has generally worked best is reliance on national institutions for execution and implementation of program interventions at the country level, and on regional institutions for supportive services that cannot be performed efficiently by national agencies, such as coordination, data gathering, technical assistance, dispute resolution, and monitoring and evaluation." (IEG 2007).

Health Center supported by OIE. This support is envisaged until the capacity of RAHC is built to the minimum level necessary to carry out project activities.

71. In countries, the project coordination units (PCU) will be responsible for the overall coordination and management of project activities. The PCU will work across sectors to improve efficiency and alignment in the implementation of project intervention. Given the multi-sectoral nature of the proposed activities, an existing national steering committee (NSC) or one to be formed will oversee the yearly planning and monitor the implementation of the project, while a project implementation unit will be set up for coordinating and managing project activities (See Annex 3 for specific details for each of the three countries) as well as transferring and monitoring the use of funds by other implementing ministries and partners. In all countries, the implementing agency will function as an “umbrella ministry”, in charge of coordinating the implementation of the various components by sectoral ministries (agriculture, livestock, health, environment, etc.) and non-governmental organizations (NGOs). Each technical ministry will be represented at the NSCs and the RSC.

72. The following country-specific arrangements will be put in place:

73. Guinea: a One Health and agriculture Steering Committee will be established under the leadership of the Ministry of Health, this committee will serve as the advisory and oversight body for the project. The Project Implementation Unit (PIU) will be housed by the existing Primary Health Services Improvement Project in the Ministry of Health and will be responsible for procurement and financial management and ensure adherence to all WB implementation and reporting guidelines for the REDISSE I. Other implementing agencies, such as the Ministry of Agriculture and Ministry of Health directorates, shall be financed through MoU for agreed deliverables with associated indicators and targets

74. Senegal: Overall governance of the REDISSE I will be provided through the Prime Minister’s office by the multi-sector steering committee of the Global Health Security Program in Senegal with its executive secretariat and its multisectoral technical One Health committee. In line with the agenda for better aid harmonization and alignment, the proposed project will be implemented by the Ministry of Health and Social Action (MSAS), with a close collaboration with the Ministry of Livestock and Animal Production (MEPA), Ministry of Agriculture and Rural Equipment (MAER) and the Ministry of Environment and Sustainable Development (MEDD). Other Ministries (such as the Ministry of Armed Forces and the Ministry of Interior and Public Safety) will also support the project and facilitate implementation.

75. The Project Designated Account will be managed by the Ministry of Economics, Finance and Planning and sub-accounts will be created at MEPA, MAER and MEDD. The REDISSE I will use the scheme already existing at the MSAS to implement the Health and Nutrition Financing Project. Consequently, the DAGE (i.e. the Directorate for Financial Management of the MSAS) will be responsible for financial management and procurement related to the Project, and its capacity will be strengthened. The General Directorate for Health (*Direction Générale de la Santé* or DGS of the MSAS) will be responsible for technical implementation, using the coordination of the current World Bank Project, with the addition of a REDISSE program

officer, an M&E specialist and support staff. The MSAS Cabinet will be responsible for coordination and monitoring.

76. Sierra Leone: an inter-ministerial committee on disease surveillance, epidemic preparedness and response will provide policy orientation and oversight of the REDISSSE I and the allocation of project financing. A One Health committee will be established with the mandate to approve project work plans (overall and yearly), monitor technical progress, provide guidance for project implementation, and ensure regular reporting and dissemination of outputs.

77. The government of Sierra Leone has established an Integrated Project Administration Unit (IHPAU) in the office of the Permanent Secretary of the Ministry of Health so that all donor-funded projects can be managed centrally by one purpose-built unit within the MOHS structure. IHPAU will ensure quality financial management, timely procurement of supplies, and efficient monitoring, accountability and learning on REDISSSE I and all donor-funded projects. Directorates and departments from the MOHS and MAFFS will be responsible for implementation of the project country wide in liaison with district implementation officers.

B. RESULTS MONITORING AND EVALUATION

78. A set of indicators to be monitored and documented to assess performance and progress toward meeting the project objectives are described in the Results Framework (RF) in Annex 1. There is an overall RF to measure regional progress and country-specific RFs with customized annual targets. Results will be reported annually in the Implementation Status Reports (ISRs). WAHO M&E specialists will lead the monitoring and evaluation of the project implementation. As noted in Annex 1, most indicators rely on existing international tools for evaluating IHR and OIE compliance and progress (the JEE tool and OIE PVS evaluation tool respectively) to minimize the burden of data collection on countries. Data sources also may vary by country and WAHO will establish a mechanism for ensuring the quality of the data.

79. The project will support the strengthening of national health information systems to collect and report quality data. Monitoring and Evaluation will be undertaken at the national level by the three participating countries and aggregated at the regional level by WAHO. The countries will be responsible for conducting annual self-assessments using the JEE and OIE PVS tools, and the JEE will be carried out by external experts biennially to validate the quality of the data and findings from the national self-assessments. In principle, OIE PVS external evaluations would be carried out shortly prior to the JEE to streamline findings into the JEE. WAHO will coordinate the M&E function for the project as a whole, based on a M&E manual detailing the requirements for all countries and at the regional level. This will be harmonized with the project implementation manuals (PIM) for all implementing agencies which are expected to be ready within three months of project effectiveness. WAHO will also implement data collection for specific indicators of regional level activities, and will ensure that all participating countries provide data and information of the required quality on time. WAHO will also provide technical backstopping in M&E to participating countries and encourage cross-country learning. At the national level the PCUs of the three participating countries would be responsible for collecting and compiling all national level data, with the assistance of external partners through external

evaluations, including the United State-Center for Disease Control (US CDC) and WHO for the human health sector, and OIE for the animal health sector.

C. SUSTAINABILITY

80. Development of a resilient disease surveillance and response systems for both human health and animal health sectors requires long term investment (See: Annex 5A Economic and Financial Analysis). An IEG report³⁷ which focused attention on the global response to the Avian Influenza (AI) epidemic noted that “despite the critical importance of building strong systems able to address both prevention and control of serious animal and human health threats, hammered [home] each time a major health crisis occur, after Avian Influenza (AI) projects ended, support for zoonotic disease control and pandemic preparedness has not been sustained in most countries. This was due mainly to the fact that the risk initially feared by countries was smaller than perceived, and was also fuelled by the donor community’s shifting priorities (once the initial crisis had passed). The Global Program on Avian Influenza (GPAI) itself, unlike other global programs, was designed as a one-time effort with a fixed financing envelope rather than a long term institutional capacity strengthening program”.

81. The Independent Evaluation Group (IEG) report concluded that “unsustainability results from a combination of: (i) lack of high level political vision and leadership, low level of information and awareness, low visibility of and collaboration with the various stakeholders, (ii) institutional weaknesses, including lack of technical, managerial and financial capacity, as well as (iii) insufficient, non-adapted, or non-properly maintained physical infrastructure and equipment, both from the public and private sector sides.

82. Sustainability was also reduced in some instances where activities were largely outsourced, leaving government agencies with little ownership. By addressing them in a coherent and coordinated fashion, the project will significantly reduce the risk of non-sustainable outcomes. As pointed out by the IEG report, the focus should not be primarily on costly infrastructure and equipment, but rather on developing systems and human capacity. Operations aimed at building or strengthening such systems contribute to making them more sustainable, and more cost-effective. Some actions often require more time than ordinarily granted during a project lifetime, such as legal frameworks, reforming and then stabilizing policies and strategies, high level staff training and recruitments and regionally coordinated activities, among others. The decision to use the SOP approach to systematically address health systems weaknesses of selected West African countries to implement the IHR (2005) and the OIE standards; establish and invest in platforms for collaboration and continuous high level visibility of disease surveillance and response and eventually expand this regional collaboration on disease surveillance to encompass all the countries in West Africa takes into account the findings of the IEG report.

83. The project intends to generate sustainable impact on the capacity for disease surveillance and response at country and regional levels through the following interventions:

³⁷ IEG: Responding to Global Public Bads: Learning from Evaluation of the World Bank Experience with Avian Influenza 2006-13.

- a. Disease surveillance and response policies, standard operating procedures, and relevant technical guidelines will be reviewed and updated;
- b. The workforce from both human, animal health and environmental sectors will be trained on different technical topics such as epidemiology, risk communication, laboratory investigation, health information management, rapid response, etc. The project will promote regional dialogue and identification of best practices for health workforce development, motivation and retention to make sure that critical posts for public health systems, in particular, disease surveillance and response within both human and animal health sectors would be filled and workforce retained. In addition, simulations and drills will be held for the trained personnel to test efficiency and responsiveness of disease surveillance and response systems built by the project. Twinning among the institutions in the region and the centers of excellence outside will be explored as a means to sustain the training initiatives started under the project. Another important element will be the enhancement of managerial capacities within the involved ministries to better manage resources (human and financial) and operations;
- c. Review and prioritization of disease surveillance and control at each country has been planned under the project in order to improve technical and allocative efficiency of funding for the diseases surveillance and control systems for the diseases affecting human and animals in the countries. As the current situation suggests, countries tend to have multiple, vertical disease surveillance systems on a large number of diseases, some of which contribute little to the disease burden. Regular disease burden assessments and prioritization based on the findings will streamline the disease surveillance program and improve better targeting; and
- d. Awareness raising, communication and advocacy materials will be tailored to strategic audiences, with a particular emphasis on political leaders and decision makers.

After the EVD outbreak in the region in 2014/2015, the World Bank has been supporting Liberia, Sierra Leone and Guinea in assessing financial sustainability for disease surveillance and response. This effort will be expanded to include all countries in the project in an effort to identify strategies to sustain disease surveillance and response financing from domestic revenue sources.

84. There is a need to ensure that disease surveillance is prioritized by governments during budget preparations. Despite the recognized public good character of building these health systems, the regular occurrence of new threats and commitment from political leaders and leading agencies to move this agenda forward, many developing countries may continue to identify other pressing issues that will compete for the resources needed to strengthen public health systems and core public health functions. Without substantial mid to long term external targeted financial support, countries may not wish to engage in this path or sustain previous efforts. The project has begun identifying and exploiting opportunities for collaboration with ongoing and any future investments from countries or development organizations in order to build synergies and ensure that investments and outcomes will be sustained. One of the primary engagements is with the United States Government and other contributors to the Global Health Security Agenda (GHSAs). In addition the World Bank has initiated the development of a

mechanism for pooling contribution from multiple donors, the REDISSE MDTF, with the objective of insuring improved resource coordination and longer term commitment to health systems capacity building for disease surveillance and response.

VI. KEY RISKS

A. RISK RATINGS SUMMARY TABLE

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

B. OVERALL RISK EXPLANATION

85. The Systematic Operations Risk Rating Tool (SORT) provides details of the key risks and proposed mitigation measures (Annex 6).

86. The overall risk rating for the project is categorized as substantial. The overall rating is based on an assessment of component risks in which the risk was rated as substantial in six categories: (i) Political and Governance; (ii) Macroeconomic; (iii) Technical Design of Project or Program; (iv) Environment and Social, (v) Fiduciary, and (vi) Stakeholders. The risk rating for Sector Strategies and Policies is rated moderate; while the risk related to Institutional Capacity for Implementation and Sustainability is rated as high.

87. A review of country reports and forecasts published by the Economist Intelligence Unit indicate that political and governance risks are heterogeneous across the ECOWAS region. The risk rating for the political and governance for Guinea and Sierra Leone is rated substantial where as it is rated low risk for Senegal.

VII. APPRAISAL SUMMARY

A. ECONOMIC AND FINANCIAL ANALYSIS

88. There is a strong economic case for investing in integrated disease surveillance and response systems. Preventing and controlling zoonotic disease outbreaks yields large economic

benefits by reducing the threats of epidemics and pandemics. Such benefits of disease surveillance go well beyond the health benefits of reducing the number of infections, reducing mortality and morbidity, and healthcare costs. Disease outbreaks affect economic activity by decreasing demand (as personal income, investment, and exports fall) and supply (as agriculture production falls and businesses in many sectors close), and reduces labor, capital, and productivity, which are the major components of growth (UNDP, 2014). The estimated forgone output due to the latest Ebola epidemics in Guinea, Liberia and Sierra Leone, was over 12 percent of the countries' combined output. The regional loss of output due to slower growth rates was estimated at US\$7.35 billion in 2014 (World Bank, 2014). Globally, the economic impacts of severe pandemics have been estimated at 4.8 percent of the global gross domestic product (GDP) or approximately US\$3 trillion in the 21st century (Jonas, 2013). Compared to the estimated required investments to build a well-functioning global disease surveillance system and response, the expected annual returns on investment of avoiding such large losses are estimated as high as 123 percent (World Bank, 2012).

89. By strengthening cross-sectoral and inter-country capacity for integrated disease surveillance and response, the REDISSE project will enhance the ECOWAS member states capacity to rapidly detect and respond to public health threats of national and international concern. Ultimately, the project will contribute towards significantly reducing the burden of diseases, particularly among poor and vulnerable populations, mitigating the public health and economic risks posed by infectious diseases in humans and animals, and decreasing the threats of future disease outbreaks, thereby promoting global health security. On a global scale, the creation of a regional network in West Africa will serve to harness the power of other regional networks to improve regional and global cooperation of the ECOWAS member countries for the attainment of better population health outcomes and to promote global health security.

90. Rational for Public Sector Provision/Financing.

91. There are three primary rationales for a publicly-provided regional approach to disease surveillance and response network in West Africa. The first is simply the overwhelming economic burden that infectious diseases, individually and collectively, place on the region, constraining regional and national economic development. Communicable diseases decrease productivity, undermine the human resource base and deter foreign investment in Africa. For example, tuberculosis (TB) causes approximately US\$12 billion in annual losses to the global economy. TB patients lose an average of 3-4 months of work time annually with lost earnings amounting to between 20-30 percent of household income (Fonkwo, 2008). It has been shown that malaria inhibits economic growth by 1.3 percent per year in malaria-endemic countries (Gallup and Sachs, 2000). Infectious diseases, particularly those that cause epidemics, continue to make costly disruptions to trade and commerce in every region of the world. The annual potential economic losses due to pandemics are high, at least, US\$30 billion (Jonas 2013). The economic impact associated with HPAI H5N1 between 2003 and 2006 resulted in nearly 2 percent loss of the regional East Asia GDP (IOM, 2009). In an interconnected world, a pathogen from a remote village can reach major cities in any continent in 36 hours (Jonas, 2013). On the animal health side, the OIE estimates that around 10 percent of animal production is lost through diseases in countries with poor performing Veterinary Services; most of these diseases could be prevented and/or controlled in a cost-efficient manner.

92. The second rationale rests on the status of a disease surveillance system as a global public good, which is both non-rival and non-exclusive. The benefit of preventing the spread of infectious disease is spread across individuals and countries, but there is no practical way to restrict the benefits to those who pay for maintaining it (non-excludable). Additionally, the consumption by one person does not reduce the availability to others, within or across nations (non-rivalrous) (Jonas, 2013; WHO, 2005). The benefits of a surveillance and response system go beyond national borders since an undetected, or uncontrolled outbreak is more likely to spread to other countries (WHO, 2005). These benefits accrue to all countries and thus describe a 'pure' global public good. A consequence of global public goods is that there is no practical way to make those who benefit from it to pay ('free-rider' problem). For that reason, it is best if the surveillance and response to infectious diseases are funded by governments rather than by individuals (WHO, 2005). Finally, there are also externalities that justify the public financing of disease surveillance and response system. For instance, reducing risks of zoonotic diseases may increase countries' capacity to trade livestock internationally. It may also result in poverty alleviation for two reasons: first, the burden of infectious diseases affects the poor disproportionately; second, livestock represents a relatively large share of poor's household income, and animal diseases inexorably reduce their welfare and increase their vulnerability (Jonas, 2013).

93. The third rationale is based on the sharing of resources to enhance efficiency. Examples of resurgent polio, meningitis, cholera and yellow fever in West African countries that were thought to have eliminated or controlled them demonstrate the need for a coordinated regional response. Costly high-level resources, such as level 3 reference laboratories, specialized research institutions, and advanced training facilities may efficiently serve the needs of more than one country. It would be wasteful and duplicative to establish these resources in every country, particularly when the critical mass of highly trained personnel and the volume of services are considered. There are also cost savings realizable through the implementation of the One Health approach. The World Bank estimates that the total cost savings are 10 percent to 15 percent of the system's total cost, depending on the prevalence of diseases (World Bank, 2012).

94. The economic analysis of the REDISSE project examines the economic rationale for investing in disease surveillance and response in West Africa. The analysis identifies all potential benefits of the project's components and activities, quantifies them into monetary units and compares them with project costs through a cost-benefit analysis (CBA).

95. Disease outbreaks affect the economy in two different ways. Firstly, by the direct effects of morbidity and mortality on the use of health-care resources and the reduction in the labour force participation (temporarily or permanently through workers being ill, dying, or caring for the sick). Secondly, behavioral effects result from the fear of contagion. It also reduces labor force participation (workers staying at home for fear of exposure), disrupts transportation, motivates governments to restrict entry of citizens from afflicted countries, closes borders, and affects private sector decisions to disrupt trade, travel, and commerce (World Bank, 2014).

96. Behavioural changes have large impacts on the economic activities as people seek to avoid infection. Individuals are likely to change their behaviour by (i) reducing air travel; (ii)

avoiding travel to infected destinations; and (iii) reducing consumption of services such as restaurant dining, tourism, mass transport, and nonessential retail shopping (Jonas, 2013). The SARS outbreak in 2003, for example, infected “only” 8,000 people and resulted in fewer than 800 deaths. However, air travel to Hong Kong SAR, China declined by 75 percent during the epidemic and by 50-60 percent, on average, during the four-month period the outbreak was active. Retail sales declined by 15 percent at the peak, and by about 9 percent over the four-month period (Jonas, 2013; Siu and Wong, 2004).

Modeling the Potential Disease Outbreak Impacts

97. Measuring the impacts of disease outbreaks is challenging given these are sporadic events, with limited data points to estimate probabilities. To overcome the uncertainties around the likelihood of a value of key parameters (probability of a pandemic and the associated economic damage), this analysis used a simulation model. The likely impacts of the proposed intervention are treated as random variables with hypothesized distributions. More specifically, 1,000 simulations for the next 50 years (2016-2065) using an annual probability of a pandemic in West Africa within a range 0.01 to 0.03, which covers the possibility of a mild, moderate and severe pandemic (World Bank, 2012; Jonas, 2013).³⁸ The analysis also assumes the total economic impact in a given year will affect the GDP within a range between -0.07 and -4.8 percent, which also covers the estimated impact of mild, moderate and severe pandemics (World Bank, 2012; Jonas, 2013).³⁹

98. The total annual benefit of controlling an outbreak in West Africa is, on average, equal to US\$7.2 billion. The distribution of expected economic losses presents a relatively long right tail, which means there is a nontrivial chance of seeing extreme losses (however, the tail is shorter than similar exercises at the global level). It is assumed that this estimate includes the health related benefits (avoided mortality and morbidity) and the economic benefits. Applying the distribution of costs proposed by the World Bank (World Bank, 2008), the estimated losses resulting from mortality are equal to US\$864 million (12 percent), the estimated productivity losses due to morbidity and absenteeism sum US\$2 billion (28 percent), and the expected losses resulting from behavior change to avoid infection are equal to US\$4.32 billion (60 percent). The analysis is likely to underestimate the benefits of disease surveillance and response system; the reasons are: (i) it does not calculate the expected impact on endemic diseases; (ii) it takes into account only the impacts in West Africa; and (iii) it assumes the risk of pandemic events this century will be the same within the time frame considered (50 years).

99. The net present value of the project costs, assuming a constant rate of disbursement, is estimated in US\$230 million. By applying the estimated average annual impact constant for the three first years of the project, it is possible to calculate a benefit-cost ratio equal to US\$108.73, i.e. for each US\$1 invested through the project, there will be an expected return of US\$108.73.⁴⁰

³⁸ An alternative to be tested is to calculate impacts by using each of the seven categories of disease – the six categories from table 2 plus a seventh branch for a catastrophic pandemic originating in West Africa.

³⁹ An alternative to be tested is to calculate impacts by using each of the seven categories of disease – the six categories from table 2 plus a seventh branch for a catastrophic pandemic originating in West Africa.

⁴⁰ US\$34.06 billion/US\$313.2 million = US\$108.73. The US\$313.2 is the net-present value of the project total costs (US\$332 million) applying a 3 percent annual discount rate.

Although extremely high, this result is based on parameters subject to high variability. Additionally, this is based on the expected economic impacts estimated through simulations over a 50 year period, for a more accurate measure of the project's five years of implementation a different simulation is necessary (5 year time frame). Such a calculation, taking into account cumulative GDP gains, yields an even higher benefit-cost ratio (US\$631.02).⁴¹ Sensitivity analysis is presented in Annex 5 of the economic analysis.

B. TECHNICAL

100. Regional approach. The project's regional nature is highly relevant and justified, given the transboundary nature of infectious diseases, facilitated by movements of people, livestock and goods at country and regional levels. In addition, given the fact that a significant number of these pathogens can be transmitted between animals and humans (more than 60 percent), there is a critical need for coordination and exchange of knowledge and information between sectors involved with animal and human health and regionally among countries.

101. Health security is a national/regional public good. Achieving the program objective of enhancing regional health security of ECOWAS requires strong cooperation between member countries. Each country requires strengthening in key technical areas to rapidly detect, prevent, and be prepared to respond to epidemic/epizootic-prone diseases. In particular, both human and animal health systems need strengthening particularly in areas of collaboration of intersecting interests. The IHR and OIE provide the overarching international standards and guidelines for strengthening national human and veterinary public health systems. The JEE-IHR and OIE PVS Pathway provide frameworks to gradually achieve these standards.

102. In addition to strengthening national veterinary and human public health systems and their respective regional cooperation mechanisms, there is an urgent need to establish or reinforce and maintain strong collaboration between systems at national and regional levels in order to better manage risks that arise at the animal-human-ecosystem interface (the 'One Health' concept). For that to happen, particular attention will be given to priority core public functions (veterinary public health and human public health) that would reduce these risks. Assessing these core functions, bridging divides among systems and ministries and reducing capacity gaps would constitute a critical element of the program. Country assessment tools now exist for both systems (Performance of Veterinary Services Pathway; the Joint External Evaluation (JEE) tool and IHR monitoring framework) as well as identified bridges for One Health competencies between these tools.

103. Finally, countries will establish a necessary One Health national platform for intersectoral collaboration, planning and monitoring, and, when desirable, joint implementation. At the regional level, activities will support the establishment of a network of those country One Health platforms.

104. Technical domains to be strengthened. While all proposed activities will contribute to the program objective, some will be implemented at country levels and some at regional level. For both human and animal public health surveillance the activities in the following domains are

⁴¹ Applying annual probability of outbreak equal to .03 and GDP losses equal to 4.8 percent

required and have been identified as core areas. At regional level, activities will support sectoral networks pertaining to these four domains: (i) surveillance and information systems; (ii) strengthening of laboratory capacity; (iii) epidemic preparedness and emergency response capacity; and (iv) workforce development.

105. Surveillance systems will provide the capacity either in-country or regionally to detect outbreaks and public health threats in time to implement an appropriate, relevant and coordinated response. Foundational capacity is necessary for both indicator-based (including syndromic) surveillance and event-based surveillance, in order to support prevention and control activities and intervention targeting for both established infectious diseases and new and emerging public health threats. Strong surveillance, supported by modern information technology, will support the timely recognition of the emergence of relatively rare or previously undescribed pathogens in specific countries.

106. Laboratory capacity. A national laboratory system or network is needed to ensure the safe and accurate detecting and characterizing of pathogens causing epidemic diseases, including both known and novel threats, from all parts of the country. Laboratory quality can be defined as accuracy, reliability and timeliness of reported test results and is necessary to identify emergent public health threats and to implement appropriate interventions. Although it is important to strengthen laboratory capacity at all levels of each country's health system, for purposes of efficiency and quality specialized and higher level laboratory functions will be a shared resource at regional level.

107. Preparedness and emergency response capacity. Preparedness and response to public health threats involves promoting local emergency response expertise, creating interconnected robust public health emergency management programs, surveillance and platforms to support planning and decision making, and a trained public health workforce to respond. This includes expertise from both human and animal health service as appropriate. Public health rapid response teams will need to be established and supported. Similarly, veterinary rapid response teams would have to be prepared to intervene for animal disease outbreaks of major importance. Involvement of other key sectors and actors (e.g. law enforcement, customs, military...) for emergency response should also be ensured when cases of zoonotic outbreaks are suspected, collaboration between public health and veterinary services would be warranted. One Health platforms are necessary for multisectoral collaboration, planning, monitoring and evaluation, and joint intervention for specific diseases/issues.

108. Workforce development. A multi-sectoral workforce that is fully competent, coordinated, evaluated, and equipped is needed for prevention, detection, and response activities to be conducted effectively in response to both public health routine functions and emergencies. While developing additional capacity in participating countries for workforce in surveillance, laboratory, and preparedness and emergency response is necessary, workforce resources, especially in specialized fields, can be leveraged regionally as appropriate.

C. FINANCIAL MANAGEMENT

109. As part of the REDISSE project preparation, a financial management assessment of the implementing units has been conducted. The assessment (see Annex 3 for full assessment) was done on the coordinating implementing entities at national level that are the Ministries of Health for Guinea, Senegal and Sierra Leone (using existing PIU within respective ministries), Sierra Leone's Ministry of Agriculture, Forestry and Food Security as well as the WAHO.

110. In order to strengthen the financial management arrangements of the project, within three months after effectiveness, Financial Management Manuals will have to be prepared by the MOHs in Sierra Leone and within one month for Guinea, while all the other implementing entities will have to include financial management arrangements related to the project in their Project Implementation Manuals; WAHO and the MOHs of Senegal and Guinea will within three months after effectiveness each need to recruit a qualified and experienced accountant to account for the project funds. MOH in Guinea will need to assign from existing staff or recruit a qualified and experienced internal auditor within three months after effectiveness; and the implementing entities in the three countries will each need to put in place a functional complaint handling mechanism to enhance service delivery within six months after effectiveness.

111. The Emergency Response Operations Manual (EROM) and the Disbursement Letter will include the detailed disbursement arrangements applicable under the CERC part of the proposed project. As part of such arrangements, a positive list could be used, which would be featured in the EROM, and would include the items against which disbursements will be made. Where a positive list of expenditures is used, the documentation required to support disbursement requests should be agreed (for example, invoices and bills of lading for food imports) and recorded in the EROM and the Disbursement Letter.

112. The conclusion of the assessment is that the financial management arrangements in place meet the World Bank's minimum requirements and, subject to the application of the enhanced accountability principles (see annex 8), are therefore adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by World Bank. The overall Financial Management residual risk rating is substantial for the three countries (Senegal, Guinea, and Sierra Leone) and moderate for WAHO.

D. PROCUREMENT

113. Procurement under the proposed project will be carried out in accordance with the World Bank guidelines: "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised July, 2014, "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised July, 2014, and the "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011, and other provisions stipulated in the Financing Agreement.

114. All procuring entities as well as bidders, and service providers, i.e. 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 paragraphs 1.16 of the Procurement Guidelines and paragraphs 1.23 of the Consultants Guidelines.

115. Procurement shall be carried out by: (A) at the regional level by WAHO and RAHC; and (B) at the country level in: (i) Guinea by the PASSP's Project Coordinating Unit within the Ministry of Health and Public Hygiene; (ii) Senegal by the Ministry of Health and Prevention for four Ministries that will implement the Project (Ministries of: Health and Prevention, Environment, Agriculture, and Livestock); (iii) Sierra Leone by the Integrated Health Projects Administration Unit (IHPAU) in the office of the Permanent Secretary of the Ministry of Health and Sanitation and for the Ministry of Agriculture Forestry and Food Security (MAFFS).

116. A detailed description of procurement procedures and institutional arrangements can be found in Annex 3 - Project Implementation Arrangements.

E. SOCIAL (INCLUDING SAFEGUARDS)

117. The net social impacts and benefits of the project are expected to be positive since it will support the creation of environmentally and socially sound laboratory technologies, surveillance systems and safe and secure mechanisms for the disposal of medical and other waste related project activities in participating countries. As the majority of project activities are expected to take place in existing government owned facilities on government-owned land, the project will not involve land acquisition leading to involuntary resettlement or restriction of access to resources or sources of livelihoods of populations. Therefore, OP 4.12 (Involuntary Resettlement) will not be triggered for this project, and the project will not finance activities that would trigger the policy.

F. ENVIRONMENT (INCLUDING SAFEGUARDS)

118. REDISSE I has been classified as a category B operation due to the low scale and site specific nature and amplitude of its foreseen risks and impacts on both the natural and physical environment. The project is expected to have overall positive environmental impacts through its support to surveillance, monitoring and containment of diseases including zoonosis. Negative impacts are related to the rehabilitation/upgrading of medical and other facilities, pest management, and medical and animal waste management. The environmental safeguards policies triggered by REDISSE I include Environmental Assessment (OP/BP 4.01) and Pest Management (OP 4.09). Each country has prepared and consulted upon a national Healthcare Waste Management Plan (HCWMP), an Integrated Pest and Vector Management Plan (IPVMP), and an Environmental and Social Management Framework (ESMF) which have been disclosed in-country, at WAHO's website, and at the InfoShop (see table below). The ESMFs draw on existing frameworks for agricultural and health projects. During project implementation, Environmental and Social Management Plans and/or Waste Management Plans (WMPs) will be prepared, consulted upon and disclosed; they will address animal waste and other issues.

SAFEGUARDS INSTRUMENT	DISCLOSURE IN-COUNTRY	DISCLOSURE AT INFOSHOP
GUINEA		
ESMF	April 27, 2016	April 27, 2016
HCWMP	April 27, 2016	April 27, 2016
IPVMP	April 27, 2016	April 27, 2016
SENEGAL		
ESMF	April 26, 2016	April 26, 2016
HCWMP	April 26, 2016	April 26, 2016
IPVMP	April 26, 2016	April 26, 2016
SIERRA LEONE		
ESMF	April 29, 2016	April 29, 2016
HCWMP	April 29, 2016	April 29, 2016
IPVMP	April 29, 2016	April 29, 2016

G. PUBLIC CONSULTATION AND PARTICIPATION AND CITIZEN ENGAGEMENT

119. Design and preparation of REDISSE I have been deeply grounded in an inclusive public consultation and participation style. A series of meetings has been held in Dakar (December, 2015 and March, 2016) and in each individual country (January, 2016) that offered a platform for open discussions and experience gathering to better frame the design and preparation of REDISSE I. Reliance on ECOWAS as the regional entity to coordinate the program, especially through one of its branches (WAHO) adds a plausible weight in the consultative and inclusive coordination approach REDISSE I is built on. Moreover, preparation and implementation of the environmental safeguards instruments is being done in a consultative and participatory manner. Likewise, preparation, validation and public disclosure of the environmental and social safeguards instruments for each country will be done alike to ensure broad public engagement (considerate of women, youth, elderly, disabled and vulnerable groups) through ownership and social accountability mechanism that altogether are foreseen to foster a sustainable development path. Since consultation and participation is an iterative process, the same trend will be maintained throughout the lifecycle of REDISSE program.

H. IMPLEMENTATION ARRANGEMENT FOR SOCIAL AND ENVIRONMENTAL (INCLUDING SAFEGUARDS)

120. To ensure adequate and timely implementation of safeguards measures in the related safeguards instruments and project appraisal documents, including legal ones, a two-person team of Social and Environmental Focal Points (SEFPs) will be designated to form a small safeguards unit within the regional implementing Agency (ECOWAS-WAHO). The Social Safeguards Specialist will be responsible for social assessment and development – including gender, youth, and vulnerable groups aspects of the project; the Environmental Safeguards Specialist will be responsible for environmental safeguards and natural resources management— including climate change aspects of the project. Likewise, the same set up will be formed in each recipient country to follow up on the proper handling of social and environmental issues in their respective national projects. The WAHO and National SEFPs will work in close tandem with

the World Bank Safeguards Specialists, who will ensure that the SESFPs' technical capacity is improved throughout the project lifecycle.

121. During project implementation, the two will work closely with the World Bank safeguards specialists to ensure that the standard quality of safeguards documents is met and adequately reported upon. Likewise WAHO-SESFPs will work with national SESFPs to prepare and share periodic reports with World Bank safeguards specialists (to be clarified in the project implementation manual) on the status of safeguards implementation and monitoring. Together, the team will agree on core recommendations to be implemented after each supervision/implementation support mission to ensure compliance with legal documents.

I. WORLD BANK GRIEVANCE REDRESS

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

ANNEX 1: RESULTS FRAMEWORK AND MONITORING

Country: Africa

Project Name: Regional Disease Surveillance Systems Enhancement Program (REDISSE) (P154807)

Results Framework

Project Development Objectives

PDO Statement

The objectives of the Project are: (i) to strengthen national and regional cross-sectoral capacity for collaborative disease surveillance and epidemic preparedness in West Africa, thereby addressing systemic weaknesses within the animal and human health systems that hinder effective disease surveillance and response; and (ii) in the event of an Eligible Emergency, to provide immediate and effective response to said Eligible Emergency.

These results are at | Project Level

Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values					
		YR1	YR2	YR3	YR4	YR5	End Target
Progress towards establishing an active, functional regional One Health platform (Number based on 5 point Likert scale)	1.00	1.00	2.00	2.00	3.00	4.00	4.00
Laboratory testing capacity for detection of priority diseases: Number of countries that achieve a JEE score of 4 or higher (Number)	2.00	2.00	2.00	3.00	3.00	3.00	3.00
Progress in establishing indicator and event-based surveillance systems: Number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	1.00	1.00	2.00	3.00	3.00
Availability of human resources to implement IHR core capacity requirements: Number of countries that achieve a JEE score of 3 or more (Number)	1.00	1.00	2.00	2.00	3.00	3.00	3.00
Multi-hazard national public health emergency preparedness and response plan is developed and implemented: Number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	1.00	1.00	2.00	3.00	3.00

Progress on cross-border collaboration and exchange of information across countries: Number of countries that achieve a score of 4 or higher (Number)	0.00	0.00	2.00	2.00	3.00	3.00	3.00
GUINEA - Laboratory testing capacity for detection of priority diseases (national capacity scores) (Number)	4.00	4.00	4.00	4.00	4.00	4.00	4.00
GUINEA - Progress in establishing indicator and event-based surveillance systems (national capacity scores) (Number)	3.00	3.00	3.00	4.00	4.00	4.00	4.00
GUINEA - Availability of human resources to implement IHR core capacity requirements (national capacity scores) (Number)	3.00	3.00	3.00	3.00	3.00	3.00	3.00
GUINEA - Multi-hazard national public health emergency preparedness and response plan is developed and implemented (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
GUINEA - Progress on cross-border collaboration and exchange of information across countries (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Laboratory testing capacity for detection of priority diseases (national capacity scores) (Number)	4.00	4.00	4.00	4.00	4.00	4.00	4.00
SENEGAL - Progress in establishing indicator and event-based surveillance systems (national capacity scores) (Number)	1.00	1.00	1.00	2.00	2.00	3.00	4.00
SENEGAL - Availability of human resources to implement IHR core capacity requirements (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	4.00
SENEGAL - Multi-hazard national public health emergency preparedness and response plan is developed and implemented (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Progress on cross-border collaboration and exchange of information across countries (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SIERRA LEONE - Laboratory testing capacity for detection of priority diseases (national capacity scores and mean regional score) (Number)	3.00	3.00	3.00	3.00	4.00	4.00	4.00
SIERRA LEONE - Progress in establishing indicator and event-based surveillance systems (national capacity scores) (Number)	2.50	2.50	3.00	3.00	4.00	4.00	4.00
SIERRA LEONE - Availability of human resources to implement IHR core capacity requirements (national capacity scores) (Number)	2.00	2.00	2.00	2.00	3.00	3.00	3.00

SIERRA LEONE - Multi-hazard national public health emergency preparedness and response plan is developed and implemented (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SIERRA LEONE - Progress on cross-border collaboration and exchange of information across countries (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00

Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values					
		YR1	YR2	YR3	YR4	YR5	End Target
Interoperable, interconnected, electronic real-time reporting system: number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	1.00	1.00	2.00	2.00	3.00
Laboratory systems quality: number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	0.00	1.00	2.00	2.00	3.00
Surveillance Systems in place for priority zoonotic diseases/pathogens: number of countries that achieve a JEE score of 3 or higher (Number)	1.00	1.00	2.00	2.00	3.00	3.00	3.00
Workforce Strategy: number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	0.00	2.00	2.00	3.00	3.00
Specimen referral and transport system: number of countries that achieve a JEE score of 4 or higher (Number)	1.00	1.00	2.00	2.00	3.00	3.00	3.00
Applied epidemiology training program in place such as FETP: number of countries that achieve a JEE score of 4 or higher (Number)	0.00	1.00	2.00	2.00	3.00	3.00	3.00
Systems for efficient reporting to WHO, OIE/FAO: number of countries that achieve a JEE score of 5 (Number)	0.00	0.00	0.00	2.00	2.00	3.00	3.00
Mechanisms for responding to infectious zoonoses and potential zoonoses are established and functional: number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	1.00	1.00	2.00	3.00	3.00
Veterinary human health workforce: number of countries that achieve a JEE score of 4 or higher (Number)	0.00	0.00	1.00	2.00	2.00	3.00	3.00
Regional surge capacity and stockpiling mechanisms established (capacity based on 5 point likert scale)	1.00	1.00	1.00	2.00	2.00	3.00	3.00

Number of policy briefings on the status of Disease Surveillance and Response in the region presented at meetings of ECOWAS Heads of State and relevant Ministers (Health, Agriculture, Finance, and Environment)	0.00	5.00	5.00	5.00	5.00	5.00	5.00
Turnaround time from date of specimen collection to date of results returned for priority diseases: number of countries with a turnaround time of 3 days or less (Number)	0.00	0.00	1.00	1.00	2.00	2.00	3.00
Citizens and/or communities involved in planning/implementation/evaluation of development programs (Yes/No)	No	Yes	Yes	Yes	Yes	Yes	Yes
Total number of project beneficiaries and percent female	0.00	107.00	110.00	113.00	116.00	129.00	123.00
GUINEA - Interoperable, interconnected, electronic real-time reporting system (national capacity scores) (Number)	2.00	2.00	2.00	3.00	3.00	4.00	4.00
GUINEA - Laboratory systems quality (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
GUINEA - Surveillance Systems in place for priority zoonotic diseases/pathogens (national capacity scores) (Number)	3.00	3.00	3.00	3.00	4.00	4.00	4.00
GUINEA - Workforce Strategy (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
GUINEA - Specimen referral and transport system (national capacity scores) (Number)	0.00	4.00	4.00	4.00	4.00	4.00	4.00
GUINEA - Applied epidemiology training program in place such as FETP (national capacity scores) (Number)	3.00	3.00	3.00	4.00	4.00	4.00	4.00
GUINEA - Systems for efficient reporting to WHO, OIE/FAO (national capacity scores) (Number)	2.25	3.00	3.00	4.00	4.00	4.00	5.00
GUINEA - Mechanisms for responding to infectious zoonoses and potential zoonoses are established and functional (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	4.00	4.00
GUINEA - Veterinary human health workforce (national capacity scores) (Number)	3.00	3.00	3.00	3.00	4.00	4.00	4.00
GUINEA - Turnaround time from date of specimen collection to date of results returned for priority diseases (Days)	5.00	5.00	4.00	4.00	3.00	3.00	3.00
GUINEA - Citizens and/or communities involved in planning/implementation/evaluation of development programs (Yes/No)	No	Yes	Yes	Yes	Yes	Yes	Yes
GUINEA - Total number of direct project beneficiaries	0.00	12.28	12.60	12.93	13.30	13.62	13.98

GUINEA – Project beneficiaries of which female (percentage)	50	50	50	50	50	50	50
SENEGAL - Interoperable, interconnected, electronic real-time reporting system (national capacity scores) (Number)	2.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Laboratory systems quality (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Surveillance Systems in place for priority zoonotic diseases/pathogens (national capacity scores) (Number)	2.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Workforce Strategy (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Specimen referral and transport system (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	4.00
SENEGAL - Applied epidemiology training program in place such as FETP (national capacity scores) (Number)	2.00	2.00	2.00	3.00	3.00	4.00	4.00
SENEGAL - Systems for efficient reporting to WHO, OIE/FAO (national capacity scores) (Number)	3.00	3.00	4.00	4.00	4.00	5.00	5.00
SENEGAL - Mechanisms for responding to infectious zoonoses and potential zoonoses are established and functional (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	4.00
SENEGAL - Veterinary human health workforce (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	4.00
SENEGAL - Turnaround time from date of specimen collection to date of results returned for priority diseases (Days)	5.00	5.00	4.00	4.00	3.00	3.00	3.00
SENEGAL - Citizens and/or communities involved in planning/implementation/evaluation of development programs (Yes/No)	No	Yes	Yes	Yes	Yes	Yes	Yes
SENEGAL - Total number of project beneficiaries	0.00	14.70	15.03	15.40	15.79	16.18	16.58
SENEGAL - Project beneficiaries of which female (percentage)	51	51	51	51	51	51	51
SIERRA LEONE - Interoperable, interconnected, electronic real-time reporting system (national capacity scores and) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	4.00
SIERRA LEONE - Laboratory systems quality (national capacity scores) (Number)	1.00	2.00	2.00	3.00	3.00	4.00	4.00
SIERRA LEONE - Surveillance Systems in place for priority zoonotic diseases/pathogens (national capacity scores) (Number)	1.50	2.00	2.00	3.00	3.00	3.00	3.00

SIERRA LEONE - Workforce Strategy (national capacity scores and mean regional score) (Number)	2.00	2.00	2.00	3.00	3.00	4.00	4.00
SIERRA LEONE - Specimen referral and transport system (national capacity scores) (Number)	2.00	2.00	2.00	3.00	3.00	3.00	4.00
SIERRA LEONE - Applied epidemiology training program in place such as FETP (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	3.00
SIERRA LEONE - Systems for efficient reporting to WHO, OIE/FAO (national capacity scores) (Number)	3.00	3.00	3.00	4.00	4.00	4.00	4.00
SIERRA LEONE - Mechanisms for responding to infectious zoonoses and potential zoonoses are established and functional (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	3.00
SIERRA LEONE - Veterinary human health workforce (national capacity scores) (Number)	1.00	1.00	2.00	2.00	3.00	3.00	3.00
SIERRA LEONE - Turnaround time from date of specimen collection to date of results returned for priority diseases (Days)	5.00	5.00	4.00	4.00	3.00	3.00	3.00
SIERRA LEONE - Citizens and/or communities involved in planning/implementation/evaluation of development programs (Yes/No)	No	Yes	Yes	Yes	Yes	Yes	Yes
SIERRA LEONE - Total number of project beneficiaries (number)	0.00	6.32	6.49	6.66	6.84	7.03	7.22
SIERRA LEONE - Project beneficiaries of which female (percentage)	51	51	51	51	51	51	51

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Progress towards establishing an active, functional regional One Health platform (Number based on 5 point Likert scale)	Where 1 = no capacity; 2 = governance structure established and endorsed; 3 = an action plan for regional collaboration is developed and endorsed; 4 = action plan is budgeted and implemented; 5 = fifty percent of operational budgets for the implementation of regional action plan comes from national budgets Additional info: The multi-sectoral aspects of One Health require the establishment of a platform consisting of a governance mechanism, an operational action plan, and M&E framework to determine intersecting areas and responsibilities between human, animal, and environmental health	Annual	Self-evaluation	WAHO/RAHC
Laboratory testing capacity for detection of priority diseases: Number of countries that achieve a JEE score of 4 or higher (Number)	Capacity graded on a score of 1-5 where: 1 = no capacity (National laboratory system is not capable of conducting any core tests); 2 = limited capacity (National laboratory system is capable of conducting 1-2 (of 10) core tests); 3 = developed capacity (National laboratory system is capable of conducting 3-4 (of 10) core tests); 4 = demonstrated capacity (National laboratory system is capable of conducting 5 or more (of 10) core tests); and 5 = sustainable capacity (In addition to capability of conducting 5 or more core	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project; self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts

	tests, country has national system(s) for procurement and quality assurance)			
Progress in establishing indicator and event-based surveillance systems: Number of countries that achieve a JEE score of 4 or higher (Number)	Capacity graded on a score of 1-5 where: 1 = no capacity (no indicator or event based surveillance system exists); 2 = limited capacity (indicator and event based surveillance system(s) planned to begin within one year); 3 = developed capacity (indicator OR event based surveillance system(s) in place to detect public health threats); 4 = demonstrated capacity (indicator AND event based surveillance system(s) in place to detect public health threats); 5 = sustainable capacity (in addition to surveillance systems in country, using expertise to support other countries in developing surveillance systems and provide well-standardized data to WHO and OIE for the past five years without significant external support)	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project; Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts
Availability of human resources to implement IHR core capacity requirements: Number of countries that achieve a JEE score of 3 or more (Number)	Capacity graded on a score of 1-5 where: 1 = no capacity (country doesn't have multidisciplinary HR capacity required for implementation of IHR core capacities); 2 = limited capacity (country has multidisciplinary HR capacity (epidemiologists, veterinarians, clinicians and laboratory specialists or technicians) at national level); 3 = developed capacity (multidisciplinary HR capacity is available at national and intermediate level); 4 = demonstrated capacity (multidisciplinary HR capacity is available as required at relevant levels of public health system (e.g. epidemiologist at national level and	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project; Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts

	intermediate level and assistance epidemiologist (or short course trained epidemiologist) at local level available); 5 = sustainable capacity (country has capacity to send and receive multidisciplinary personnel within country (shifting resources) and internationally)			
Multi-hazard national public health emergency preparedness and response plan is developed and implemented: Number of countries that achieve a JEE score of 4 or higher (Number)	Capacity graded on a score of 1-5 where: 1 = no capacity (national public health emergency preparedness and response plan is not available to meet the IHR core capacity requirements); 2 = limited capacity (a multi-hazard national public health emergency preparedness and response plan to meet IHR core capacity requirements has been developed); 3 = developed capacity (national public health emergency response plan(s) incorporates IHR related hazards and Points of Entry AND Surge capacity to respond to public health emergencies of national and international concern is available); 4 = demonstrated capacity (procedures, plans or strategy in place to reallocate or mobilize resources from national and intermediate levels to support action at local response level (including capacity to scaling up the level of response); 5 = sustainable capacity (the national public health emergency response plan(s) is implemented /tested in actual emergency or simulation exercises and updated as needed)	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project; Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts
Progress on cross-border collaboration and exchange	Progress graded on a score of 1-5 where: 1 = no capacity (no formal/informal	Annual	Self-assessment	Participating Countries

<p>of information across countries: Number of countries that achieve a score of 4 or higher (Number)</p>	<p>agreements related to cross border collaboration/information exchange, and no standard operating procedures in place) 2 = limited capacity (informal agreements on cross-border collaboration/ information exchange and standard operating procedures drafted) 3 = developed capacity (formal agreements on cross-border collaboration/information exchange, and standard operating procedures adopted) 4 = demonstrated capacity (formal agreements on cross border collaboration/information exchange and standard operating procedures implemented and routinely monitored) 5 = sustainable capacity (normal agreements on cross-border collaboration/information exchange and standard operating procedures) implemented, routinely monitored and financed from domestic budget.</p>			
--	---	--	--	--

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
<p>Interoperable, interconnected, electronic real-time reporting system: number of countries that achieve a JEE score of 4 or higher (Number)</p>	<p>Capacity graded on a score of 1-5 where 1 = no capacity (no interoperable, interconnected, electronic real-time reporting system exists; 2 = limited capacity (country is developing an interoperable, interconnected, electronic real-time reporting system, for either public health or veterinary surveillance systems); 3 = developed capacity (country has in place an inter-operable,</p>	<p>Annual</p>	<p>JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years</p>	<p>Participating countries, JEE and OIE PVS experts</p>

	interconnected, electronic reporting system, for either public health or veterinary surveillance systems. The system is not yet able to share data in real-time); 4 = demonstrated capacity (country has in place and interoperable, interconnected, electronic real-time reporting system, for public health and/or veterinary surveillance systems. The system is not yet fully sustained by the host government); and 5 = sustainable capacity (country has in place an interoperable, interconnected, electronic real-time reporting system, including both the public health and veterinary surveillance systems which is sustained by the government and capable of sharing data with relevant stakeholders according to country policies and international obligations)			
Laboratory systems quality: number of countries that achieve a JEE score of 4 or higher (Number)	Capacity graded on a score of 1-5 where 1 = no capacity (there are no national laboratory standards); 2 = limited capacity (national quality standards have been developed but there is no system for verifying their implementation); 3 = developed capacity (a system of licensing of health laboratories that includes conformity to a national quality standard exists but it is voluntary or is not a requirement for all laboratories); 4 = demonstrated capacity (mandatory licensing of all health laboratories is in place and conformity to a national quality standard is required); and 5 = sustainable capacity (mandatory licensing of all health	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts

	laboratories is in place and conformity to an international quality standard is required)			
Surveillance Systems in place for priority zoonotic diseases/pathogens: number of countries that achieve a JEE score of 3 or higher (Number)	Capacity graded on a score of 1-5 where 1 = no capacity (no zoonotic surveillance system exists); 2 = limited capacity (country has determined zoonotic diseases of greatest national public health concern but does not have animal zoonotic surveillance systems in place); 3 = developed capacity (zoonotic surveillance systems in place for 1- 4 zoonotic diseases/ pathogens of greatest public health concern); 4 = demonstrated capacity (zoonotic surveillance systems in place for five or more zoonotic diseases/ pathogens of greatest public health concern); and 5 = sustainable capacity (zoonotic surveillance systems in place for 5 or more zoonotic diseases/pathogens of greatest public health concern with systems in place for continuous improvement)	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts
Workforce Strategy: number of countries that achieve a JEE score of 4 or higher (Number)	Capacity graded on a score of 1-5 where 1 = no capacity (no health workforce strategy exists); 2 = limited capacity (a healthcare workforce strategy exists but does not include public health professions e.g. epidemiologists, veterinarians and laboratory technicians); 3 =developed capacity (a public health workforce strategy exists, but is not regularly reviewed, updated, or implemented consistently); 4 = demonstrated capacity (a public health workforce strategy has been	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts

	drafted and implemented consistently; strategy is reviewed, tracked and reported on annually); and 5 = sustainable capacity (“demonstrated capacity” has been achieved, public health workforce retention is tracked and plans are in place to provide continuous education, retain and promote qualified workforce within the national system)			
Specimen referral and transport system: number of countries that achieve a JEE score of 4 or higher (Number)	Capacity graded on a score of 1-5 where 1 = no capacity (i.e. aside from ad hoc transporting, no system is in place for transporting specimens from district to national level); 2 = limited capacity (system is in place to transport specimens to national laboratories from less than 50% of intermediate level/districts in country for advanced diagnostics); 3 = developed capacity (system is in place to transport specimens to national laboratories from 50- 80% of intermediate level/districts within the country for advanced diagnostics); 4 = demonstrated capacity (system is in place to transport specimens to national laboratories from at least 80% of intermediate level/districts within the country for advanced diagnostics; and 5 = sustainable capacity (system is in place to transport specimens to national laboratories from at least 80% of districts for advanced diagnostics; capability to transport specimens to/from other labs in the region; and specimen transport is funded from domestic budget)	Annual	JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years	Participating countries, JEE and OIE PVS experts

<p>Applied epidemiology training program in place such as FETP: number of countries that achieve a JEE score of 4 or higher (Number)</p>	<p>Capacity graded on a score of 1-5 where 1 = no capacity (no FETP or applied epidemiology training program established or no access to such a program in another country); 2 = limited capacity (no FETP or applied epidemiology training program is established within the country, but staff participate in a program hosted in another country through an existing agreement (at Basic, Intermediate and/or Advanced level); 3= developed capacity (one level of FETP (Basic, Intermediate, or Advanced) FETP or comparable applied epidemiology training program in place in the country or in another country through an existing agreement); 4 = demonstrated capacity (two levels of FETP (Basic, Intermediate and/or Advanced) or comparable applied epidemiology training program(s) in place in the country or in another country through an existing agreement); and 5 = sustainable capacity (three levels of FETP (Basic, Intermediate and Advanced) or comparable applied epidemiology training program(s) in place in the country or in another country through an existing agreement, with sustainable national funding)</p>	<p>Annual</p>	<p>JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years</p>	<p>Participating countries, JEE and OIE PVS experts</p>
<p>Systems for efficient reporting to WHO, OIE/FAO: number of countries that achieve a JEE score of 5 (Number)</p>	<p>Capacity graded on a score of 1-5 where 1 = no capacity (no national IHR focal point, OIE Delegate and/or WAHIS National Focal Point has been identified and/or identified focal point/delegate does not have access to learning package and</p>	<p>Annual</p>	<p>JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years</p>	<p>Participating countries, JEE and OIE PVS experts</p>

	<p>best practices as provided by WHO, OIE and FAO); 2 = limited capacity (country has identified National IHR Focal Point, OIE delegates and WAHIS National Focal Points; focal point is linked to learning package and best practices as provided by WHO, OIE and FAO); 3 = developed capacity (country has demonstrated ability to identify a potential PHEIC and file a report to WHO based on an exercise or real event, and similarly to the OIE for relevant zoonotic diseases); 4 = (demonstrated capacity (country has demonstrated ability to identify a potential PHEIC and file a report to WHO within 24 hours and similarly to the OIE for relevant zoonotic disease, based on an exercise or real event); and 5 = sustainable capacity (country has demonstrated ability to identify a potential PHEIC and file a report within 24 hours, and similarly to the OIE for relevant zoonotic disease, and has a multisectoral process in place for assessing potential events for reporting)</p>			
<p>Mechanisms for responding to infectious zoonoses and potential zoonoses are established and functional: number of countries that achieve a JEE score of 4 or higher (Number)</p>	<p>Capacity graded on a score of 1-5 where 1 = no capacity (i.e. no mechanism in place); 2 = limited capacity (national policy, strategy or plan for the response to zoonotic events is in place); 3 = developed capacity (a mechanism for coordinated response to outbreaks of zoonotic diseases by human, animal and wildlife sectors is established); 4 = demonstrated capacity (timely* and systematic information exchange between animal/wildlife</p>	<p>Annual</p>	<p>JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project Self-assessments by countries in intermediary years</p>	<p>Participating countries, JEE and OIE PVS experts</p>

	<p>surveillance units, human health surveillance units and other relevant sectors in response to potential zoonotic risks and urgent zoonotic events); and 5 = sustainable capacity (timely** response to more than 80% of zoonotic events of potential national and international concern)</p> <p>*timeliness is judged and determined by country</p> <p>** time between detection and response as defined by regional/national standards</p>			
<p>Veterinary human health workforce: number of countries that achieve a JEE score of 4 or higher (Number)</p>	<p>Capacity graded on a score of 1-5 where 1 = no capacity (country has no animal health workforce capable of conducting One Health activities); 2 = limited capacity (country has animal health workforce capacity within the national public health system); 3 = developed capacity (animal health workforce capacity within the national public health system and less than half of sub-national levels); 4 = demonstrated capacity (animal health workforce capacity within the national public health system and more than half of sub-national levels); and 5 = sustainable capacity (animal health workforce capacity within the public health system and at all sub-national levels; this includes a plan for animal health workforce continuing education)</p>	Annual	<p>JEE (IHR and GHSA), and OIE PVS evaluation at year 3 and end of project</p> <p>Self-assessments by countries in intermediary years</p>	<p>Participating countries, JEE and OIE PVS experts</p>
<p>Regional surge capacity and stockpiling mechanisms established (capacity based on 5 point likert scale)</p>	<p>Capacity graded on a score of 1 -5 where: 1 = no capacity (no regional surge capacity and stockpiling mechanisms exist); 2 = limited capacity (regional</p>	Annual	Survey	WAHO

	stockpiling mechanism is in place with limited surge capacity); 3 = developed capacity (regional surge capacity and stockpiling mechanism has been established); 4 = demonstrated capacity (regional surge capacity and stockpiling mechanism has been established and tested); 5 = sustainable capacity (effective regional surge capacity and stockpiling mechanism has been established with sustainable funding arrangements from country budget)			
Number of policy briefings on the status of Disease Surveillance and Response in the region presented at meetings of ECOWAS Heads of State and relevant Ministers (Health, Agriculture, Finance, and Environment)	Target number of policy briefings = 5 per year There should be annual reporting to the ECOWAS Heads of state and relevant line ministries (health, agriculture, environment, and finance) on the status of disease detection and response capacity in the region; and bi-annual reports to the AU, WHO/AFRO and OIE	Annual	No description provided.	WAHO
Turnaround time from date of specimen collection to date of results returned for priority diseases: number of countries with a turnaround time of 3 days or less (Number)	Laboratory specimen turnaround time measured by days from collection to results returned must be within a reasonable time frame to determine appropriate responses for early warning and intervention. This depends on laboratory testing capabilities, specimen transport networks, and quality standard	Annual	Self-assessment	Countries
Citizens and/or communities involved in planning/implementation/evaluation of development programs (Yes/No)	Existence/inexistence of citizens and grassroots organizations trained, engaged and incentivized to contribute to the achievement of the project's objectives.	Annual	Survey	WAHO/Participating countries

Total number of project beneficiaries and percent female	Total project beneficiaries are: (i) primary beneficiaries measured as nationals from the five countries and (ii) secondary beneficiaries including service providers (both public and private), as well as regional institutions (WAHO and RAHC) and the percentage of women benefiting from the project's overall activities and from activities specifically addressing their needs whenever possible.	Annual	Survey	WAHO/Participating countries
--	---	--------	--------	------------------------------

Annex 2: Project Description

Regional Disease Surveillance Systems Enhancement Program in West Africa

PROJECT COMPONENTS

1. The REDISSE program design incorporates a shift from a paradigm grounded in crisis response to one that embraces a disaster risk reduction approach and better risk management by building support for the animal health and human health systems, and the required linkages at country and regional level to manage infectious disease threats.
2. The project seeks to address 3 priority areas: (i) strengthen national capacity to detect and respond to infectious human and animal disease threats; (ii) establish national and regional platforms for collaboration and collective action; and (iii) ultimately promote a platform to increase engagement across the human health, animal health and environmental sectors to implement a One Health approach.
3. The project will enhance the capacities of the human and veterinary public health systems of selected ECOWAS member countries (Guinea, Sierra Leone, and Senegal) for efficient and effective surveillance and preparedness for response by: (i) strengthening the capacity of countries to fulfil their obligations under the WHO IHR (2005) using the IDSR framework, and the OIE Terrestrial Animal Health Code and Manual; (ii) reinforcing sustainable and effective regional collaboration and collective action to detect, prepare and respond promptly to priority infectious diseases threats in West Africa including zoonotic diseases; and (iii) establishing an efficient linkage of country health systems to regional laboratory, surveillance, and response networks.
4. The project will be comprised of five components: (i) Surveillance and Information Systems; (ii) Strengthening of Laboratory Capacity; (iii) Preparedness and Emergency Response; (iv) Human Resource Management for Effective Disease Surveillance and Epidemic Preparedness; and (v) Institutional Capacity Building, Project Management, Coordination and Advocacy.
5. The five (5) identified project components and thirteen (13) sub-components will serve as a menu of options for countries to select from so that the project can address specific needs of countries that are at different stages of building their respective disease surveillance, preparedness and response systems.
6. Selected interventions under each component are based on thorough consultations with the government, regional entities, and other key technical and financial partners including but not limited to the Africa Development Bank (AfDB), Bill and Melinda Gates Foundation (BMGF), Canadian International Development Agency (CIDA), Department of International Development (DFID), FAO, the Government of South Korea, Japan International Cooperation Agency (JICA), OIE, US CDC, USAID, WHO. To ensure appropriate linkages and complementarity with other ongoing efforts on disease surveillance and response in the sub-region, the project will fill financing gaps by investing in interventions that are currently under funded and/or lacking

government and donor support at both country and regional level. Donor support is aligned with the post-EVD health system development strategies in the three countries. However, recognizing the complexity of the development partner landscape in the three countries and the unpredictability of funding streams, a joint country-driven annual work plan development process will be adopted to properly reflect country priorities. Assessments will also be carried out under the project to assist countries with identifying critical gaps in financing to better rationalize the use of donor resources in the context of country priority needs.

7. The project will also complement ongoing IDA supported operations interventions including the WARDS project in the ECOWAS countries, the PRAPS and the Ebola Emergency Response Project (EERP) in Guinea and Sierra Leone. For example, under the EERP, the project will supplement and take over the EERP activities based on gap analysis and availability of funds, and will support efforts led by other partners on the project including US CDC, AfDB, UNICEF, and the French Cooperation (refer to Annex 7 for full details of REDISSE project alignment with other World Bank supported and DP project by country). Within the World Bank, the country task team leaders from both health and agriculture sectors will ensure the complementarity of proposed project interventions with existing operations. Overall, support will be provided by the project to complement activities that will be implemented under the ECOWAS RCDC and the identified national collaborating centers of the RCDC.

8. During the first year of the project, the following priorities have been proposed for the three countries under REDISSE I: (i) set up or improvement of institutional mechanisms for the project. For instance, a One Health committee, joint technical working groups, project coordination office at national and, if needed, at subnational level; (ii) preparatory activities such as disease surveillance program assessment and prioritization, disease risk mapping, feasibility studies for civil works that are deemed necessary and (iii) piloting activities such as community event based surveillance and rumour surveillance.

9. The proposed national and regional OH platforms, including the OH committees and Joint Technical Working Groups, will help identify national and regional priorities for disease surveillance, preparedness and response and facilitate the utilization of the findings from the surveillance system for guiding and evaluating the national or regional disease control programs. They will also, facilitate linkages between surveillance efforts to other national and regional initiative (current and future) to support national disease control programs including antimicrobial resistance (AMR). Additionally, linkages between the One Health committee and other existing coordination bodies in both health and agriculture sectors will be set up to ensure a programmatic approach in the development of systems

10. Across all project activities, the project will promote partnership with the private sector to improve areas of known weaknesses in the provision of public goods across all project activities.

Component 1: Surveillance and Information Systems. Total costs including contingencies US\$27.91 million equivalent, of which US\$23.85 is financed by IDA and US\$4.06 million is financed by the MDTF.

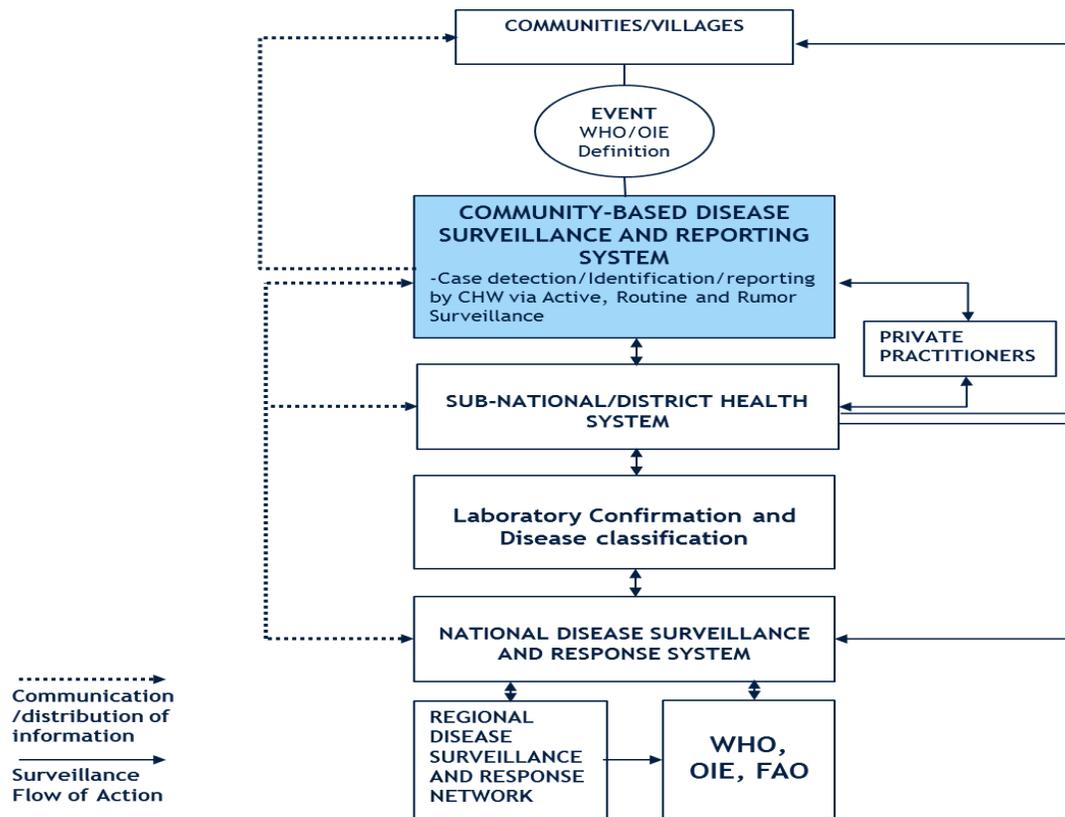
11. This component will provide support to strengthening the human and animal disease surveillance systems of Guinea, Senegal, and Sierra Leone, and the development of regional interconnected human and animal platforms to promote collective action, cross-border and cross-sectoral collaboration in surveillance. It will in particular support the (i) assessment of epidemio-surveillance systems and networks; (ii) prioritization of diseases (including zoonotic ones); (iii) the development of harmonized procedures for the surveillance, reporting, diagnosis of and response to prioritized diseases within the countries of the region; (iv) the development of institutional mechanisms to improve the efficiency and coordination of animal health epidemiological networks with human health networks, including protocols for rapid information sharing across sectors; (v) the design and implementation of operational research (including the use of epidemio-surveillance surveys) and utilization of surveillance data for risk management (decision making on disease prevention and control across the sub-region), and risk communication; and (vi) scale-up of the use of ICT including for disease risk mapping, data analysis, forecasting and reporting purposes. Activities under this component will in particular aim at addressing main weaknesses with the implementation of the IDSR strategy such as the need for the activation and strengthening of the community-based surveillance systems, and the development of an effective and efficient mechanism to ensure interoperability of surveillance systems.

Sub-Component 1.1 Support coordinated community-level surveillance systems and processes across the animal and human health sectors. Total costs including contingencies US\$11.04 million equivalent, of which US\$7.63 million is financed by IDA and US\$3.41 million is financed by the MDTF.

12. This sub-component will involve the strengthening of community-level surveillance structures and processes in countries where gaps exist for detecting events in communities (human and animal). This will entail improving community-level surveillance capacity for active, passive and rumor surveillance including in cross-border areas, and the development and implementation of a plan to ensure adequate territorial coverage for surveillance from the community to the central level.

13. Recognizing the high degree of unregulated movement of livestock and humans across the sub-region, there is a critical need to improve infectious disease surveillance systems including cross-border surveillance and cooperation in animal movement control. Project activities under this component will complement the implementation of the surveillance and reporting action package under the US GHSA specifically with regards to improving border health surveillance at international ports of entry and strengthening capacity for community-based surveillance around land cross-border crossing; and other programs such as RESEPI recipient communities. Activation of the community-level system is expected to lead to improved capacity of countries for the early detection of cases at the source of outbreaks, and early reporting of infectious disease threats in the region including those of zoonotic origins.

Figure 1: Linkages between community action and regional surveillance and response



Sub-Component 1.2 Develop capacity for interoperable surveillance and reporting systems. Total costs including contingencies are US\$10.32 million equivalent financed by IDA.

14. The second sub-component will support the: (i) assessment of existing human and animal health surveillance systems and networks for prioritization of interventions within and across key sectors; (ii) review and update of national and regional disease priorities, and review and development of harmonized guidelines, protocols and tools to enhance surveillance and reporting processes; (iii) development of common methodologies and protocols (applicable to both public and private actors involved in disease surveillance) for efficient flow and utilization of surveillance data; (iv) development of the required ICT infrastructure to facilitate cross-sectoral interoperability of surveillance and reporting systems at the national and regional level; and (v) establishment of the necessary linkage of surveillance and reporting systems to national incidence management systems

15. The project will address the need to reduce the fragmentation that currently exists with multiple surveillance systems, and to improve surveillance data management and reporting processes of the human health and veterinary public health systems. It will support the IDSR strategic goals to improve availability of quality information by investing in the development of the required ICT infrastructure for cross-sectoral interoperability of surveillance and reporting systems at the country and regional level. Interoperable systems will enhance information

sharing practices, the integration of laboratory data following specimen collection, transportation and confirmation, and improve the quality of surveillance reports that will be utilized to address animal health and public health emergencies, and to implement other appropriate rapid response interventions in the sub-region.

16. Adopting best practices from other regions, measures will be taken to ensure the practicality of building effective and efficient interoperable surveillance systems including the identification of country and regional champions, and the formulation of evidence-based policies to support establishment of appropriate capacity for interoperable surveillance systems.

Sub-Component 1.3 Establish an early warning system for infectious disease trends prediction. Total costs including contingencies are US\$6.55 million equivalent, of which US\$5.9 million is financed by IDA and US\$0.65 million is financed by MDTF.

17. This sub-component will involve the establishment of an early warning system including the use of Geographic Information System (GIS) techniques to study infectious disease patterns and make predictions on evolution of disease outbreaks, including zoonoses and identify potential high risk areas for disease outbreaks in the region. Activities under this will support monitoring trends that occur in infectious diseases such as AMR and insecticide resistance, and the impact of climate change on infectious disease outbreaks in the region.

18. The benefits of investing in a regional disease surveillance network in West Africa is well grounded in adopting a multi-dimensional approach, via multi-sectoral, cross-border cooperation, to develop more resilient country health systems equipped with the capacity to respond promptly, and effectively to disease outbreaks, which is critical for preventing mortality risks due to emerging and re-emerging infectious disease outbreak threats, and improving overall health outcomes.

19. Identified interventions will also complement activities under the USAID EPT2, which focuses on risk-based surveillance in select countries for the implementation of appropriate mitigation measures.

20. The project will support countries to undertake activities such as:

- ✓ development of non-financial incentives-based early reporting mechanisms for both human health and animal health;
- ✓ renovation and rehabilitation of facilities, provision of equipment, logistics and materials for sample collection, preservation and shipment to the laboratory; and
- ✓ partnership with the private sector for enhanced disease surveillance and reporting.

21. The project will support regional partners to undertake activities such as:

- ✓ establishment of mechanisms such as MoU for improved regional collaboration on disease surveillance and data sharing practices across countries;
- ✓ design and provision of ICT infrastructure including improving video conference capacity for enhanced communication and regional networking; and

- ✓ periodic dissemination of information on surveillance best practices and stock taking exercises on the state of surveillance and response in the ECOWAS region.

Table 5: Funding allocation by Sub-Component, Component 1

Project activities	Senegal	Guinea	Sierra Leone	ECOWAS/ WAHO
<i>COMPONENT 1</i>				
Sub-Component 1.1 Support coordinated community-level surveillance systems and processes across the animal and human health sector	.66	5.90	1.07	3.41
Sub-Component 1.2 Develop capacity for interoperable surveillance and reporting systems	5.33	3.80	1.19	0
Sub-Component 1.3 Establish an early warning system for infectious disease trends prediction	.83	2.00	3.07	0.65
<i>Sub-total component 1</i>	6.82	11.70	5.33	4.06

Component 2: Strengthening of Laboratory Capacity. *Total costs including contingencies are US\$17.03 million equivalent financed by IDA.*

22. The objective of this component is to strengthen existing networks of efficient, high quality, accessible public health and veterinary laboratories for the diagnosis of infectious human and animal diseases, and to establish a regional networking platform to improve collaboration for laboratory investigation. Public health and veterinary laboratories form an integral and critical part of human and animal disease surveillance systems and an underdeveloped laboratory network hinders governments' ability to confirm and respond in a coordinated manner to disease outbreaks. In designing the specific activities, the project will seek to work with existing institutions, systems and international partners and complement ongoing initiatives such as the Global Fund to Fight AIDS, TB and Malaria (GFATM), RESOLAB⁴², RESOLAB⁴³. It will also provide support to establish the necessary linkages of public health laboratory networks with existing private laboratory networks to improve laboratory practices across countries in the region.

23. The project will aim at addressing key gaps in laboratory networks that are needed for (i) cost-efficient and integrated disease surveillance; (ii) compliance with IHR and OIE international standards; (iii) conduct of quality and rapid diagnosis to guide control measures; and (iv) support to the implementation of operational research.

⁴² ECOWAS Veterinary Laboratory Network for Avian Influenza and other Transboundary Animal Diseases in West Africa

⁴³ This is a network of laboratories across West Africa including Benin, Togo, Burkina Faso, Guinea, Mali, Niger and Senegal.

24. This project will place a strong emphasis on consolidating and bridging regional networks of national human health and veterinary laboratories for efficiency gains and achieving quality diagnostic services. It will seek to address laboratory systems weaknesses across the three countries for the proper diagnosis of priority regional communicable diseases of animal (zoonotic ones in particular) and public health importance, and to share information about those diseases to mount an effective regional prevention and control response. Identified regional centers of excellence in various technical fields will be eligible for regional financing to provide services in training, other forms of technical assistance to countries and implementation of operational research under a contractual agreement. The Project will support the development of regionally harmonized policies, strategies, protocols, aligned with internationally recognized practices, and inter-laboratory trials to ensure prompt and high quality results. This component is divided into three sub-components:

Sub-Component 2.1 Review, upgrade and support network laboratory facilities. Total costs including contingencies are US\$5.81 million equivalent financed by IDA.

25. This sub component will include the: (i) assessment of existing human and animal health laboratory facilities and networks for prioritization of interventions; (ii) increase of laboratories services, and biosafety and biosecurity; (iii) support for improved supply chain management including the establishment of efficient inventory tracking and management systems; (iv) technical support for integrated laboratory information systems and the interoperability with disease surveillance and reporting systems; and (v) support to the strengthening of quality assurance systems for diagnostic services.

26. The project will make investments in renovating and upgrading existing facilities, in ensuring adequate supplies and in strengthening supply chain management. Networking of laboratories will be supported for (i) sharing timely information across countries; and (ii) contributing to joint investigations of disease outbreaks. Networks will ensure improved capacity to diagnose diseases, identify public health threats, and conduct surveillance. Networks will also serve as effective platforms for learning and knowledge sharing.

Sub-Component 2.2 Improve data management and specimen management. Total costs including contingencies are US\$7.21 million equivalent financed by IDA.

27. Under this component, measures to improve data management will include the: (i) strengthening of the competencies of laboratory personnel to analyze and use laboratory surveillance data; (ii) strengthening of laboratory data management systems to ‘report up’ and ‘report down’ more effectively; and (iii) achievement of interoperability between data management systems, where possible.

28. This sub-component will also support strengthening specimen management including the: (i) streamlining of the laboratory specimen referral process, including use of sub-national laboratories rather than having all specimens coming to a central laboratory, where possible; and (ii) improvement of efficiency of specimen transport and disposal systems including through the use of private sector partnerships.

Sub-Component 2.3 Enhance regional reference laboratory networking functions. Total costs including contingencies are US\$4.01 million equivalent financed by IDA.

29. Regional level activities will seek to (i) strengthen existing and possibly identify new regional reference laboratories for specific diseases or diagnostic techniques, (ii) strengthen regional networking and information sharing between countries; and (iii) harmonize laboratory quality assurance policies across countries in the region, based on international standards.

30. The sub-component will support regional reference laboratories to serve as hubs for quality diagnosis along with acting as centers for knowledge generation and sharing. These laboratories will harmonize tools, offer training, technical support, explore innovative laboratory diagnosis, and serve as centers of excellence, documenting and sharing good practices in disease surveillance.

31. This sub-component will also provide support to improve quality assurance, and notably (i) the development of common standards, quality assurance systems, procedures and protocols; (ii) the introduction of peer review mechanisms; (iii) the application of the WHO/AFRO five-step accreditation process and technical assistance to support accreditation of laboratories; and (iv) support for inter-laboratory external quality assessments among the participating countries and recruitment of additional personnel to provide mentorship to laboratories.

32. The project will support countries to undertake activities such as:

- ✓ upgrading laboratory policies, optimization of cost-effective laboratory networks;
- ✓ provision of laboratory equipment and materials, including waste management equipment and protective gear;
- ✓ rehabilitation of existing laboratory facilities;
- ✓ convening of experts to achieve interoperability of surveillance systems with laboratory information systems platform; and
- ✓ development of private sector partnership to strengthen specimen management systems and streamline both the laboratory referral and sample transportation processes.

33. The project will support regional partners to undertake activities such as:

- ✓ strengthening the information sharing platforms of regional reference laboratories;
- ✓ development of a regional laboratory sample transportation system;
- ✓ development of regional proficiency testing between national and regional reference laboratories, and other activities to improve quality assurance processes; and
- ✓ internal renovations and upgrading capacity to manage priority infectious diseases.

Table 6: Funding allocation by Sub-Component, Component 2

Project activities	Senegal	Guinea	Sierra Leone
<i>COMPONENT 2</i>			
Sub-Component 2.1 Review, upgrade and network laboratory facilities	1.21	2.60	2.0
Sub-Component 2.2 Improve data management and specimen management	6.05	.80	.36
Sub-Component 2.3 Enhance regional reference laboratory networking functions	0.49	3.40	.12
<i>Sub-total component 2</i>	7.75	6.8	2.48

Component 3: Preparedness and Emergency Response. Total costs including contingencies are US\$25.96 million equivalent financed by IDA.

34. This component will support national and regional efforts to enhance infectious disease outbreak preparedness and response capacity by improving local, national and regional capacities to prepare for impending epidemics in humans and animals, and to respond effectively to disease outbreak threats including the resulting mortality risks posed by infectious diseases. Project interventions will provide support to improve country and regional surge capacity to ensure a rapid response during an emergency and, for what concerns the human health sector, a better performance of the healthcare system in service delivery.

35. Project activities will involve the establishment of adequate policies, legislation and detailed operational planning for early response mechanisms with due consideration to increased demand for services during epidemics and possibly other disasters, as well as the establishment of multidisciplinary rapid response teams at both national and regional level. It will seek to better educate and prepare communities for outbreaks and emergencies as part of the routine delivery of health services.⁴⁴ As part of the cross-sectoral efforts, the development of joint planning and joint implementation will be pursued. The project will also support enhancing countries' health system capacities for management of disaster recovery priorities including the capacity for the integration of community-centered emergency care into the broader healthcare system.

36. Activities under this component will support the (i) updating and/or development of cross-sectoral emergency preparedness and response plans (national and regional) for priority diseases, and ensuring their integration into the broader national all-hazards disaster risk management framework; (ii) regular testing, assessment, and improvements of plans; (iii) expansion of the health system surge capacity including the allocation and utilization of existing pre-identified structures and resources (at the national and regional level) for emergency

⁴⁴ Evidence-based preparedness activities using the lessons learned on best approaches to involve and prepare will be used to ensure community acceptance and promote community resilience during emergencies)

response, infection prevention and control (IPC); (iv) regional exchange of best practices and lessons learned in preparedness and response across countries in the region; (v) explore the establishment of national and regional financing mechanisms for animal health (including the development of compensation schemes for livestock culling) and public health emergencies; (vi) establishment of public-private partnerships to improve supply chain logistics management and planning across countries in the region; (vii) development of mechanisms for improving access to essential health services and enhancing the delivery of primary healthcare and nutrition needs of the population during and after disasters. To limit duplication of efforts, project activities will complement other ongoing preparedness and response efforts in the sub-region including the GHSA Preparedness and Response project under preparation.

37. Component 3 will be made up of three sub-components.

Sub-Component 3.1 Enhance cross-sectoral coordination and collaboration for preparedness and response. Total costs including contingencies are US\$6.01 million equivalent financed by IDA.

38. This sub-component will support (i) partnership building (including partnership with the private sector) and effective capacity development activities for outbreak preparedness and disaster risk management at the community, district, national and regional level; (ii) improvement and harmonization of policies, legislations, and operating procedures that includes representation from other relevant sectors including environment, customs/immigration, education, law enforcement; and (iii) explore the establishment of national and regional financing mechanisms to ensure swift mobilization of resources for animal health and public health emergencies.

39. This sub-component will support activities to strengthen coordination and communication in outbreak preparedness and response across countries (using a bottom-up and top-down approach) including (i) development, upgrading, testing of operational communication mechanisms, development of risk communication strategies, training of spokespersons; and (ii) the preparation and test-run of communication materials prior to an outbreak to ensure local acceptance and understanding of contents. Adopting a bottom-up and systematic approach to epidemic/pandemic preparedness ensures that the needs of the communities especially those that are most vulnerable to disease outbreaks and the aftermaths of disasters borne from pandemics are properly taken into account. In order to maximize the use of the already limited veterinary network, efforts should be placed to better involve private veterinarians and veterinary para-professionals, in particular in rural areas, in the prevention and response mechanisms, through delegation and appropriate remuneration of activities conducted in this context.

40. Support will also be provided at the regional level for coordination purpose, sharing best practices and lessons learned across the region.

Sub-Component 3.2 Strengthen Capacity for emergency response. Total costs including contingencies are US\$19.95 million equivalent financed by IDA.

41. Weaknesses in surge capacity of the healthcare system are a major problem that hinders the roll-out of effective response interventions including efficiently responding to the high demands for other essential health services during emergencies. This sub-component will support the strengthening of EOC and surge capacity at the national and regional levels, to ensure the implementation of established control measures under national and regional emergency response plans at the community, district, national and regional level.

42. Activities under this sub-component will support (i) the establishment and management of a database of MRRTs that will be available for rapid deployment; (ii) the development and management of stockpiling mechanisms (virtual and physical) to ensure availability of supplies to countries during an emergency response; and (iii) the swift mobilization and deployment of resources in response to major infectious disease outbreaks to limit the need for reallocation of resources and the consequent burden on the health system; (iv) the development of mechanisms to ensure the provision of essential health services to meet other primary health needs and nutrition needs of the population.

Sub-Component 3.3 Contingency Emergency Response Component (CERC) US\$ 0.

43. The objective of this sub-component is to improve the Government's response capacity in the event of an emergency, following the procedures governed by OP/BP 10.00 paragraph 13 (Rapid Response to Crisis and Emergencies). There is a moderate to high probability that during the life of the project that one or more countries will experience an epidemic or outbreak of public health importance or other disaster which causes a major adverse economic and/or social impact (e.g. Ebola), which would result in a request from the country to the World Bank to support mitigation, response, and recovery in the region(s) affected by such an emergency. In anticipation of such an event, this CERC provides for a request from the country to the World Bank to support mitigation, response, and recovery in the district(s) affected by such an epidemic. The CERC will serve as a first line financing option during an emergency response, country IDA funding that hasn't been used will be allocated to this sub-component in the case of an emergency. However, if more financing is required, the restructuring of other projects would also be considered prior to the triggering of the PEF.

44. An immediate EROM will be prepared by each country in complement to the Project Implementation Manual (PIM) as a condition of disbursement within 3 months of project effectiveness. Countries will begin drafting the EROM immediately to ensure that the CERC is in place as soon as possible in the event that an emergency occurs early in the implementation of the Project. Triggers for the CERC will be clearly outlined in the PIM and the EROM acceptable to the World Bank. Disbursements will be made against an approved list of goods, works, and services required to support crisis mitigation, response and recovery

45. The project will support countries to undertake activities such as:

- ✓ review and implementation of existing preparedness and response plans building on the experience of the Integrated National Action Plans⁴⁵ for the animal and human health sector to better respond to infectious diseases threats;
- ✓ improvement of video conferencing and communication equipment for EOCs and RRTs.
- ✓ establishment and management of a real-time database of emergency response health workers on standby for rapid deployment;
- ✓ table-top simulation exercises and drills related to infectious disease outbreaks control at local, subnational and national level and cross-border; and
- ✓ establishment of private sector partnerships for supply chain logistics distribution management.

46. The project will support regional partners to undertake activities such as:

- ✓ development of MoUs for the regional stockpiling platform for the effective management of essential stocks and supplies during an emergency response;
- ✓ regional exchange of best practices and lessons learned in preparedness and response across countries in the region; and
- ✓ establishment of public-private partnerships to improve supply chain logistics management and planning across countries in the region.

Table 7: Funding allocation by Sub-Component, Component 3

Project activities	Senegal	Guinea	Sierra Leone
<i>COMPONENT 3</i>			
Sub-Component 3.1 Enhance cross-sectoral coordination and collaboration for preparedness and response	2.30	1.94	1.77
Sub-Component 3.2 Strengthen capacity for emergency response	5.84	1.95	12.16
Sub-Component 3.3 Contingency emergency response	0	0	0
<i>Sub-total component 3</i>	8.14	3.89	13.93

Component 4: Human Human Resource Management for Effective Disease Surveillance and Epidemic Preparedness. *Total costs including contingencies are US\$14.1 million equivalent financed by IDA.*

47. Component 4 is cross-cutting given that animal and human health workers form the backbone of Disease Surveillance (Component 1), Laboratories (Component 2) and Preparedness and Response (Component 3). A strong, trained and motivated workforce is key to the

⁴⁵ INAPs are country-owned action plans developed by countries affected and threatened by Avian and Human Influenza.

implementation of surveillance activities and is essential for timely response to disease outbreaks. Effective human resource management can bring the right people with the right skills to the right place at the right time and ensure that inputs translate into actual services delivered. The project will provide support to the development of institutional capacity for planning and managing continuing workforce training, leveraging on existing training structures and programs across countries in the region.

48. This component will include two sub-components.

Sub-Component 4.1 Health workforce mapping, planning and recruitment. Total costs including contingencies are US\$2.5 million equivalent financed by IDA.

49. The project aims to strengthen government capacity to plan, implement and monitor human resource interventions. In so doing, the project seeks to build long-term capacity for improved management of human resources. Decisions regarding human resources should be based on a solid understanding of the current state of play in each country. In this regard, stock-taking exercises will greatly aid the planning of HRH interventions and the required recruitment processes.

50. This sub-component includes: (i) assessments of current workforce in terms of quantity, geographical distribution and capacity; (ii) strengthening capacity for human resource management for disease surveillance and response; (iii) supporting the capacity of governments to recruit health workers and create an incentive environment which encourages skilled individuals to join the public sector; and (iv) using private actors to deliver public sector activities through delegation of power (e.g. sanitary mandates for veterinarians).

Sub-Component 4.2 Enhance health workforce training, motivation and retention. Total costs including contingencies are US\$11.6 million equivalent financed by IDA.

Training

51. This sub-component will include an assessment of, and provision of technical assistance to improve institutional capacity for planning and managing continuing workforce training programs (public and private actors), with the goal of achieving an efficient surveillance, preparedness and response.

52. It will also deliver a number of training activities targeted to the diversity of actors involved in surveillance, preparedness and response at various levels. Cognizant of the importance of community involvement in disease surveillance, a key lesson from the Ebola crisis, the project places emphasis on training at the community level, rather than focusing solely on higher level cadres.

53. At the community level, activities may include: (i) training of One Health community agents in community-based surveillance and response; (ii) technical support and supervision of community agents (iii) support to inter-sectoral interventions combining animal and human health service providers within the community, such as promoting the collaboration of public

health informants and livestock farmers through awareness campaigns and training in best practices.

54. At the district and national level, this includes training of health workers in core skillsets (described below). Training will depend on individual country capacity but will seek to leverage on existing programs in the region and other workforce training programs that address critical public health areas.

Motivation and Retention

55. Employment decisions are subject to many factors other than financial ones, such as job satisfaction, community recognition, and other factors that influence individual preferences. The movement of labor is driven by a complex decision-making process, which requires a better understanding of the behavioral characteristics of the health workers. To be successful, any intervention would need to be based on more detailed and accurate understanding of this decision-making process.

56. The project will seek to understand and address the incentive environment within which health workers operate. Armed with an improved understanding of this environment, the project will seek to implement activities which create incentives which not only draw those with relevant skills to the public sector, but also improve staff motivation and retention.

57. Activities under this sub-component will support (i) operational research to better understand the incentive environment; (ii) the provision of incentives-based mechanisms including technical support and supervision for community “One Health” agents engaged in community-based surveillance and response for both public health and veterinary health.

58. The project will support countries to undertake activities such as:

- ✓ exploration of viable options to ensure a centrally coordinated and efficient process for the recruitment and retention of a skilled health workforce available for routine surveillance and rapid deployment.
- ✓ recruitment of new staff according to the findings of assessments (likely to include establishment of positions for field epidemiologists and laboratory specialists at the district level) technical assistance to create systems which oblige individuals receiving specialist education to provide in-country service for a pre-defined period.
- ✓ training of community health agents in community-based surveillance and response.
- ✓ training in case management and containment of infectious patients and livestock.
- ✓ training of specialists, including, but not limited to, those with the following skill sets: IPC (infection prevention and control), epidemiologists, laboratory, data management, communications, information, risk analysis (including risk assessment, risk communication and risk management), pathologists and health economists for economic analysis of disease outbreaks/epidemics/pandemics.
- ✓ sponsorship for long-term training of highly-skilled professionals, e.g. veterinarians and entomologists.
- ✓ leveraging existing programs in the region such as the Field Epidemiology Training Program (FETP), Field Epidemiology and Laboratory Training Program (FELTPs),

Veterinarian Field Epidemiology Training Program (V-FETP), and other workforce training programs that address critical public health areas. The provision of hand held devices for epidemiological event/syndromic surveillance reporting (refer to Component 1) and other incentives such as the provision of internet facilities, toll free numbers, and vehicle maintenance allowances for real time reporting, provision of other incentives-based mechanisms for all cadres including technical support and mentorship.

59. The project will support regional partners to undertake activities such as:

- ✓ identification of pools of experts in the region to support countries and regional institutions when required;
- ✓ reinforcement of the role of regional institutions including ECOWAS-WAHO and ECOWAS-RAHC to build countries' capacity to manage human resources skills including strategic staffing, as well as initial and continuing education planning and implementation, in close partnership with ECOWAS-CDC and other centers of excellence in the region, in particular ACE and training institutions such as EISMV;.
- ✓ cross-country and regional twinning arrangements and staff exchange programs;
- ✓ capacity building for skilled MRRTs.

Table 8: Funding allocation by Sub-Component, Component 4

Project activities	Senegal	Guinea	Sierra Leone
<i>COMPONENT 4</i>			
Sub-Component 4.1 Healthcare Workforce mapping, planning and recruitment.	.60	1.0	.90
Sub-Component 4.2 Enhance health workforce Training, Motivation and Retention	4.23	3.11	4,26
<i>Sub-total component 4</i>	4.83	4.11	5.16

Component 5: Institutional Capacity Building, Project Management, Coordination, and Advocacy. Total costs including contingencies are US\$29.06 million financed by IDA.

60. This component focuses on all aspects related to project management, coordination by WAHO as well as support to enhancing the capacity of the RAHC to coordinate the implementation of animal health interventions. Project management activities to be supported under this component include fiduciary aspects (financial management and procurement), M&E, knowledge generation and management, communication, and the monitoring of safeguard mitigation measures. It also provides for critical cross-cutting institutional support, meeting capacity-building and training needs identified in the five countries and at WAHO and RAHC on top of specific technical capacity-building activities undertaken within the four technical components. It will support the routine assessment of critical animal health and human health capacities of national systems using reference tools (such as OIE PVS and JEE) to identify

weaknesses and monitor progress. This component will build on and complement other projects and initiatives such as the WARDS project (which has been supporting the development of the institutional capacity of WAHO), EAPHLN, GHSA and EPT2 and other discrete activities to foster the harmonization of a functional regional disease surveillance and response network in the ECOWAS region.

61. Lessons learned from the implementation of other regional projects by WAHO including the Sahel Malaria and Neglected Tropical Diseases project, the Sahel Women Economic Empowerment and Demographic Dividend project (SWEDD) and the WARDS project have been taken into account for enhancing the institutional capacity to be supported under this component.

62. Support will also be provided for the establishment of national and regional One Health coordination platforms for the purpose of developing synergies, joint planning, implementation and communication. Strategies will be adopted for generating evidence to be used to advocate for increased and sustained financing for disease surveillance and preparedness from domestic sources.

63. Component 5 will include two sub-components.

Sub-component 5.1 Project coordination, fiduciary management, monitoring and evaluation, data generation, and knowledge management. Total costs including contingencies are US\$20.83 million equivalent financed by IDA.

64. WAHO will host the REDISSE coordination unit (R-PCU) at the regional level, while line ministries in charge or other institutions supporting REDISSE implementation in the three countries will each host a national coordination unit (N-PCU). REDISSE will (i) strengthen the capacities of national and regional institutions to efficiently perform core project management functions including operational planning, financial management, procurement arrangements, and environmental and social safeguards policies in accordance with WB guidelines and procedures; (ii) enhance monitoring and evaluation systems including routine HMIS and other data sources; (iii) manage operational research program implemented by national and regional institutions which have been identified under each of the four technical project components; (iv) promote the design of impact evaluation studies to measure impact of project interventions; and (v) coordinate the roles of existing national and regional institutions to better support the planned project activities.

65. REDISSE will also finance the generation of data on animal and human health activities in the ECOWAS countries, which is critical to guide and calibrate investments.

Sub-component 5.2 Institutional support, capacity building, advocacy, and communication. Total costs including contingencies are US\$8.23 million equivalent financed by IDA.

66. REDISSE will help assess and build capacities at national and regional level. It will provide technical and investment support to enhance provision of services by WAHO, RAHC and other cross-cutting regional and international institutions or organizations relevant to animal

and human health sector development. WAHO will be primarily responsible for regional coordination, guided by the decisions of the REDISSE Regional Steering Committee under the political leadership of ECOWAS. For the regional oversight of the animal health area, WAHO would delegate operational coordination and implementation of regional animal health activities to RAHC, which would do so initially with the support of OIE. The regional activities include both OIE mandated activities as well as activities in support of the RAHC core functions. The latter are intended to be fully transferred to the RAHC as soon as feasible, when RAHC capacity will be considered to be sufficiently established. All regional animal health activities would be implemented collaboratively in order to build RAHC capacities so that the staff recruited in the RAHC would be in a good position to take over the management of the regional AH (Animal Health) activities, according to WB rules. Both WAHO and RAHC/OIE would use, as appropriate, the services of other human and animal health key technical partners, such as WHO and FAO. The project will support in particular the: (i) conduct of capacity gap analysis (including staffing, skills, equipment, systems, and other variables); (ii) identification of potential synergies and cross-fertilization possibilities among various operations pertaining to disease surveillance and response, using a progressive pathway for One Health operationalization at country level, supported by regional institutions (see Table below); and (iii) establishment or upgrading of national public health institutions. The project will also assist in supporting greater engagement and coordination of the three countries in regional decision- and policy-making processes in ECOWAS, as well as among regional public and non-public organizations.

Table 9: Possible progressive approach towards the implementation of OH at the national level

Steps	General Objectives	How	With who	By whom
1-	-Understanding of respective strengths and weaknesses with regards IHR and OIE standards -Broad identification of areas for common action	Joint workshop with HH (Human Health) and AH staff from respective ministries “IHR-PVS” bridging workshop	Representative staff from relevant ministries from central up to the smaller administration level possible (e.g. min 20 persons from each sector)	-Pool of OIE PVS and WHO IHR experts -Role of regional technical bodies in developing own capacity to facilitate and coordinate these national workshops (e.g. WAHO and RAHC, with support from WHO HQ/AFRO and OIE)
2-	Development of a common strategy to address issues where joint action is required	-Formal commitment from line ministries -Establishment of an intersectoral committee tasked with the development of the strategy (N.B.: various governance mechanisms are possible)	-Mainly heads of relevant departments from the line ministries; -Involvement of relevant stakeholders	-Self -Possible facilitation by the regional level (pool of trained experts for regular guidance along the process)

		-Ad Hoc meetings held N.B.: strategy=Living document with attached process for regular revision		
3-	Prioritization of diseases (for OH approach)	-Use of disease prioritization tools adapted for One Health approach (many possibilities: e.g. Animal Health tools such as the EC tool, CaribVet tool) N.B.: lack of data on likely important issues can serve to prompt specific surveillance programs and be retrofitted into the prioritization tools N.B.: prioritization exercise can also be used individually to identify other non-OH priorities	- Selected staff from relevant departments from the line ministries; -Involvement of relevant stakeholders	- Support from external partners - Possible facilitation by the regional level (pool of trained experts)
4-	Development of a detailed action plan for OH activities	-Derives from 2 and 3 -Joint working groups for each specific topic to address -Core team ensuring coordination and consolidation NB: includes detailed budget, timeline, M&E	- Selected staff from relevant departments from the line ministries; -Involvement of relevant stakeholders	- Support from external partners (using the INAP ⁴⁶ experience) - Possible facilitation by the regional level (pool of trained experts)
5-	Implementation of the action plan	-E.g. development of joint protocols for surveillance and/or control activities with clearly defined roles of respective sectors; joint and complementary trainings (in-service and pre-service);	-Relevant staff from line ministries and selected stakeholders (from central to field level)	- Self - Possible facilitation by the regional level (inputs/expertise)

⁴⁶ INAP = Integrated National Action Plans program was an initiative of the Partnership for Africa Livestock Development [Alive] Platform, jointly organized by FAO , the World Bank, the African Union-Inter African Bureau for Animal Resources [AU-IBAR], OIE and WHO

		<p>development of communication tools and materials; development of multi-sector emergency plans and simulation exercises; adaptation of legislation/regulations as need be; coordination of data collection/analysis, reporting mechanisms and communication procedures; disease surveillance and control cost-benefit analysis; risk analysis; etc.</p> <p>NB: scope can vary greatly based on respective initial capacities (human resources, infrastructure, technical and financial capacities)</p>		
--	--	---	--	--

67. The project will support advocacy and communication activities that sustain the One Health approach. This will include: (i) generation and dissemination of lessons learned at the national and regional levels through OH national and regional platforms respectively; and (ii) raising awareness on strategic issues at the decision and policy levels of countries, and at the regional economic communities level, and increasing and sustaining allocation of resources for disease surveillance, preparedness and response.

Table 10: Funding allocation by Sub-Component, Component 5

Project activities	Senegal	Guinea	Sierra Leone	ECOWAS/ WAHO
COMPONENT 5				
Sub-component 5.1 Project coordination, fiduciary management, monitoring and evaluation, data generation, and knowledge management	1.79	2.5	1.54	15
Sub-component 5.2 Institutional support, capacity building, advocacy, and communication	.67	1.0	1.56	5
Sub-total of component 5	2.46	3.50	3.1	20

PROJECT FINANCING

68. The lending instrument will be a Series of Projects (SOP) as part of an Investment Project Financing (IPF), financed under IDA Credits and Grants in the amount of US\$110 million equivalent for the first phase (see table below). In addition, a multi-donor trust fund from the Department of Foreign Affairs, Training and Development in Canada was created in the amount of US\$4.06 million and will be used to finance activities under component 1. The World Bank support is planned for six years (FY2016-FY2023). Hence, total project amount is US\$114.06 million or equivalent for the first phase of the project.

69. The proposed IDA budget breakdown per country for the REDISSE-SOP 1 is the following:

Table 11: IDA budget breakdown per country

Country / Regional Institution	Country IDA	Regional IDA	Total
ECOWAS/WAHO/		20.0	20.0
Senegal	15.0	15.0	30.0
Sierra Leone	10.0	20.0	30.0
Guinea	10.0	20.0	30.0
Phase 1 total	35.0	90.0	110.0

PROJECT COST AND FINANCING

70. The proposed budget breakdown for the project is the following:

Table 12: Proposed budget breakdown per component

Project Components	Project Cost (US\$ million)	IDA Credit/Grant	IDA Regional Grant	MDTF
Component 1: Surveillance and Information Systems	27.91	23.85	0	4.06
Sub-Component 1.1 Support coordinated community-level surveillance systems and processes across the animal and human health sectors	11.04	7.63	0	3.41
Sub-Component 1.2 Develop capacity for interoperable surveillance and reporting systems	10.32	10.32	0	0
Sub-Component 1.3 Establish an early warning system for infectious disease trends prediction	6.55	5.96	0	0.65
Component 2: Strengthening of Laboratory Capacity	17.03	17.03	0	0
Sub-Component 2.1 Review, upgrade and network laboratory facilities	5.81	5.81	0	0
Sub-Component 2.2 Improve data management and specimen management	7.21	7.21	0	0
Sub-Component 2.3 Enhance regional reference laboratory networking functions	4.01	4.01	0	0
Component 3: Preparedness and Emergency Response	25.96	25.96	0	0
Sub-Component 3.1 Enhance cross-sectoral coordination and collaboration for preparedness and response	6.01	6.01	0	0
Sub-Component 3.2 Strengthen Capacity for emergency response	19.95	19.85	0	0
Sub-Component 3.3 US\$0 Component for Emergency Response	0	0	0	0
Component 4: Human Resource Management for Effective Disease Surveillance and Epidemic Preparedness.	14.1	14.1	0	0
Sub-Component 4.1 Healthcare workforce mapping, planning and recruitment.	2.5	2.5	0	
Sub-Component 4.2 Enhance health workforce Training, Motivation and Retention.	11.6	11.6	0	0
Component 5: Institutional Capacity Building, Project Management, Coordination and Advocacy	29.06	9.06	20	0
Sub-component 5.1 Project coordination,	5.83	5.83	15	0

fiduciary management, monitoring and evaluation, data generation, and knowledge management				
Sub-component 5.2 Institutional support, capacity building, advocacy, and communication	3.23	3.23	5	0
Total	114.06	90	20	4.06

SERIES OF PROJECTS OBJECTIVE AND PHASES

71. Given high country demand for participation in the project, the multiplicity and complexity of the issues involved, the large number of stakeholders and the need for an accelerated project preparation schedule, an agreement was reached to prepare REDISSE as a series of interdependent projects supporting a program involving multiple borrowers, all of which would need to participate for the program’s objectives to be achievable. This approach provides a platform for high-level policy and regulatory harmonization, cooperation, and coordination between countries aiming toward achieving benefits that will go beyond each country’s boundaries; they create regional public goods, generate positive externalities, or mitigate negative ones.⁴⁷

72. The first in the series of projects (SOP) will be delivered in the fourth quarter of FY16. REDISSE-I includes three countries that are at a high state of readiness for investments in surveillance systems enhancement and that includes two extremely vulnerable countries and one country which has more effective surveillance systems and serves as host for important regional assets. The estimated project financing is US\$110 million in country and regional IDA. Guinea, and Sierra Leone, which (together with Liberia) bore the greatest burden of the Ebola Virus Disease (EVD) outbreak, are included in REDISSE I. These countries are in urgent need of assistance to establish core public health capacity including disease surveillance and response. A significant influx of technical and financial assistance associated with the EVD crisis has allowed these countries to assess their needs, identify priorities and lay plans for health systems recovery and strengthening. Senegal, which weathered the EVD crisis by quickly identifying and containing imported cases of the disease has better functioning disease surveillance systems from which good practices can be derived for the sub-region.

73. REDISSE II is expected to be delivered in Fiscal Year 17 (FY17). The estimated project financing for REDISSE-II is US\$212 million. FY17 delivery of this project will allow additional time for consultations, assessments and planning needed to ensure country readiness. The REDISSE II countries will include: Liberia, Nigeria, Cote d’Ivoire, Guinea Bissau, Ghana, Togo, and Benin. Most of the REDISSE II countries participated in regional consultations in Dakar, Senegal, on December 1-4, 2015, alongside countries in Guinea, Senegal and Sierra Leone to ensure consistency of focus, common priorities and commitment to collaboration across the two projects. Several of the REDISSE II countries (notably Liberia and Nigeria) are far advanced in the project preparation and planning process. Together, REDISSE I and II constitute a block of equatorial, coastal countries with shared borders and similar epidemiologic profiles which

⁴⁷ Investment Project Financing-Series of Projects Guidance Note, World Bank, OPSPQ. July 1, 2014

extends from Senegal in the west to Nigeria in the east. Pending funding availability, REDISSE III would be delivered in Q4 of FY17 and would target Niger, Burkina Faso, Cape Verde, Mali and Gambia.

74. Together, REDISSE I and II constitute a block of equatorial, coastal countries with shared borders and similar epidemiologic profiles which extends from Senegal in the west to Nigeria in the east. The remaining five countries (Cape Verde, Mali, Gambia, Niger and Burkina Faso) would constitute REDISSE-III and could be delivered to the Board in Q4 of FY17.

LESSONS LEARNED AND REFLECTED IN THE PROJECT DESIGN

75. Recognizing the inherent challenges faced with designing regional projects across multiple sectors, the REDISSE project builds on the achievements and lessons learned from several regional projects including the EAPHLN and the West Africa Regional Disease Surveillance (WARDS) project. The REDISSE project is also well-aligned with the objectives of the GHSA and adapts best practices from the GHSA country assessments and tools utilized for the implementation of the action packages under the GHSA. Best practices are also adopted from the USAID Preparedness and Response project: Emerging Pandemic Threats (EPT1), which was focused on mitigating the impact of novel “high consequence pathogens” of zoonotic origins. The main objective of the EPT2 project is to enable national governments to establish and strengthen systems, policies and practices for the prevention, detection, response, and control of emerging disease threats, with a focus on zoonotic diseases. (USAID, 2015).

76. Lessons have been learned from the recent responses to major infectious disease outbreaks, including the ongoing AIDS pandemic, SARS in 2003, the H5N1 HPAI epidemic that started in 2004, the H1N1 pandemic in 2009-10, MERS since 2012, and the Ebola outbreak in West Africa in 2014-15. Given its regional scope, global influence, cross-sectoral interventions, and duration, the Global Program for Avian Influenza Control and Human Pandemic Preparedness and Response (GPAI) that was developed to address the H5N1 HPAI epidemic and rolled out as from 2006 in 62 countries through 83 operations, offers strong lessons that can be applied to this project. Most recently, the Independent Evaluation Group (IEG) carried out an evaluation of 22 GPAI country projects, and summarizes the key evaluation findings in the 2014 IEG report: “Responding to Global Public Bads – Learning from evaluation of the World Bank experience with Avian Influenza 2006-2013” (See Box 1 below).

77. The IEG report highlights a number of interesting technical lessons learned from the projects that are incorporated in the REDISSE project design and implementation arrangements. Complementing these lessons are best practices adapted from a comprehensive literature review of successful models of regional networking in disease surveillance and response adopted by other regions, including the evidence of impact, value-added and sustainability considerations.

78. The most salient experiences and lessons learned are noted below, keeping in mind that the main characteristics of the REDISSE project are its focus on building and sustaining national public health and animal health surveillance systems, strengthening their inter-sectorality, and promoting regional cooperation in developing national and regional preparedness and response capacity to improve global health security.

- ✓ Analytical Studies: The project design has been informed by extensive analytical work on the post-Ebola Health Systems Strengthening Financing Framework. Best practices on the structure and function of regional disease surveillance and response networks in other regions were assessed under the third component of the ASA (Advisory Services and Analytics). The project incorporates lessons learned from comprehensive literature review of existing regional disease surveillance and response networking arrangements adopted in other regions including the: (i) Pacific Public Health Network in the Pacific Island Region; (ii) East Africa Infectious Disease Surveillance Network in the East Africa Community; (iii) Mekong Basin Disease Surveillance network in the Mekong Basin region; (iv) Middle East Consortium for Infectious Disease Surveillance network in the Middle East; and (v) the South Africa Center for Infectious Disease Surveillance network. The table below provides a summary of key findings and lessons learned from the analytical studies.

- ✓ Institutional Capacity building: The project design properly takes into account the need to build institutional capacity at both national and regional level. Recognizing that regional organizations typically do not have the mandate or capacity to implement major programs, a part of the project will address building the institutional capacity of the ECOWAS-WAHO and ECOWAS-RAHC to support the implementation of identified regional level activities that complement national activities.

- ✓ Address weaknesses in the M&E/Results Framework: The quality-at-entry issues most commonly cited in IEG reviews are: weaknesses in monitoring and evaluation systems (with indicators that focused on production of outputs that do not necessarily assess whether actual increase in surveillance and response capacity has been achieved rather than on achievement of intermediate or final outcomes); indicators that measure the completion of outputs are often not very useful, especially in the case when no outbreaks occur. Another commonly reported problem is the use of too many indicators, which overwhelm the limited capacity of project management units. This results in failure to collect data, and/or data collected solely for routine reporting purposes rather than for project management purposes. Given the REDISSE project focuses on the prevention and preparedness for the control of infectious disease outbreak threats with uncertain probability of occurrence and unknown magnitude of impact (in the event that such outbreaks occur), some selected indicators have been chosen as PDO-level indicators that can assess the progress made in improving intermediate outcomes including improvements in institutional capacity (effectiveness of surveillance systems, etc.). The project results framework also makes use of existing tools such as the Joint External Evaluation tools used to assess the capacity of countries to implement the IHR (2005) and the OIE PVS (Performance of Veterinary Services) tool. The project has also been designed in close collaboration with the US CDC to align the results framework indicators with measures utilized in the implementation of the GHSA.

- ✓ Clearly outlined project activities: The REDISSE project addresses the importance of distinguishing between country-implemented activities to be financed under the project for improving disease surveillance systems capacity and activities implemented by regional institutions that contribute to the global public good nature of the project.
- ✓ Improving cooperation across sectors and regions: Effective control of infectious diseases and preparedness for outbreak of animal origins requires cooperation and coordination between animal and human health sectors, both at the strategic level and in implementation. The design of the REDISSE relies heavily on the cooperation of both sectors within the World Bank, and among country government representatives, regional entities, and Development Partners. The project design highly promotes cross-sectoral interventions at the regional level to encourage inter-country cooperation, an important element reported to be lacking in the GPAI projects. The project design also encourages systematic institutional support to encourage cross-sectoral coordination from preparation to project implementation.
- ✓ Implementation arrangements: The project will put in place a project coordinator (PCU) responsible for the overall coordination of project activities across sectors to improve efficiency in the implementation of project interventions.
- ✓ Building better Health Systems: The REDISSE project design incorporates a shift from a paradigm grounded in crisis response to one that embraces a disaster risk reduction approach and better risk management by building support for the required animal health and human health systems, and the required linkages at country and regional level to manage infectious disease threats. The project design thus contributes to long-term systems capacity building across the two sectors to effectively detect and respond to infectious diseases of zoonotic nature in a more integrated manner. In the longer term, the project design accounts for the need to build sectoral capacity to perform core public health and veterinary health functions in line with the international standards established by WHO and OIE. The design of the REDISSE project also addresses the need for integrated surveillance systems that can tackle various kinds of disease outbreaks, and the development of interoperable systems for improving data sharing practices between the animal and human health surveillance systems for zoonoses and other common issues such as AMR.
- ✓ Private sector engagement: Adopting lessons learned from other regional projects, the project also promotes partnership with the private sector to improve areas of known weaknesses in the provision of public goods like supply chain logistics planning and management, biosecurity, specimen transportation systems, and development of clear communication strategies tailored to the local context, and the stronger involvement of private actors in disease surveillance and control activities (e.g. sanitary mandate for private veterinarians).
- ✓ Ensuring Cost-effectiveness of interventions: The IEG report highlights that while many projects supported significant improvement in disease diagnostic capacity, there

was a tendency for projects to focus too much on investing in laboratory infrastructure and equipment rather than in systems development and human capacity. Having thoroughly considered the cost-effectiveness and high maintenance cost implications (infrastructure and human capacity) required to sustain a Biosecurity Level 3 (BSL3) laboratory, the REDISSE project design will focus on improving overall laboratory performance at all levels of the health pyramid, but only consider supporting the upgrading of identified reference laboratories to BSL3 laboratory standards as a regional level activity that will promote effective laboratory networking among countries. Other cost-effective project interventions have been thoroughly considered and incorporated in the project. For example, to reduce the time taken for diagnostic tests, the project takes into account that it is often cost-effective to develop an effective specimen transportation system rather than to finance a large and ultimately unsustainable laboratory network.

- ✓ Client ownership: Another important lesson is that along with the support from donor partners and other international agencies, individual countries are central to ensuring a coordinated regional program that successfully addresses the threats posed by infectious diseases. For example, while pandemics and AMR are global threats, programs to reduce these threats must be initiated and led by countries, based on their assessment of opportunities to meet country goals through reduction of emerging and reemerging infectious disease burdens, including endemic diseases. Country commitment to integrated programs is critical, as is coordinated donor support for such programs.
- ✓ Sustainability Plans: The project design accounts for the need to mainstream epidemic preparedness and zoonotic diseases risk management into ongoing agendas across the health and agriculture sector to ensure sustainability. While WB performance in developing and managing the GPAI was overall successful, the failure to sustain its support to infectious disease prevention and control left countries insufficiently prepared to face recurrent or new threats. Moving away from emergency response, and working toward long-term capacity building to support health systems using a cross-sectoral interventions, was identified as the proper approach, which is incorporated in the REDISSE project design.

Table 13: Summary of findings from literature review on evidence of value and impact of regional networking in disease surveillance and response

Indicators/Measures of value-added	Case Study Network	Evidence of Impact
<i>Epidemiologic Indicators</i>		
Reduced time to detection	EAIDSNet	○ Early detection of 4 Ebola outbreaks and points of transmission in Uganda (see Table 5.1)
Cases/Outbreaks averted	EAIDSNet	○ Averted outbreaks and reduced cases of Ebola, Rift Valley Fever, Marburg, and Wild Polio Virus

Effective early warning system with the capacity for trends assessment established	PPHSN	<ul style="list-style-type: none"> Establishment of PacNet has resulted in the implementation of preventive measures against the spread of emerging and reemerging infectious diseases across countries in the region including Dengue Fever, Influenza, Measles, Rubella and SARS
Reduced time to action/effective response	EAIDSNet	<ul style="list-style-type: none"> Reduced time of transmission of vital information from surveillance data for effective response
Magnitude of mortality and morbidity averted	EAIDSNet	<ul style="list-style-type: none"> Containment of the spread of 4 recorded outbreaks of EVD in the region
Measure of disease risk factors for the development of early prevention interventions	MBDS	<ul style="list-style-type: none"> Training of workforce on disease risk communication across countries in the Mekong basin
<i>Measure of improved IHR (2005) Core Capacities</i>		
Increase in country technical capacity (including improved usage of ICT)	EAIDSNet; MBDS; SACIDS	<ul style="list-style-type: none"> Successful pilot of a web-based One Health portal for linking animal and human health disease surveillance (EAIDSNet); Successful partnership with the University of Mahidol to train cross-border officials on the use of Geographic Information Systems for research, outbreak investigations and communication (MBDS) Partnership with EAIDSNet on the pilot of a mobile phone-based system for rapid cross-border communication of animal-human health surveillance information (SACIDS)
Improved surveillance and usage of surveillance data for action/implementable policy formulation	EAIDSNet; MECIDS; PPHSN	<ul style="list-style-type: none"> Improved framework for cross-border surveillance within the context of IHR (2005) and IDSR Improved reporting system used for mitigating the impact of AI (MECIDS) Streamlining of surveillance data across member countries
Improved Preparedness and Response Capacity	EAIDSNet; MBDS; MECIDS	<ul style="list-style-type: none"> Successful completion of a field simulation exercise in HPAI pandemic preparedness (EAIDSNet) including at the Kenyan-Ugandan border; Successful Preparation for and response to H5N1, Dengue Fever Outbreaks and natural disasters in Myanmar in 2008 (MBDS); Successful preparedness and response to

		the H1N1 outbreak in the middle east region (MECIDS)
Number of cross border sites established (Points of Entry)	EAIDSNet; MBDS	<ul style="list-style-type: none"> ○ Strengthened district health management teams at cross-border districts; ○ Expansion of cross-border sites from 4 to 24 in 3 years (MBDS)
Improved laboratory confirmation	EAIDSNet; across all regional networks	<ul style="list-style-type: none"> ○ Implementation of activities under the EAPHLN project to improve laboratory capacity in the region ○ Promotion of better laboratory practices and dissemination of standardized laboratory protocols
Appropriately trained and skilled Human Resources	EAIDSNet; MBDS; MECIDS	<ul style="list-style-type: none"> ○ Expansion of the HRH staffing capacity for disease surveillance and response using a One Health approach (EAIDSNet) ○ Improved capacity building for HRH: training of medical doctors in field epidemiology, disease surveillance and response (MBDS) ○ Development of common health workforce training protocols in core skillsets for member countries (MECIDS)
<i>Health Systems Strengthening Indicators</i>		
Efficiency of a RDSR system	MBDS, MECIDS	<ul style="list-style-type: none"> ○ Improved cross-sectoral coordination for preparedness and response activities (MBDS) ○ Serves as an effective platform for countries to monitor emerging and reemerging infectious disease trends across member countries (MECIDS)
Improved coordination of disease prevention and control activities from community to national level	EAIDSNet; SACIDS	<ul style="list-style-type: none"> ○ Establishment of Village Health Teams (VHTs) and reporting protocols to the district health information system ○ Serves as an effective bridge between the ministries of human health, livestock, and wildlife in the 14 SADC countries
Allocation of resources during health planning	MBDS	<ul style="list-style-type: none"> ○ Allocation of resources for expansion of cross-border surveillance response sites
Improved country capacity in the health sector	EAIDSNet; SACIDS	<ul style="list-style-type: none"> ○ Institutionalization of a formal health unit within the EAC ○ Serves as an effective bridge between the ministries of human health, livestock, and wildlife in the 14 SADC countries
Private Sector Engagement	PPSHN; SACIDS	Establishment of PacNet
<i>Measures of multi-sectoral and Regional Cooperation</i>		

<p>Increase in cooperation among member states</p>	<p>MBDS; SACIDS</p>	<ul style="list-style-type: none"> ○ Establishment of multisectoral cross-border response teams (MBRTs) made of trained officials from member countries representing the health, animal, customs and immigration sectors (MBDS) ○ Effective surveillance of climate-dependent vector borne disease with potential inter-species concern (SACIDS)
<p>Joint outbreak investigations conducted</p>	<p>MBDS; EAIDSNet</p>	<ul style="list-style-type: none"> ○ Joint Dengue fever investigation by multi-sectoral cross-border response teams (health, customs and immigration officials) between Lao and Thai Provincial sites; joint Typhoid investigation between Lao and Thai provincial sites; joint avian influenza investigation of cases in humans (MBDS); ○ Joint outbreak investigations for 4 EVD outbreaks

Annex 3: Implementation Arrangements

Regional Disease Surveillance Systems Enhancement Program in West Africa

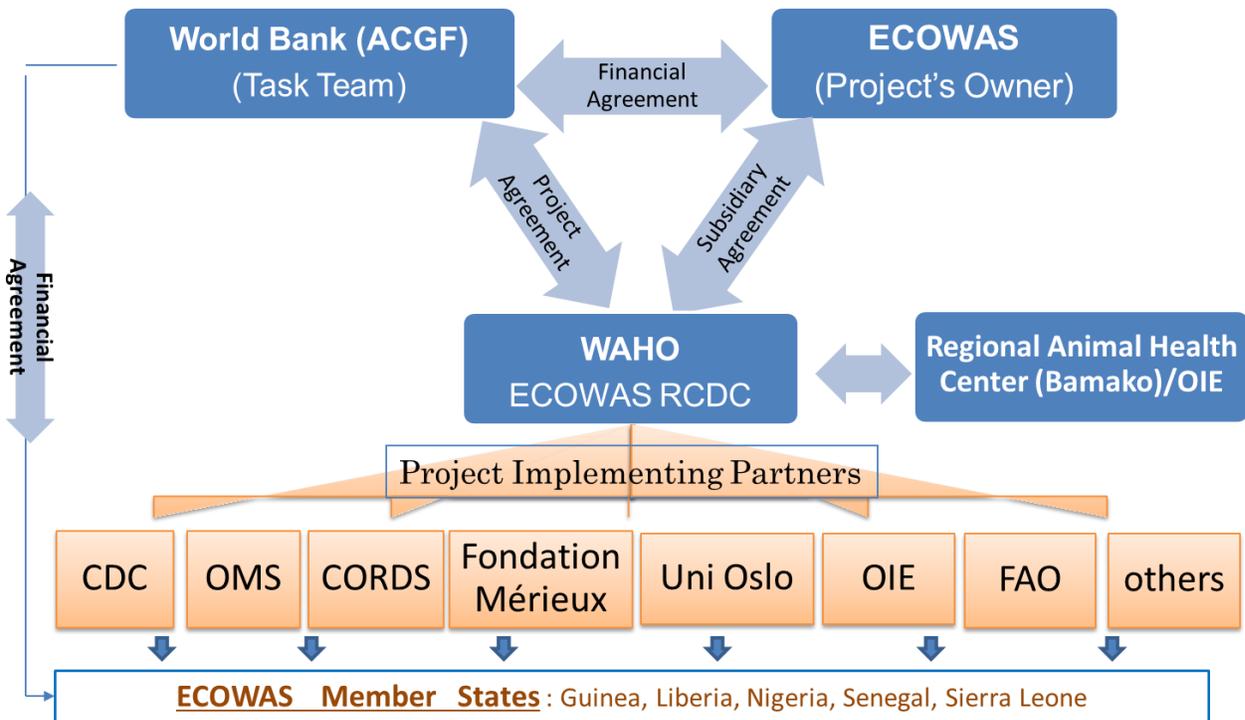
I. INSTITUTIONAL ARRANGEMENTS

1. The REDISSE program will be implemented at a regional and national level. At the regional level, project implementation will be led by WAHO of ECOWAS, which will host the regional secretariat of the project. Under this regional coordination, the governments of the three participating countries will implement country-level tasks as per their respective country implementation arrangements. WAHO will also provide support to countries both directly and through service agreements and Memoranda of Understanding (MoUs) with technical organizations such as WHO and OIE. This proposed arrangement is fully in line with IEG's recommendations on regional projects⁴⁸.
2. Regional coordination will be managed through a Regional Steering Committee (RSC), whose secretariat will be run by WAHO. More generally, WAHO will be responsible for technical coordination at regional level. WAHO on the human health side, and RAHC on the animal health side, the latter supported by OIE⁴⁹, will also be responsible for the execution of identified regional activities and of supporting countries regarding specific issues. The RSC will include representatives of involved Ministries from all the three countries and will meet twice a year.
3. As financial flows, IDA funds will be made available to WAHO (through a direct regional IDA grant). WAHO will allocate part of the regional grant proceeds to support the implementation of regional animal health activities and targeted technical assistance to the countries to be carried out by the Bamako Regional Animal Health Center supported by OIE. This support is envisaged until the capacity of RAHC is built to the minimum level necessary to carry out project activities.

⁴⁸ “What has generally worked best is reliance on national institutions for execution and implementation of program interventions at the country level, and on regional institutions for supportive services that cannot be performed efficiently by national agencies, such as coordination, data gathering, technical assistance, dispute resolution, and monitoring and evaluation.” (IEG 2007).

⁴⁹ REDISSE will contribute to the operationalization of RAHC which is in its early stages of development. The World Organization for Animal Health (OIE) will assist RAHC as it moves toward assuming its responsibilities as the ECOWAS Specialized Agency for Animal Health, in conformity with the 2012 decision of ECOWAS Heads of States. The OIE would assume core functions for coordination, implementation, and oversight of the project regional animal health activities for an initial period of 2 years (with possible extension depending on RAHC capacity evaluation results after this interim period before transferring responsibilities).

Figure 2. ECOWAS/WAHO Regional Institutional Arrangements



4. In countries, it is expected that project coordination units (PCU) will be put in place and would be responsible for the overall coordination and management of project activities. The PCU will need to work across sectors to improve efficiency and alignment in the implementation of project intervention. Given the multi-sectoral nature of the proposed activities, an existing national steering committee (NSC) or one to be formed will oversee the yearly planning and monitor the implementation of the project, while a project implementation unit will be set up for coordinating and managing project activities as well as transferring and monitoring the use of funds by other implementing ministries and partners. In all countries, the implementing agency will function as an “umbrella ministry”, in charge of coordinating the implementation of the various components by sectoral ministries (agriculture, livestock, health, environment, etc.) and NGOs. Each technical ministry will be represented at the NSCs and the RSC.
5. Below is a description of in country institutional arrangements.

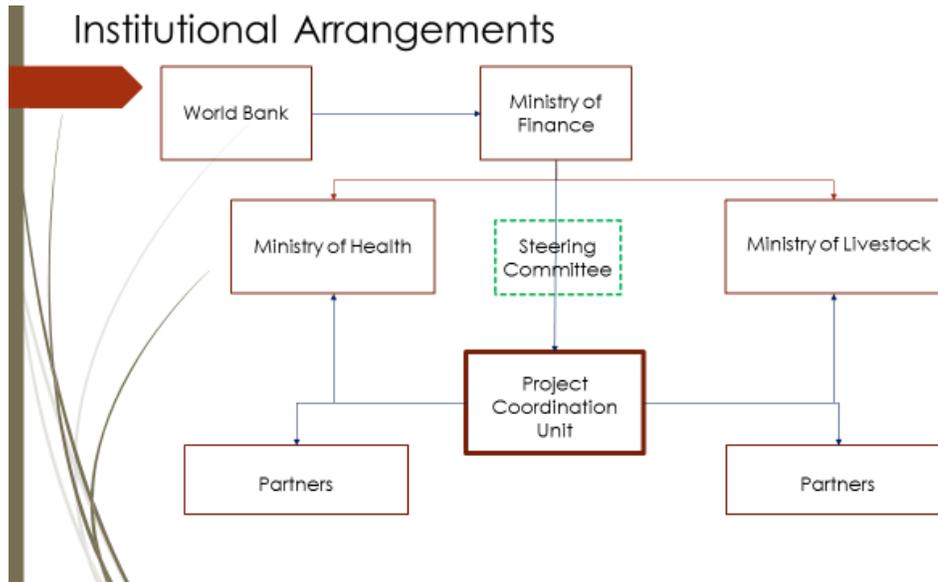
A – GUINEA

6. The ministerial departments concerned with the implementation of REDISSE I are:
 - ✓ The Ministry of Health in charge of handling Human Health and;
 - ✓ The Ministry of Livestock and Animal Production in charge of managing Animal Health. The Ministry of Health will lead the implementation of the Guinea REDISSE I that will be managed by the ongoing Primary Health Services improvement project funded by the World Bank (PASSP/WB). The animal health component will be

implemented by the National Directorate of Veterinary Services of the Ministry of Livestock and Animal Production. The health component will be implemented by the Office of Strategies and Development (BSD) of the Ministry of Health.

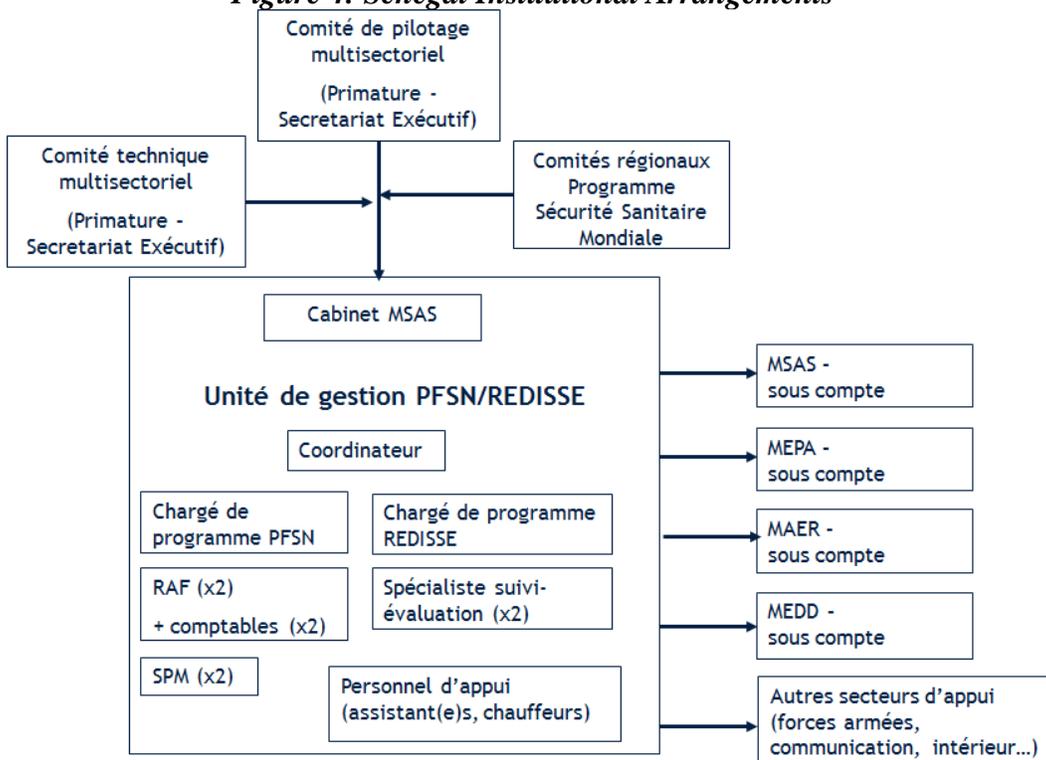
7. A steering committee will be created by joint order of the Minister of Health and Minister of Livestock production. This committee will provide strategic direction and monitor the overall progress of the project. It will approve annual work plans and the annual and quarterly reports. It will be chaired by the Secretary General of the Ministry of Health and composed of directors of the two Ministries, the Ministry of Finance and development partners.
8. Daily management of the project will be done by the Primary Health Services improvement project called PASSP and will directly report to the Secretary General of the Ministry of Health. The project Coordination Unit will: (i) coordinate the project activities; (ii) ensure the financial management of the project activities in all components; (iii) prepare consolidated annual work plans, budgets, monitoring and evaluation report (M&E in English), and the implementation report of the project to be submitted to the Steering Committee and the Association (IDA).
9. The Coordination Unit will include technical services and fiduciary services, and will be led by the Health Project Coordinator. In order to carry out REDISSE I activities, full time consultants will be recruited with project funds and they should have the necessary qualifications.
10. The PASSP technical services will be strengthened by the recruitment of: one human health epidemiologist, one animal health epidemiologist and one monitoring and evaluation specialist. The fiduciary services will recruit one additional procurement specialist and one additional accountant. The PASSP project manual of procedures will be revised to reflect REDISSE I activities.

Figure 3: Guinea Institutional Arrangements



B - SENEGAL

Figure 4: Senegal Institutional Arrangements



11. Implementing entities: Overall governance of the REDISSE I will be provided through the Prime Minister’s office by the multi-sector steering committee of the Global Health Security Program in Senegal with its executive secretariat and its multisectoral technical One Health

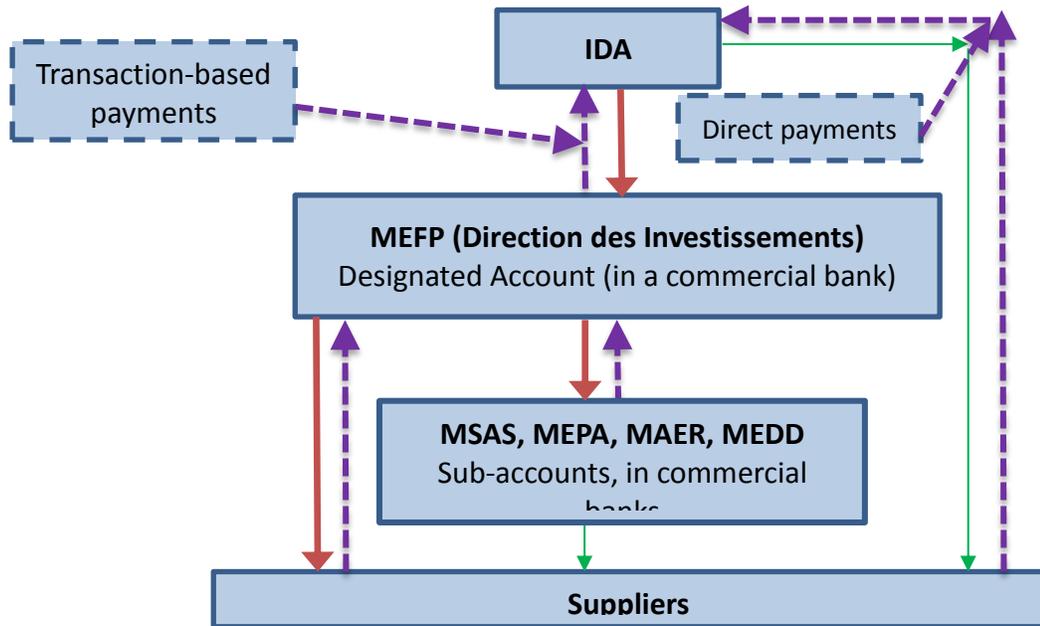
committee. In line with the agenda for better aid harmonization and alignment, the proposed project will be implemented by the Ministry of Health and Social Action (MSAS), with a close collaboration with the Ministry of Livestock and Animal Production (MEPA), Ministry of Agriculture and Rural Equipment (MAER) and the Ministry of Environment and Sustainable Development (MEDD). Other Ministries (such as the Ministry of Armed Forces and the Ministry of Interior and Public Safety) will also support the project and facilitate implementation.

12. The Project Designated Account will be managed by the Ministry of Economics, Finance and Planning and sub-accounts will be created at MEPA, MAER and MEDD. REDISSE I will use the scheme already existing at the MSAS to implement the Health and Nutrition Financing Project. Consequently, the DAGE (i.e. the Directorate for Financial Management of the MSAS) will be responsible for financial management and procurement related to the Project, and its capacity will be strengthened. The General Directorate for Health (Direction Générale de la Santé or DGS of the MSAS) will be responsible for technical implementation, using the coordination of the current World Bank Project, with the addition of a REDISSE I officer, an M&E specialist and support staff. The MSAS Cabinet will be responsible for coordination and monitoring.

13. Governance of REDISSE I will be the following:

- A multisectoral steering committee of the Global Security Agenda Program at the Prime Ministry. The steering committee will be supported by a technical secretariat.
- A multisectoral technical committee in charge at the operational level to follow the Project progress and provide recommendations to the steering committee.
- Sectorial steering committees will be created within each key Ministry in charge of implementation.
- Multisectoral platforms at local level, including community level.
- Regional platform to coordinate regional implementation with other countries.

Figure 5: Senegal Flow of Funds

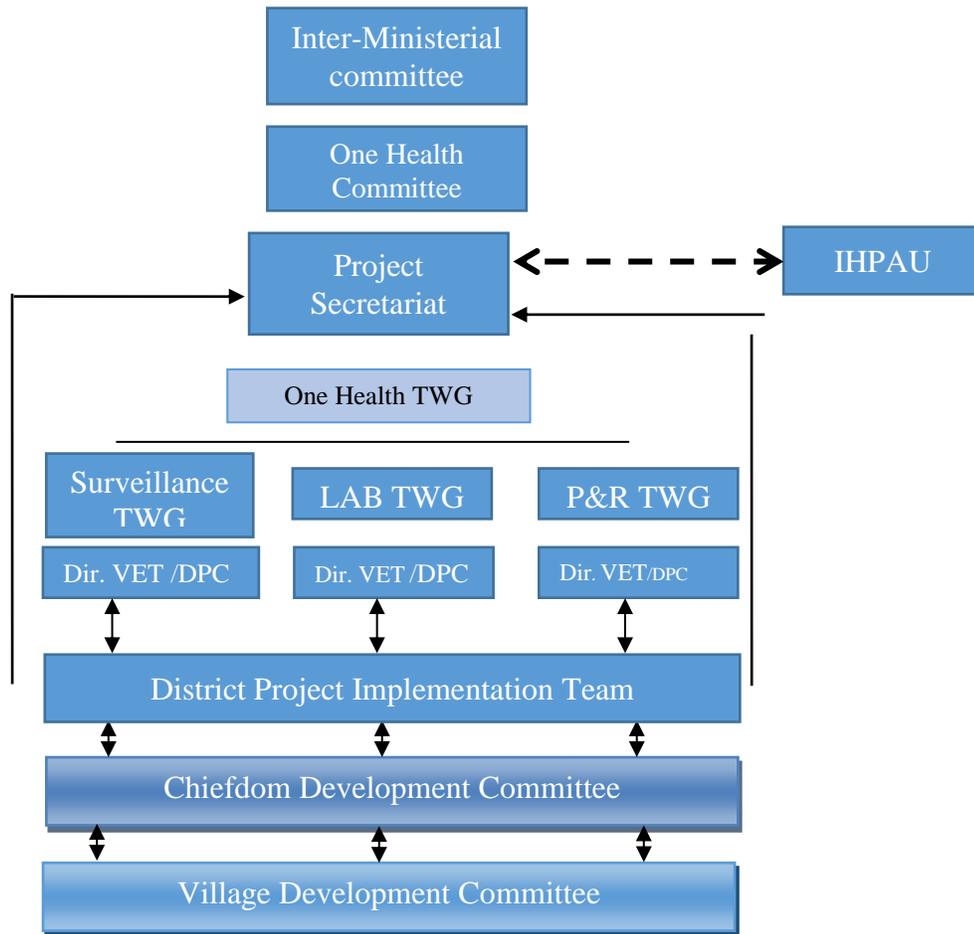


Key:
 → Financial Flow
 - - - Document Flow (invoices, receipts, contracts...)
 → Payment to Suppliers

C - SIERRA LEONE

14. The project will be implemented using the following structure:

Figure 6: Sierra Leone Institutional Arrangements



a. Inter-ministerial Committee

Mandate: Policy orientation, overall oversight & decision making on funding allocations of the project.

Membership: Not yet defined but presumably Minister of Finance, Minister of Health, Minister of Agriculture, and Head of the environmental protection Agency.

b. One Health Committee

Mandate: Approve project work plans (overall and yearly), monitor technical progress, provide guidance for project implementation, and ensure regular reporting and dissemination of outputs.

Chair: co-chaired by Chief Medical Officer and Chief Agricultural Officer.

Membership: Senior technical officers from MoHS; MAFFS; Office of National Security (ONS), Environmental Protection Agency (EPA); Police; RSLAF (Army); training institutions, partners (senior representatives).

c. Project Secretariat

Mandate: Day to day planning & monitoring of project implementation, liaison with TWGs, follow up of funding management and accountability, overseeing production of technical reports.

Membership: Lead project Manager; two Project Officers (MoHS-1, MAFF-1), Monitoring and Evaluation Officer, Safeguards specialist, Secretariat support staff.

d. Technical Working Groups (IDSR, Lab and P&R)

Mandate: Develop operational plans, produce technical reports, review and validate guidelines and standard operating procedures.

Membership: Competent technical officers from relevant ministries & departments, technical experts from partners.

e. Directorates Units

Directorates and departments from the two ministries will be responsible for implementation of the project country wide in liaison with district implementation officers.

f. District level

The existing MoHS and MAFFS structures will be utilized to facilitate implementation of the project at district level. Working groups will be established at this level.

II. FINANCIAL MANAGEMENT, DISBURSEMENTS AND PROCUREMENT

A. FINANCIAL MANAGEMENT, DISBURSEMENT

15. As part of the REDISSE I preparation, a financial management assessment of the implementing units has been conducted. The assessment was done on the coordinating implementing entities at national level that are the Ministries of Health for Guinea, Senegal and Sierra Leone (using existing PIU within respective ministries), the Sierra Leone Ministry of Agriculture, Forestry and Food Security as well as the regional West African Health Association (WAHO).
16. The objective of the assessment was to determine: (a) whether these units have adequate financial management arrangements to ensure that: (i) project funds will be used for purposes intended in an efficient and economical way; (b) project financial reports will be prepared in an accurate, reliable and timely manner; and (c) the project's assets will be safeguarded. The financial management assessment was carried out in accordance with the Financial Management Manual for World Bank Investment Project Financing Operations that became effective on March 1, 2010 but was issued (retrofitted) on February 4, 2015. In this regard, a review of the FM arrangements (budgeting, accounting, financial reporting, funds flow and disbursements, internal controls and audit and external audit arrangements) has been conducted for the above entities.
17. The primary implementing entities in the three (3) countries, that is, the MOHs in Senegal, Guinea and Sierra Leone will have a MOU with sub-implementing entities to implement the

project. These sub-implementing entities if they receive funds from the primary implementing entities will have to ensure that a project account is opened and the signatories communicated to the primary implementing entity. In addition, they should have an accountant to account for the project funds and have adequate accounting policies and procedures documented in the Project Implementation Manual. The sub-implementing entities will include the following: Guinea (Ministry of Livestock); Sierra Leone (MAFFS); and Senegal (MAER, MEPA and MEDD)

B. BUDGETING ARRANGEMENTS

18. WAHO and the three countries will prepare annual budgets based on their annual work plans (AWP) and thereafter submit them to the World Bank at least two months before the beginning of the project's fiscal year. The specific details of each entity's FM Manual are included in the table under the accounting arrangements. Implementing entities receiving funds from the MOHs will submit their budgets to the MOHs for consolidation. The AWP will then be approved by the respective National Steering Committee of each country and submitted to the WB no later than December 31 of the year preceding the year the work plan should be implemented.
19. The implementing entities will monitor its execution with the projects' accounting software in accordance with the budgeting procedures specified in the manual of procedures and report on variances along with the quarterly interim financial report (IFRs). The budgeting system needs to forecast for each fiscal year the source and use of funds under the project. Only budgeted expenditures would be committed and incurred so as to ensure the resources are used within the agreed upon allocations and for the intended purposes. The quarterly IFRs will be used to monitor the execution of the AWP.

C. ACCOUNTING ARRANGEMENTS

20. Accounting Policies and Procedures: These are adequate for all the implementing entities except for Guinea and Sierra Leone where a Financial Management Manual will have to be prepared as part of the Project Implementation Manual. All other implementing entities (WAHO and MOH PIU in Senegal), will have to include Financial Management aspects related to the project but not covered in their existing manuals under the Project Implementation Manual.
21. *Accounting Staff.* The following needs to be done to strengthen the accounting staffing arrangements in the MOHs for three countries and as well as in WAHO. All accounting staff, where necessary, will be trained in World Bank FM and Disbursement guidelines as well as in the use of projects' accounting software where applicable.
 - *Senegal:* The Project Accounting Unit of the MOH will need to recruit a Project Accountant before effectiveness using the PPA in order to account for project funds.
 - *Sierra Leone:* The Integrated Health Project Administration Unit (IHPAU) has hired accounting staff who will prepare the accounts for the project. These staff will be trained in World Bank FM and Disbursements guidelines and procedures.

- *Guinea*: In order to have adequate accounting staff for this project, PASSP/PCU should recruit one accountant.
- *For WAHO*: They need to recruit an additional accountant who will account for the project funds within three months after effectiveness. This is because the workload of the current staff will not enable them to effectively provide accountability related to the project.

22. *Accounting Information Systems*. These are adequate for WAHO in Burkina and the MOHs of Senegal, and Guinea. In Sierra Leone, the IHPAU and the MAFFS are using the Integrated Financial Management Information System (IFMIS) but it is not functional and it leads to delays in preparing financial statements, therefore this project will use a customized accounting system compatible with IFMIS. While the functionality concerns of the IFMIS are tackled by the government of Sierra Leone, IHPAU has procured an accounting information system that it will use to prepare the accounts of this project

23. *Accounting Standards and Basis*. All fiduciary units in Sierra Leone will use International Public Sector Accounting Standards (IPSAS) to prepare the project accounts. Senegal and Guinea will use the SYSCOHADA accounting system customized for African Francophone Countries. They will also use the cash basis of accounting while IHPAU and MAFFS in Sierra Leone will use the accrual basis of accounting.

Table 14: Accounting Arrangements

Institution	Accounting Staff	FM Manual	Accounting Information System
Senegal Using PIU	FM Unit headed by a Finance Manager supported by a chief accountant and an accountant but there is need to recruit one accounting staff for the project.	Financial Procedures Manual	TOM2PRO
Sierra Leone IHPAU	IHPAU has recruited Financial Management staff who will receive training in WB's FM procedures and guidelines.	They will need to prepare a FM Manual agreeable to the WB as part of the PIM to document accounting policies and procedures that will be used for the project.	IHPAU is using an IFMIS that currently has very weak internal controls that need to be addressed. To mitigate this challenge, IHPAU has acquired an accounting information system that will be used to prepare the accounts of this project until the IFMIS functionality issues are addressed

Institution	Accounting Staff	FM Manual	Accounting Information System
Guinea: MOH	In order to have adequate staff for this project, MOH PASSP/PCU should recruit one accountant.	Adapt the existing financial manual of the Primary Health Services Improvement Project.	TOM2PRO
WAHO	One additional Accountant will be recruited.	Financial Rules and Procedures Manual set in place by WAHO for ongoing IDA funded project will be used.	The existing software being used for World Bank financed projects will be used for this project.

D. INTERNAL CONTROL AND INTERNAL AUDIT ARRANGEMENTS

24. *Internal Controls.* The internal control procedures will be documented in the FM Manuals shown in the table above for each of the implementing entities and their Project Implementation Manuals that will take into consideration gaps in their existing FM Manuals/Regulations to ensure project FM arrangements are in line with the Financing Agreement. These will ensure that the project does have an effective internal control system.
25. *Internal Audit.* WAHO, IHPAU in Sierra Leone and the MOH in Senegal have adequate internal audit functions while the MOH in Guinea will set up an internal audit function to be coordinated by the “*Cadre Permanent de Concertation des Corps de Controle*” for the PASS Project. Despite the ongoing reforms to strengthen internal audit in these countries, it will be essential for each of the implementing entities to ensure adequate internal audit staff are assigned to audit this project to ascertain that project implementation is going on as planned especially amongst the multiple sub-implementing entities that will receive funds from the ministry. Internal auditors in each of the implementing entities should ensure that the project’s audit is included in their work plan and the audit conducted using a risk based approach.

E. GOVERNANCE AND ANTI-CORRUPTION (GAC) ARRANGEMENTS

26. As part of the GAC arrangements 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 is highly encouraged by putting the project’s budget and audited financial statements on the implementing entity’s websites. Complaint handling mechanisms should also be set up by the implementing entities such that beneficiaries who are not receiving services as planned can have a mechanism to raise their complaints such that they are followed up and addressed. This will involve putting in place a system to record all complaints received, direct them to the responsible person to be addressed and record when a response is sent to the complainant. In addition, there are the World Bank Anti-Corruption Guidelines that the project will have to comply with.

F. FUNDS FLOW ARRANGEMENTS

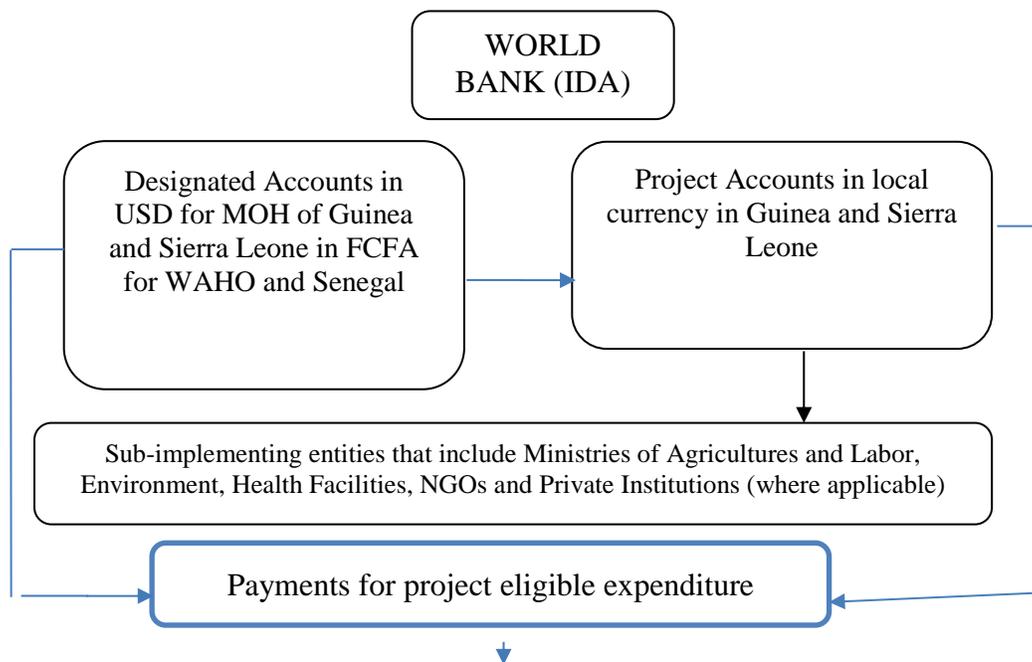
27. **Designated and Project Accounts.** The MOHs in Guinea, and Sierra Leone as well as WAHO will have to open Designated Accounts denominated in United States Dollars while MOH in Senegal will open its designated account in FCFA. MOH in Guinea and Sierra Leone will open a Project Account denominated in local currency to facilitate payments in local currency. These will be maintained in either the central bank or a commercial bank acceptable to the World Bank. The specific banking details for each of the implementing entities are shown in the table below. The signatories to these accounts should be in line with the FM Manuals of the implementing entities and they should be submitted to the WB between the signing of the project and its effectiveness. Payments for eligible expenditures can be made from either the Designated or Project Accounts.

Table 15: Designated and Project Bank Accounts

Institution	Designated Account	Project Account
Senegal	Commercial Bank (FCFA)	Commercial Bank
Guinea	Commercial Bank (USD)	Commercial Bank (GNF)
Sierra Leone	Commercial Bank (USD)	Commercial Bank (Leone)
WAHO	Commercial Bank (USD)	Commercial Bank

28. **Project Accounts.** Sub-implementing entities receiving funds from the Designated Accounts will have to open a Project Account denominated in local currency to receive funds in either the central bank or in commercial banks acceptable to the World Bank. The signatories to these accounts should be in line with the FM Manuals for the project or PIM of the sub-implementing entities and they should be submitted to the main implementing entities in the country.

Figure 7: Funds Flow Diagram



29. *Disbursements.* All implementing entities in the three countries and WAHO will access funding from the World Bank as advances using the transaction based method as described in the World Bank Disbursement Handbook. Other disbursement methods will include direct payments, reimbursements and special commitments. Detailed disbursement procedures will be documented in the project's Disbursement Letter. Upon credit effectiveness, PIU will be required to submit a withdrawal application for an initial deposit to the Designated Account, drawn from the IDA Credit, in an amount agreed to in the Disbursement Letter. Further deposit of funds from IDA to the Designated Account will be made upon evidence of satisfactory utilization of the advance, reflected in SOEs. Withdrawal applications would be required to be submitted regularly at least once a month.
30. For the Contingent Emergency Response Component, the existing flexibility in OP 12.00 Disbursement would be used to provide significant advances in order to provide the necessary liquidity for fast response. The level of the advance needed for the CERC would be established independently of any existing advances for the project components and recorded in the revised Disbursement Letter. The advances for the CERC would be deposited in separate Designated Accounts established for the purpose.
31. 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 Designated Account remains inactive for more than 6 months, the WB may reduce the amount advanced. The WB will have the right, as reflected in the terms of the Financing Agreement, to suspend disbursement of the funds if significant conditions, including reporting requirements, are not complied with. Additional details regarding disbursement are provided in the disbursement letters.

32. *Disbursements by category.* The table below sets out the expenditure categories to be financed out of the Grants and Credits. This table takes into account the prevailing Country Financing Parameter for all participating Countries in setting out the financing levels.

ECOWAS - IDA GRANT

Category	Amount of the Grant Allocated (expressed in USD)	Amount of the Grant Allocated (inclusive of Taxes)
(1) Goods, non-consulting services, consultants' services, Training, and Operational Costs:	0	
(a) under Parts 1.1 (i) of the Project	6,000,000	100%
(b) under Part 1.3 of the Project	2,500,000	100%
(c) under Parts 2.3 (ii) and (iii), 3.1 (ii), 3.2 (ii) and (iii) and 5.2 (i), (ii) and (iv)	7,750,000	100%
(2) Works under Part 5.2 (iii) of the Project	1,850,000	100%
(3) Refund of Preparation Advance. No. V0150	1,900,000	100%
TOTAL AMOUNT	20,000,000	

ECOWAS MDTF

Category	Amount of the Grant Allocated (expressed in USD)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, non-consulting services, consultants' services, Training, and Operational Costs under Part 1.1 (i) of the Project (including centers for epidemiological surveillance) ⁵⁰	2,820,000	100%
(2) Goods, non-consulting services, consultants' services, Training, and Operational Costs under Parts 1.3 of the Project ⁵¹	1,180,000	100%
TOTAL AMOUNT	4,000,000	

⁵⁰ This category will finance 100% of the 47 Centers of Epidemiological Surveillance at US\$60,000 per 01 CES

⁵¹ This category will finance 100% of the Resolabs at US\$25,000 per 01 Resolabs

Category	GUINEA			SIERRA LEONE			SENEGAL	
	Amount of the Credit Allocated (expressed in USD)	Amount of the Grant Allocated (expressed in USD)	Percentage of Expenditures to be Financed (inclusive of Taxes)	Amount of the Credit Allocated (expressed in USD)	Amount of the Grant Allocated (expressed in USD)	Percentage of Expenditures to be Financed (inclusive of Taxes)	Amount of the Credit Allocated (expressed in USD)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, non-consulting services, consultants' services, Training, and Operational Costs under Parts 1, 2.2, 2.3 (i), 3.1 (i), 3.2 (i) and (iii), 4 and 5.1 of the Project	18,258,000	9,142,000	67% for the Credit and 33% for the Grant	18,412,100	9,217,900	67% for the Credit and 33% for the Grant	28,790,000	100%
(2) Goods and works under Part 2.1 of the Project	1,742,000	858,000	67% for the Credit and 33% for the Grant	1,587,900	782,100	67% for the Credit and 33% for the Grant	1,210,000	100%
(3) Emergency Expenditures under Part 3.3 of the Project			100% for the Grant			100% for the Grant		100%
TOTAL AMOUNT	20,000,000	10,000,000		20,000,000	10,000,000		30,000,000	

33. *Financial Reporting Arrangements.* WAHO and the MOHs in the three countries will prepare quarterly un-audited Interim Financial Reports (IFRs) in form and content satisfactory to the WB, which will be submitted to the WB within 45 days after the end of the quarter to which they relate. The formats and contents of the IFR were agreed on between the WB and the national implementing entities before 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; and
 - Bank statements for both the Designated and Project Account and related bank reconciliation statements;
34. WAHO and the MOHs in the three countries will also prepare the Project's annual financial statements within three months after the end of the accounting year in accordance with International Public Sector Accounting Standards and SYSCOHADA. The financial statements will be required to be submitted to the WB within six months after the end of the fiscal year.
35. *External Audit Arrangements.* The Audit Service Sierra Leone (ASSL) will be conducting the external audit for Sierra Leone; it can also contract private audit firms acceptable to the WB to conduct the audit on its behalf. Senegal, Guinea and WAHO will use private audit firms that are acceptable to the WB; the cost of hiring a private audit firm will be met by the Project. All audits should be carried out in accordance with International Standards on Auditing or International Standards for Supreme Audit Institutions issued by the International Organization for Supreme Audit Institutions. All external audit Terms of Reference for each implementing entity will be agreed to with the World Bank by signing a financial agreement. The external auditors should be appointed within six months after effectiveness. Audit reports together with management letters should be submitted to the World Bank within six months after the end of the government's fiscal year. Audit reports will be publically disclosed by the World Bank in accordance with the World Bank's disclosure policy.

Table 16: Financial Management Action Plan

Implementing Entity	Action	Responsibility	Due Date
All Implementing Entities	Interim Financial Report Formats were agreed on before negotiations and External Audit Terms of Reference will be agreed on before the signing of the Finance Agreement	For all three countries and WAHO	Indicated in the action plan
Guinea and Sierra Leone	Prepare a Project Financial Management Manual that is acceptable to the WB. This will be part of the PIM.	Sierra Leone (IHPAU) and Guinea (MOH)	Within three months of effectiveness
All Implementing Entities	Prepare a Project Implementation Manual (PIM) that is acceptable to the WB. The PIM will address gaps in the existing FM Manuals to reflect project specific requirements in the case of WAHO and Senegal.	All implementing entities including WAHO	Within three months of effectiveness
Senegal, Guinea, and WAHO	Recruit qualified and experienced accountants before effectiveness	MOHs in Senegal and Guinea and WAHO	Within three months of effectiveness
Sierra Leone	Address functionality concerns related to the IFMIS or acquire an accounting software to account for project funds.	Sierra Leone IHPAU	Within six months after effectiveness
Guinea	Recruit/assign a qualified and experienced internal auditor to strengthen internal control systems.	Ministry of Health	Within three months after effectiveness (use of PPA recommended)
All Implementing Entities	Appoint an external auditor for the Project	All implementing entities	Within six months after effectiveness
All implementing entities	Put in place and strengthen complaint handling mechanisms to enhance service delivery.	All implementing entities	Within six months after effectiveness

36. *Financial Covenants.* Financial covenants are the standard ones as stated in the Financing Agreement, Schedule 2, Section II (B) on Financial Management, Financial Reports and Audits and Section 4.09 of the General Conditions.

37. *Implementation Support Plan.* Financial Management implementation support missions will be carried out twice a year for the three countries based on the substantial FM residual risk rating while for WAHO, the implementation support will be carried out once a year based on the moderate FM residual risk rating. Implementation Support will also include desk reviews such as the review of the IFRs and audit reports. In-depth reviews and forensic reviews may be done where deemed necessary. The FM implementation support will be an integrated part of the project's implementation reviews support.
38. The conclusion of the assessment is that the financial management arrangements in place meet the World Bank's minimum requirements under OP/BP10.00, and subject to the application of enhanced accountability principles (see Annex 8) and strengthening based on the FM action plan above, are therefore adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by World Bank. The overall Financial Management residual risk rating is substantial for the three countries (Senegal, Guinea, and Sierra Leone) and moderate for WAHO.

III. PROCUREMENT

39. Procurement under the proposed project will be carried out in accordance with the World Bank guidelines: "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised July 2014, "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011 and revised July 2014, and the "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011, and other provisions stipulated in the Financing Agreement.
40. All procuring entities as well as bidders, and service providers, i.e. 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 paragraphs 1.16 of the Procurement Guidelines and paragraphs 1.23 of the Consultants Guidelines.
41. A General Procurement Notice (GPN) will be prepared and published in the United Nations Development Business (UNDB) online, on the World Bank's external website, and in at least one national newspaper after the project is approved by the World Bank Board and before the Project effectiveness. Specific Procurement Notices for all goods and works to be procured under International Competitive Bidding (ICB) and Requests for Expressions of Interest (REOIs) for all consulting services costing the equivalent of US\$300,000 and above will also be published in the United Nations Development Business (UNDB) online, the World Bank's and the Borrower's external websites, and the national press. For works and goods using NCB procedures, the Specific Procurement Notice (SPN) will only be published nationally.

A. Institutional Arrangements for Procurement

42. Procurement at the Regional level shall be carried out by:

43. WAHO – the West African Health Organization (WAHO), a health specialized agency of the Economic Community of West African States (ECOWAS). WAHO has the full mandate to coordinate all public health activities within ECOWAS member states. WAHO consists of 4 departments among which a Financial Direction including a Procurement Unit which is responsible for all procurement activities up to 250,000 UC (\approx US\$ 250,000). ECOWAS shall make the proceeds of the funds provided by the World Bank available to WAHO subsidiary agreements to be entered into between the ECOWAS and WAHO, under terms and conditions approved by the World Bank, which shall include, inter alia, a delegation of authority from the Recipient to WAHO valid through Project implementation to carry out all the procurement goods, non-consulting services and consultants services pursuant to the provisions of Section III of this Schedule, regardless of the value of the contract involved and above any limit set forth in the ECOWAS' regulations on procurement.
44. RAHC – The Regional Animal Health Center (RAHC) for West and Central Africa based in Bamako (Republic of Mali) was the first Center established in April 2006 by OIE, FAO, and AU-IBAR and inaugurated on October 20, 2007, to support, among others, the states of West and Central Africa in their efforts of prevention and control of highly pathogenic avian influenza and other transboundary animal diseases and zoonoses. In 2012, ECOWAS member countries recognized the RAHC as the ECOWAS specialized technical center for animal health. The governance rules, administration, management and financing of the Agency, the Agency's relationships in agriculture and livestock, criteria and forms of intervention, the processing of funding applications, the recruitment of the Agency's staff comply with the legislation in force in ECOWAS. According to the organizational chart of RAHC, it must have an executive director to whom are attached an executive secretary and a technical pool secretary, one Animal Health unit, one Veterinary Governance unit and an Administration and Finance unit. This last unit has in principle 3 staff members: a program officer (administration and finance) (the unit chief), an administrative assistant and an accountant. The administrative assistant is responsible for procurement. To date, no one has been recruited. The center is not operational because it did not receive the required operating funds from ECOWAS since its creation. A program officer and an accountant, all within the AU have been seconded to Bamako to lay the foundation; but no independent capacity of the RAHC has yet been developed.
45. WAHO will support the RAHC to build its capacity by engaging OIE. OIE will carry out the necessary procurement for RAHC.
46. OIE – In the initial period, the World Organization for Animal Health will provide technical support in implementing RAHC activities. OIE will also help RAHC build its capacity and take over the implementing role once RAHC is ready. OIE is an intergovernmental organization subject to the authority and control of a Committee composed of National Delegates from its 180 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 Finance, the Head of the World Animal Health and Welfare Fund Unit, and a Head of the Budget Unit; in addition, are also involved the Head of Legal Affairs and Human Resources Unit and the Head of the

Performance Management Cell (internal audit and procedural matters). There is no dedicated staff assigned to carry out procurement since this depends on the nature of goods and services to be procured.

47. Procurement at the National level shall be carried out by:
48. Guinea – The proposed institutional and implementation arrangements foreseen the Executing Agency for this project will be the PASSP’s Project Coordinating Unit (PCU) within the Ministry of Health (MOH). The PCU, which enjoys autonomy in the management of day-to-day activities, will report directly to the Secretary General of the MOH. However, even if the ministry has a long track record in implementing WB-financed projects drawn on the implementation experience of the prior project (closed in December 30, 2013), a new PCU has been hired under the PASSP.
49. Senegal – The project shall be implemented by four Ministries: Health and Prevention, Environment, Agriculture, and Livestock. The procurement activities will be implemented using the institutional arrangements of the Senegal Health & Social Financing Project (P129472) executed by the Ministry of Health and Prevention which will carry out procurement for all four Ministries.
50. Sierra Leone – Ministry of Health and Sanitation and Ministry of Agriculture Forestry and Food Security (MAFFS): The Integrated Health Projects Administration Unit (IHPAU) is in the office of the Permanent Secretary Ministry of Health and Sanitation. IHPAU, working alongside the Directorate of Support Services, intends to integrate all donor-funded projects to be centrally managed by one coherent unit to be integrated within the MOHS structure. The integrated projects are funded by the World Bank, the GAVI Alliance, the Global Fund to Fight AIDS, TB and Malaria, the African Development Bank, the UK Aid, the EU, UN Agencies and others. IHPAU is responsible for ensuring quality financial management, timely procurement of supplies, efficient monitoring, accountability and training with regard to all donor-funded projects. Currently the implementing agency has one procurement specialist and the recruitment of two procurement officers is underway. The MoHS procurement team will participate in the implementation of the project. It benefits from an experienced team, but its members are new to the ministry and have no experience in procurement of medical related equipment and pharmaceuticals. Currently IHPAU is working with BDO consultancy firms to enhance capacity in procurement for a period of six months after which the staff will have gained enough capacity to implement the project. Procurement under the project will be carried out by IHPAU under the supervision and guidance of the evaluation committee that is chaired by the Permanent Secretaries of MOHS and co-chaired by MAFFS.

B. Procurement approval process

51. The following procurement approval procedures will be followed by each entity:

52. WAHO – There is no clear mechanism for decision making in the project manual used for the ongoing projects. It is recommended that the existing manual be revised to describe responsibilities and approval thresholds for procurement contracts.
53. RAHC – In the initial period, OIE will carry out procurement for the RAHC. There is a clear and responsible decision making mechanism for procurement. Any purchase or acquisition estimated to be equal or greater than EUR 2,500 must be duly authorized by the Director General. For some exceptions, delegation of signature authority is given to the Head of Administration.
54. Guinea – For ICBs and NCBs, the main steps (bids receiving and opening) are handled by the Procurement Committee within the Ministry in charge of Health. For shopping and other small contracts, the PASSP's internal Committee handles the process. That Committee comprises the Financial Management Specialist, the Procurement Specialist, the Representative of the MOH Procurement Department, and the Beneficiary Representative.
55. For larger contracts (ICB and NCB), the Procurement Committee comprises a representative of the National Procurement Body (DNMP), a representative of the Contracting Authority, who will be the Secretary of the Committee, a representative of each beneficiary, a representative of the MOH (the Ministry to whom the Contracting Authority reports); the Main Financial Controller or the dedicated Financial Controller for the Contracting Authority or his Representative, the PASSP Procurement Specialist, the PASSP Project Coordinator or Financial Management Specialist.
56. The ACGMP (*l'Administration et Contrôle des Grands Projets et des Marchés Publics*) is responsible for procurement regulations and public procurement processes.
57. Depending on the contract estimate amount, a double prior review may be requested (by IDA) —a delay to the process.
58. Senegal – Each participating Ministry has a Procurement Unit (Cellule de Passation de Marchés - CPM) and a Tender Committee (Commission de Marchés - CM). The CM of the MOHP will be responsible for the procurement of main contracts and common equipment or consultancy for all Ministries while the CM of other Ministries will be responsible for the remaining contracts for their specific activities. The CM is in charge of bid opening, evaluation, and contract award, whereas the CPM is responsible for the quality control of Procurement transactions. After the public bids opening meeting forms an ad hoc technical evaluation committee composed of subject matter specialists, user departments, and procurement specialists who evaluate tenders, reports are submitted to a Procurement Cell for review/approval and award recommendations. In accordance with the National Procurement Code and Regulations, and the permitted threshold value, the contract shall be submitted to prior review by the Direction du Contrôle de Marchés (DCPM) before the contract is awarded.
59. Sierra Leone – Procurement under the project will be requested by the user departments of MOHS and MAFFS who will prepare technical specifications, terms of reference and bills of

quantities that will be submitted to the procurement committee for procurement approval. MOHS and MAFFS form ad-hoc technical evaluation committee composed of subject matter specialists, user departments and procurement specialists who evaluate tenders and submit reports to a procurement committee that reviews and approves the award. The procurement committee is permanent and is composed of a Permanent Secretary, a Chief Medical Officer and the Directors of different departments from the MOHS and a Chief Agriculture Officer, a Director of Livestock and a MAFFS' focal point person for REDISSE I. The quorum for decision making is seven out of ten members. The MOHS has an integrity committee in place that is chaired by the Permanent Secretary, is composed of representatives of different government organs, and is responsible for handling audit issues and ensures the implementation of their recommendation.

60. Filing and record keeping. The Procurement Procedures Manual will set out the detailed procedures for maintaining and providing readily available access to project procurement records, in compliance with the Loan Agreement. The Implementing Agencies will assign one person responsible for maintaining the records. The logbook of the contracts with unique numbering system shall be maintained.
61. The signed contracts recorded in the logbook shall be reflected in the commitment control system of the Borrower's accounting system or books of accounts as commitments whose payments should be updated with reference made to the payment voucher. This will establish a complete record system whereby the contracts and related payments can be corroborated.
62. Procurement Risk Rating. The project procurement risk prior to the mitigation measures is "Substantial". The risk is reduced to a residual rating of "Moderate" upon consideration of successful implementation of the mitigation measures. The risks and mitigation measures are provided in the table at the end of this Annex.
63. Procurement Strategy. The procurement strategy is linked to the project implementation strategy both at the country and the regional level ensuring proper sequencing of the activities since the Project strives to achieve regional disease surveillance. It considers procurement capacity for carrying procurement and managing contract implementation, as well as governance aspects need adequate behavior and capabilities of the market to respond to the procurement are important factors in designing procurement arrangements. The health sector activities require strong technical capability to prepare proper technical specifications and consider in the procurement strategy to avert lack or inadequate market response. Special arrangements like direct contracting, or use of the UN Agencies or institutions which have unique qualifications for the Project implementation, were considered.
64. Procurement Plan. The Borrowers and their Implementing Agencies prepared a detailed 18-month Procurement Plans. They were concluded and agreed on by the Government and the World Bank at the loan negotiations. The Procurement Plans shall be published on the WB's website. The Procurement Plan will be updated in agreement with the WB Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

65. UN agencies may be hired by the Governments on sole-source basis for contracts for which they offer their unique roles and qualifications in responding to emergency situations. Standard forms of agreements for UN agencies as acceptable to the WB will be adopted. For those UN agencies, if such forms have not been agreed upon with the WB, the WB team will provide acceptable sample forms for use by the countries. For the UN agencies hired by the Government, certain quick-disbursing arrangements may be agreed upon to finance a positive list of imported or locally produced goods that are required for the project, further subject to the WB's prior agreement on the conditions for the release of the financial tranches and the required documentation and certifications, such as customs and tax certificates or invoices.
66. The recruitment of civil servants as individual consultants or as part of the team of consulting firms will abide by the provisions of paragraphs 1.9 to 1.13 of the Consultants Guidelines.
67. Special Considerations: Sierra Leone is on the 2013/14 harmonized list of Fragile and Conflict affected Situations (FCS) countries and therefore the Project will trigger paragraph 12 of OP 10.00 Investment Project Financing and subsequently paragraph 20 of the WB's OP 11.00 Procurement in order to apply flexibilities and simplification to facilitate procurement implementation. These procurement arrangements therefore draw on the Guidance Note on Simplified Procurement Procedures for Situations of Urgent Need of Assistance or Capacity Constraints issued in April 2013.
68. The expenditures for the disbursement categories as per the above referenced table (paragraph 33) shall be financed from the Grant and Credit under the Project: The Implementing Agencies will carry out procurement for their needs to implement the Project and for the Ministries as explained below. They may also procure goods, works, or services for other institutions and agencies of the health system in their countries for the purpose of the project as included in the Procurement Plan and agreed with the WB.
69. WAHO – The IDA and MDTF grant funds will be used by WAHO only to provide for the procurement of goods as well as for non-consultant and consultant services contracts. They include, but are not limited to, vehicles, mobile labs, computers, offices set up, technical experts to support the project implementation, consultant(s) for data collection and firms to develop laboratory activities and conduct some studies.
70. WAHO intends to seek OIE's technical support and knowledge transfer to RAHC. OIE will provide technical support to RAHC, organize training for its staff and recruit some technical expert to help the center develop technical activities. Very few contracts for goods for IT equipment and consumables, laboratory reagents, and sample transportation will be procured by OIE. OIE will provide assistance to RAHC to build their capacity.
71. Guinea – Works to be procured under the proposed project include but may not be limited to: contracts for renovation of offices for the PIU, new construction and renovation of laboratories. Goods and non-consultancy services to be procured include but may not be limited to: vehicles, motorcycles, laboratory and IT equipment, tyres for vehicles and motorcycles, cell phones, solar equipment, VSAT equipment, stationery, printing,

maintenance (for vehicles, motorcycles, IT equipment and laboratories), insurances. Consultancy services include but may not be limited to: hiring expert in livestock and human health, M&E specialist, procurement Assistant, development and/or updating manual of procedures, recruitment of safeguard specialist, recruitment of consultants for studies and supervision of civil works.

72. Senegal – Works to be procured under the project are mostly to include contracts for rehabilitation and new small infrastructures to meet minimum hospital infection control at borders or bio-security standards recommended by either WHO or OIE. Also needed are diverse non-consulting services such as maintaining vehicles, offices and laboratories maintenance, goods to be procured under this project are mostly testing kits and consumables, laboratory equipment, offices and ICT equipment, vehicles and off the shelf lab information management system. Other equipment may include generators, incinerators, disinfectants, PPE, as well as other items to ensure functioning emergency response system. The consulting services under this project are: consulting services to develop basic systems to support One Health surveillance, consulting services to establish phytosanitary standards, consulting services to develop contingency funds and mechanism for payments during, facilitators for training for an outbreak response, hiring of additional staff: drafting MIP, data analyst, epidemiologist, bio technician, procurement specialist.
73. Sierra Leone – The scope of procurement includes preventive and protective equipment, lab equipment, vehicles, phones, incinerators, ICT materials, office equipment, conference facilities. The Project will finance hiring consultancy services to carry out an assessment, develop strategic plan, tools guidelines and protocols for animal diseases surveillance systems, develop One Health policy document, comprehensive assessment of existing human and animal health laboratory facilities and to assess current workforce with regards to quantity, geographical distribution and capacity for animal and human health..
74. *Training, Workshops, Study Tours, and Conferences.* Workshops, Seminars and Conferences. Training activities would comprise workshops and training, based on individual needs, as well as group requirements, on-the-job training, and hiring consultants for developing training materials and conducting training. Selection of consultants for training services follows the requirements for selection of consultants above. All training and workshop activities (other than consulting services) would be carried out on the basis of approved Annual Work Plans/Training Plans that would identify the general framework of training activities for the year, including: (i) the type of training or workshop; (ii) the personnel to be trained; (iii) the institutions which would conduct the training and reason for selection of this particular institution; (iv) the justification for the training, how it would lead to effective performance and implementation of the project and or sector; (v) the duration of the proposed training; and (vi) the cost estimate of the training. Report by the trainee(s), including completion certificate/diploma upon completion of training, shall be provided to the Project Coordinator and will be kept as parts of the records, and will be shared with the World Bank if required.
75. A detailed training and workshops’ plan indicating the nature of training/workshop, number of trainees/participants, duration, staff months, timing and estimated costs will be submitted

to IDA for review and approval prior to initiating the process. The selection methods will derive from the activity requirement, schedule and circumstance. After the training, the beneficiaries will be requested to submit a brief report indicating what skill have been acquired and how these skills will contribute to enhance their performance and contribute to the attainment of the project objectives.

76. *Enhance Accountability framework:* Internal controls under current projects will continue to be maintained under REDISSE I. In addition to this however, an enhanced accountability framework (Annex 8) will be in place and the underlying principles will be incorporated in the PIM to ensure funds allocated to training, workshops and study tours etc., in particular, are used for the intended purposes with due attention to economy and efficiency. Accordingly, all training (local and international) would require clearance from the World Bank. The requests for clearance should at a minimum include the following:

- (i) A demonstrated linkage between the rationales of the workshop and the project objectives;
- (ii) Be part of the Annual Work Plan to which the activity falls;
- (iii) The number of trainees, their function and, mode of selection. This should also include the number of times during the past 18 months listed trainees had benefitted from training;
- (iv) The process used for selection of training provider and if foreign training, rationale for not proposing local training;
- (v) The training prospectus;
- (vi) The detailed costs of the event-venue, how venue was or is proposed to be selected, venue rental, refreshments/lunches, per diem, transport costs (air or land travel costs per trainee).

77. Only on the basis of the above submissions and IDA prior clearance will expenses be committed and become eligible for financing under the project

78. *Operational Costs.* Operational costs financed by the Project would be incremental expenses, including office supplies, vehicles operation and maintenance cost, maintenance of equipment, communication costs, rental expenses, utilities expenses, consumables, transport and accommodation, per diem, supervision costs, and salaries of locally contracted support staff. Such services' needs will be procured using the procurement procedures specified in the Project Implementation Manual (PIM) accepted and approved by the WB.

79. Retroactive financing in accordance with the Procurement Guidelines will be allowed up to 20 percent of the Credit/Grant financing value in accordance with the Financing Agreement, covering the expenditures incurred by the country prior to the signing of the IDA Credit/Grant Financial Agreement under the activities agreed with the WB.

80. Procurement Manual. Procurement arrangements, roles and responsibilities, methods and requirements for carrying out procurement shall be elaborated in detail in the Procurement Manual which may be a section of the Project Implementation Manual (PIM). The PIM shall

be prepared by the Borrowers and agreed to with the WB not later than within three months from the Project effectiveness.

81. The procurement arrangements applicable under Sub-Component 3.3 US\$0 “Component for emergency response” shall be described in the Emergency Operation Manual which shall be prepared by the Borrower and agreed to with the WB in due time to ensure that it is in place before occurrence of any potential emergency situation that would require using this sub-component.

82. Procurement methods. The methods as indicated in the below table and within the thresholds indicated in the below tables can be used. The thresholds for the WB’s prior review requirements are also provided in the table below:

Table 17: Thresholds*, Procurement Methods, and Prior Review

Note: The thresholds are for all countries unless indicated otherwise for specific items.

No	Expenditure Category	Contract Value Threshold* [eq. USD]	Procurement Method	Contracts Subject to Prior Review [eq. US\$]
1	Works	$C \geq 5,000,000$	ICB / LIB	All
		$200,000 \leq C < 5,000,000$	NCB	None
		$C < 200,000$ $C < 200,000$ (Guinea)	Shopping	None
		All Values	Direct Contracting	All Contracts $\geq 100,000$
2	Goods and non-consulting services	$C \geq 500,000$	ICB / LIB	All contracts $\geq 1,000,000$
		$100,000 \leq C < 500,000$ $50,000 \leq C < 500,000$ (Guinea)	NCB	None
		$C < 100,000$ $C < 50,000$ (Guinea)	Shopping	None
		All Values	Direct Contracting	All Contracts $\geq 100,000$
3	Consulting Services	$C \geq 300,000$ (firms) **	QCBS, QBS LCS, FBS,	All contracts
		$C < 300,000$ (firms)	As above and CQS	Contracts for procurement and legal services. TOR and Shortlists for the remaining contracts.
		All values	IC	All contracts $\geq 200,000$. TOR and Shortlists for the remaining. Contracts. The entire process for the contracts for procurement and legal services regardless of the value.

No	Expenditure Category	Contract Value Threshold* [eq. USD]	Procurement Method	Contracts Subject to Prior Review /[eq. US\$]
		All values	SSS	All contracts ≥ 100,000
4	Training, Workshops, Study Tours	All Values	Based on approved Annual Work Plan & Budgets (AWPB)	All

*These thresholds are for the purposes of the initial procurement plan for the first 18 months. The thresholds will be revised periodically based on re-assessment of risks. All contracts not subject to prior review will be post-reviewed.

** Short lists of consultants for services estimated to cost less than US\$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. However, if foreign firms have express interest, they will not be excluded from consideration.

83. National Competitive Bidding (NCB) Procedure is the competitive bidding procedure normally used for public procurement in the country of the Borrower and may be used to procure goods, works, or non-consultant services provided that:

84. WAHO – The procurement procedure to be followed under the Project for the National Competitive Bidding (NCB) for Goods, Works, and Non-consulting Services shall be Local and Regional Competitive Bidding as described in the ECOWAS procurement Law, and shall also be subject to the following additional provisions: i) tender notices are published in the national newspapers of wide circulation; (ii) the bidding documents indicate clearly the criteria for evaluation of the offers, qualification of tenderers and award of contracts; (iii) the bidders have a response time enough (at least four weeks) to prepare and submit tenders; (iv) contracts should be awarded to the bidder, the lowest bidder, provided that the bidder is qualified; (v) the eligible bidders, including foreign bidders, are not excluded from the tender process; and vi) domestic suppliers have no margin of preference.

85. Guinea –.The following provisions apply for the purpose of the NCB procedure:

- (i) Bidding documents acceptable to the Association shall be used.
- (ii) Four weeks will be provided for preparation and submission of bids after issuance of the Invitation for Bids or availability of the Bidding Documents to the bidders, whichever is later;
- (iii) Bids will be advertised in national newspapers with wide circulation;
- (iv) Bids will be presented and submitted only in one internal envelope (no system with two envelopes will be used);
- (v) Eligibility to participate in a procurement process and to be awarded an Association-financed contract shall be as defined under Section I of the Procurement Guidelines; accordingly, no bidder or potential bidder shall

be declared ineligible for contracts financed by the for reasons other than those provided in Section I of the Procurement Guidelines. Foreign bidders shall be allowed to participate in NCB procedures, and foreign bidders shall not be obligated to partner with local bidders in order to participate in a procurement process.

- (vi) Bidding shall not be restricted to pre-registered firms, and foreign bidders shall not be required to be registered with local authorities as a prerequisite for submitting bids.
- (vii) No margins of preference of any sort (e.g., on the basis of bidder nationality, origin of goods, services or labor, and/or preferential programs) shall be applied in the bid evaluation.
- (viii) Joint venture or consortium partners shall be jointly and severally liable for their obligations. Bidders shall be given at least thirty (30) days from the date of publication of the invitation to bid or the date of availability of the bidding documents, whichever is later, to prepare and submit bids. Bids shall be submitted in a single envelope.
- (ix) Bid evaluation criteria, bidder qualifications criteria, and the contract award criteria will be clearly specified in the bidding documents
- (x) The procedures will include the publication of the results of evaluation and of the award of the contract, and provisions for bidders to protest;
- (xi) If the procurement Code doesn't apply to small contracts, the procedures will require that for such contracts, a competitive method be used (reference for example to the shopping method in instance);
- (xii) All bids (or the sole bid if only one bid is received) shall not be rejected, the procurement process shall not be cancelled, and new bids shall not be solicited without the Association's prior written concurrence; and
- (xiii) Qualification criteria shall be applied on a pass or fail basis.

86. Senegal – the procurement method designated as an *Appel d'Offres Ouvert* (Open Tender Procedure) to be acceptable to IDA and used for NCB, the following special requirements will need to be followed: (i) bids shall be advertised in national newspapers with wide circulation; (ii) bid evaluation, bidder qualification and award criteria shall be specified clearly in the bidding documents; (iii) bidders shall be given a minimum of four weeks following the date of the invitation to bid or the date of availability of the bidding documents, whichever is later to prepare and submit bids; (iv) bids shall be awarded to the lowest evaluated bidder; (v) eligible bidders, including foreign bidders, shall not be precluded from participating; and (vi) no preference margin shall be granted to domestic contractors. In addition, the following provisions of the national procurement code will not apply: (a) 3.4c(i)

related to the procurement of fuel for vehicles for the public administration, and 3.4c(iii) referring to the procurement of hotel services; if such goods and services need to be procured, reference will be done to the relevant methods described in the Procurement Guidelines; (b) 52 containing the possibility of excluding foreign bidders' participation in direct contracting; (c) 76 2(b) and 2(c) involving political decisions in the use of direct contracting in the context of emergency; and (d) 108 related to quality control and possible price reduction.

87. Sierra Leone – The procurement procedure to be followed for National Competitive Bidding (NCB) shall be the open competitive bidding procedure set forth in The Public Procurement Act, 2004, of Sierra Leone (the “Act”); provided, however, that such procedure shall be subject to the provisions of Section I, and Paragraphs 3.3 and 3.4 of the “Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers”, and the following additional provisions (exceptions to the Act):

- a) Bidding documents acceptable to the World Bank shall be used;
- b) Eligibility to participate in a procurement process and to be awarded a WB-financed contract shall be as defined under Section I of the Procurement Guidelines; accordingly, no bidder or potential bidder shall be declared ineligible for contracts financed by the Association for reasons other than those provided in Section I of the Procurement Guidelines. Foreign bidders shall be allowed to participate in NCB procedures, and foreign bidders shall not be obligated to partner with local bidders in order to participate in a procurement process;
- c) Bidding shall not be restricted to pre-registered firms, and foreign bidders shall not be required to be registered with local authorities as a prerequisite for submitting bids;
- d) No margins of preference of any sort (e.g., on the basis of bidder nationality, origin of goods, services or labor, and/or preferential programs) shall be applied in the bid evaluation;
- e) Joint venture or consortium partners shall be jointly and severally liable for their obligations. Bidders shall be given at least thirty (30) days from the date of publication of the invitation to bid or the date of availability of the bidding documents, whichever is later, to prepare and submit bids. Bids shall be submitted in a single envelope;
- f) An extension of bid validity, if justified by exceptional circumstances, may be requested in writing from all bidders before the original bid validity expiration date, provided that such extension shall cover only the minimum period required to complete the evaluation and award a contract, but not to exceed thirty (30) days. No further extensions shall be requested without the prior written concurrence of the WB;
- g) All bids (or the sole bid if only one bid is received) shall not be rejected, the procurement process shall not be cancelled, and new bids shall not be solicited without the WB's prior written concurrence;
- h) Qualification criteria shall be applied on a pass or fail basis;
- i) Bidders shall be given at least twenty-eight (28) days from the receipt of the notification of award to submit performance securities;
- j) In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the WB's policy with respect to inspection and audit of

accounts, records and other documents relating to the submission of bids and contract performance.

88. For NCB in all countries: And in accordance with paragraph 1.16 (a) and 1.16 (e) of the Procurement Guidelines, each bidding document and contract financed out of the proceeds of the credit shall include provisions stating the Association's policy to sanction firms or individuals found to have engaged in fraud and corruption as set forth in the Procurement Guidelines, and each bidding document and contract shall include provisions stating the Association's policy with respect to inspection and audit of accounts, records and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the World Bank.
89. Bidding Documents. Procurement for works, goods and non-consulting services will be carried out using the World Bank's SBD for all ICB for goods and works and for Standard Requests for Proposal (RFP) for the selection of consultants through competitive procedures. In the case of NCB, the National SBD as agreed with the WB can be used or, if not available, shall be developed and agreed with the WB.
90. If necessary, they may need to be updated. For example, the Government of Senegal has developed National SBD but they may not be up to date, particularly with regard to provisions on fraud and corruption. It has been agreed that for this project, the WB's SBD be adapted (or modified to meet the exceptions authorized under NCB) and used for NCB.
91. In the case of shopping, the procurement will be done in accordance with the WB's Memorandum "Guidance on Shopping", dated June 9, 2000 (provided this Memorandum does not contradict the Procurement Guidelines) and the "Guide for the Procurement of Small Contracts" issued on February 1, 2011.
92. The World Bank's Procurement Implementation Support and Supervision. Project execution is the Borrower's responsibility. Striving to cultivate strong and frank partnerships with staff of the Borrowers, the WB will provide the Borrowers with procurement implementation support which shall include advice and assistance taking into consideration project features and risk profile, as reasonably required. Such support would be available to the Project due to experience capacity constraints because of specific vulnerabilities to disease epidemics as experienced by the West African countries recently. In addition, procurement support shall be provided during the WB's supervision missions held at least once a year.
93. Given the regional nature of the Project, the Borrowers are encouraged to establish a collaborative approach, preferably through a network which will allow drawing experience of colleagues from the other countries participating in the Project including ECOWAS and its agencies WAHO and RAHC at the regional level.
94. Although each Borrower will ensure that procurement is based on the specific needs of their project, there may be common items, especially major equipment and specialized or important services that would be procured by several Borrowers. In order to secure the best competition and avoid inconsistencies, for such commonly procured items and/or services, it

is advisable to form a working group or a committee of technical experts drawn one each from the participating Borrower countries who would review and agree in advance on specifications of such major items before bidding. This will also insure optimization of the outcome of such procurement towards achieving the best value for money given that the same providers of goods and services are likely to bid in respective Borrower countries.

95. The Borrowers will hire individual consultants or engage with other institutions in their country, such as, the Supreme Audit Institution as agreed with the WB to carry out procurement review and help the Borrowers identify any issues and correct them to ensure continued procurement. The TOR for such review shall be subject to the WB’s no objection. To ensure sufficiency of the review the sample of the contracts for review shall be selected based on the disbursement and with help of the list of the signed contracts. The review will also include review of the record keeping system, its adequacy and completeness. If any of the procurement and contract management or record is not available, the WB may take appropriate remedial measures, including declaring misprocurement.
96. To ensure that any potential irregularities are identified early and to avert their recurrence, the arrangements for this review shall be done early. The first review should be carried out after the first few procurement processes have been completed, which are not subject to prior review. The following reviews should be carried out at least once a year. The percentage sample of the reviewed contracts shall be 15 percent. The Borrower shall submit the Review Report to the WB. The WB may choose to ask for selected source documents of the reviewed procurement.

Table 18: Procurement Risk Assessment and Mitigation Action Plan

Procurement Risk	Mitigation measure	Responsibility and Deadline	Risk level Initial/residual
ECOWAS			Substantial/Moderate
WAHO			
Insufficient capacity in WAHO due to the limited staff in charge of procurement, especially that WAHO would be entirely responsible for the project and the activities financed by other donors	Finalize recruitment of the principal procurement specialist with strong knowledge in the WB procedures, particularly in the selection of consultants	WAHO Immediately or within 3 months after signing of the Financing Agreement	

Lack of experience and absence of detailed procedures applying to the selection of consultants (Activities in the project will mainly focus on consultants services and training)	Due diligence in elaboration of TORs for main consultants services to allow the launching of the selection process in advance and signing of contracts by effectiveness	WAHO Immediately or within 3 months after signing of the Financing Agreement	
The use of the permanent commission of awards of contracts at central level for high contracts would probably introduce some bottlenecks and delays in procurement process	Adequate arrangements to convene with ECOWAS to allow the implementation of all procurement activities at WAHO level only	Appropriate delegation of authority shall be made in the Subsidiary Agreement between ECOWAS and WAHO	
Lack of clear description on the mechanism for contract approval in the existing project manual	Revise the PIM and describe the decision making mechanism in procurement and provide the responsibilities and thresholds for contracts approval	WAHO Immediately or within 3 months after signing of the Financing Agreement	
RAHC*			
Procurement function placed at the lowest level in CRSA Structure	Elevate the procurement function to a higher level position	ECOWAS Commission	
Lack of procurement staff	Recruitment of a procurement specialist skilled in WB procurement procedures	ECOWAS Commission	
Lack of a Project Procurement Manual	Prepare a Project Procurement Manual	ECOWAS Commission	
Inadequate space for records keeping	Provide additional working space in order to improve filing and record keeping.	ECOWAS Commission through WAHO	
Guinea			Substantial/Moderate
Ministry of Health and Public Hygiene			

Weak background of the PCU in WB's procedures and insufficient capacity	<ol style="list-style-type: none"> 1. Reinforce procurement capacities of the Staff involved in procurement activities by providing procurement trainings (internal by the PS in place) and/ or external 2. Hire a Procurement Assistant given the additional activities due to the proposed project 	PASSP Within 3 months after signing of the Financing Agreement	
Reinforce the capacities of the procurement specialist in place who was procurement assistant for PACV2 and has been hired in 2006	Reinforce procurement capacities of the staff involved in procurement activities by providing procurement trainings (internal by the PS in place) and/ or external	PASSP Within 3 months after signing of the Financing Agreement	
Update the implementation manual to include the procurement procedures for the project	Recruit a consultant and update the manual of procedure	PASSP Within 3 months after signing of the Financing Agreement	
Senegal			Substantial/Moderate
Ministry of Health and Prevention			

Insufficient procurement capacity	<ol style="list-style-type: none"> 1. Develop Procurement Manual Procedures to describe the responsibilities of the PIU and each of the ministries in project implementation and procurement procedures 2. Hiring a project procurement specialist with procurement with adequate qualifications and experience to address the workload activities 3. Train staff of CPM and Committee Tenders in the World Bank Procurement Procedures and filing procedures 4. Provides filing equipment including save mallets for each CPM of the four ministries 	MoHP Project within six months from signing the Financing Agreement	
The Procedures Manual is not up to date	Update the Procedures Manual to include the REDISSE Project and its activities.	MoHP Within three months from signing the Financing Agreement	
Sierra Leone			High
Ministry of Health and Sanitation, Integrated Health Project Administrative Unit			
Insufficient procurement capacity	Training of staff on World Bank Procurement Procedures in a specialized institution	IHPAU Within three months from signing the Financing Agreement	

Insufficient filing space	Provide a space for filing of procurement documents.	IHPAU Within three months from signing the Financing	
Insufficient procurement capacity	Carry out procurement refresher trainings to the PCU staff.	PCU During project life	

In the initial period until RAHC has sufficient capacity, OIE will carry out procurement. Recently, OIE has taken a responsibility for procurement under the World Bank-financed Project PRAPS. OIE has good experience in carrying out procurement under the EU rules. In order to mitigate possible procurement risk arising from the use of different procurement procedures, the World Bank Team will provide OIE with a “Procurement Guidance Note” that clearly explains the step-by-step procedures that need to be followed in the selection of consultants, procurement of goods and non-consultant services.

IV. ENVIRONMENTAL AND SOCIAL (including safeguards)

97. The net social impacts and benefits of the project are expected to be positive since it will support the creation of environmentally and socially sound laboratory technologies, surveillance systems and safe and secure mechanisms for disposal of medical and other project activity related waste, in participating countries. As the majority of project activities are expected to take place in existing government owned facilities on government-owned land, the project will not involve land acquisition leading to involuntary resettlement or restriction of access to resources or sources of livelihoods of populations. Therefore, OP 4.12 (Involuntary Resettlement) is not triggered for this project, and the project will not finance activities that would trigger the policy.
98. REDISSE I has been classified as a category B operation due to the low scale and site specific nature and amplitude of its foreseen risks and impacts on both the natural and physical environment. The project is expected to have overall positive environmental impacts through its support to surveillance, monitoring and containment of diseases including zoonosis. Negative impacts are related to the rehabilitation/upgrading of medical and other facilities, pest management, and medical and animal waste management. The environmental safeguards policies triggered by REDISSE I include Environmental Assessment (OP/BP 4.01) and Pest Management (OP 4.09). Each country has prepared and consulted upon a national Healthcare Waste Management Plan (HCWMP), an Integrated Pest and Vector Management Plan (IPVMP), and an Environmental and Social Management Framework (ESMF) which have been disclosed in-country, at WAHO’s website, and at the InfoShop. The ESMFs draw on existing frameworks for agricultural and health projects. During project implementation, Environmental and Social Management Plans and/or Waste Management Plans (WMPs) will be prepared, consulted upon and disclosed; they will address animal waste and other issues.
99. The environmental safeguards instruments have been consulted upon and publicly disclosed by the proponents in the regional implementing agency (ECOWAS/WAHO) websites (and thereafter in each individual participating countries) and at the InfoShop prior to the physical start of project implementation as required. All the above mentioned plans (e.g. ESMFs,

WMPs, etc.) will be prepared, consulted upon and publicly disclosed in appropriate locations before the commencement of civil works and/or project activities.

PUBLIC CONSULTATION AND PARTICIPATION AND CITIZEN ENGAGEMENT

100. Design and preparation of REDISSE I have been grounded in an inclusive public consultation and participation style. A series of meetings has been held in Dakar (December, 2015 and March 2016) and in each individual country (January 2016) that offered a platform for open discussions and experience gathering to better frame the design and preparation of REDISSE program. Reliance on ECOWAS as the regional entity to coordinate the program, especially through one of its branches (WAHO), adds a plausible weight in the consultative and inclusive coordination approach REDISSE I is built on. Moreover, preparation and implementation of the environmental safeguards instruments is being done in a consultative and participatory manner. Likewise, preparation, validation and public disclosure of the environmental and social safeguards instruments for each country will be done alike to ensure broad public engagement (considerate of women, youth, elderly, disabled and vulnerable groups) through ownership and social accountability mechanism that altogether are foreseen to foster a sustainable development path. Since consultation and participation is an iterative process, the same trend will be maintained throughout the lifecycle of REDISSE.

IMPLEMENTATION ARRANGEMENT FOR SOCIAL AND ENVIRONMENTAL (INCLUDING SAFEGUARDS)

101. To ensure adequate and timely implementation of safeguards measures in the related safeguards instruments and project appraisal documents, including legal ones, a two-person team of Social and Environmental Focal Points (SESFPs) will be designated to form a small safeguards unit within the regional implementing Agency (ECOWAS-WAHO). The Social Safeguards Specialist will be responsible for social assessment and development – including gender, youth, and vulnerable groups aspects of the project; the Environmental Safeguards Specialist will be responsible for environmental safeguards and natural resources management—including climate change aspects of the project. Likewise, the same set up will be formed in each recipient country to follow up on the proper handling of social and environmental issues in their respective national projects. The WAHO and National SESFPs will work in close tandem with the World Bank Safeguards Specialists, who will ensure that the SESFPs' technical capacity is improved throughout the project lifecycle.

102. During project implementation, the two will work closely with the World Bank safeguards specialists to ensure that the standard quality of safeguards documents is met and adequately reported upon. Likewise WAHO-SESFPs will work with national- SESFPs to prepare and share with World Bank safeguards specialists' periodic reports (to be clarified in the project implementation manual) on the status of safeguards implementation and monitoring. Together, the team will agree on core recommendations to be implemented after each supervision/implementation support mission to ensure compliance with legal documents.

103. The Environmental and Social Management Plans (ESMPs) and/or Waste Management Plans will examine the existing and potential environmental and social risks and impacts associated with the proposed project activities, including animal waste management. Likewise, the HCWMPs provide specific guidelines as to how to properly handle medical waste, from collection, transportation, storage and disposal. The environmental safeguards instruments will greatly build on the previous instruments developed for the ongoing WB funded operations in the participating countries, as well as on the lessons learned and missed opportunities from experience in implementing the instruments. Once the exact characteristics of the physical locations and details (nature, type, scope and scale) specific activities of the selected research and training centers have been identified, each country will then develop its site specific ESMPs to capture local specificities. In addition, the safeguards instruments include institutional arrangements, outlining the roles and responsibilities for the various stakeholder groups involved in each participating country, at the national and regional levels for screening, reviewing, and approving activities that will be financed by IDA under this project. The safeguards instruments also describe potential adverse risks and/or impacts that could result from the implementation of the project, generic mitigation measures, implementing and monitoring mitigation measures for such activities.
104. The respective Borrowers have individually and collectively benefited from other (past and ongoing) IDA projects which provided/are providing relatively sufficient capacity for understanding and applying safeguard policies. In addition, borrowing countries have adequate institutional and legal frameworks that are expected to ensure satisfactory compliance with World Bank operational safeguard policies. The same is true for ECOWAS/WAHO the regional implementing agency that has also gained sufficient experience in handling WB financed operation in the past, and is therefore sufficiently prepared to handle this new operation. Moreover, the WB's involvement in the health sector has been significant and the clients have over time shown relatively sufficient capacity and goodwill in implementing World Bank funded projects. Nonetheless, in aiming at complying with the legal framework and boosting the program's overall performance on safeguards and gender aspects, additional technical capacity building will be required for WAHO and each individual participating country institutions, including the respective national environmental (and social) agencies.
105. Specifically this project has triggered two out of the ten safeguard policies.

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)		X
Pest Management (OP 4.09)	X	
Physical Cultural Resources (OP/BP 4.1 1)		X
Involuntary Resettlement (OP/BP 4.12)		X
Indigenous Peoples (OP/BP 4.10)		X
Forests (OP/BP 4.36)		X
Safety of Dams (OP/BP 4.37)		X
Projects in Disputed Areas (OP/BP 7.60)		X
Projects on International Waterways (OP/BP 7.50)		X

IV. MONITORING AND EVALUATION

106. A set of indicators to be monitored and documented to assess performance and progress toward meeting the project objectives are described in the Results Framework (RF) in Annex 1. There is an overall RF to measure regional progress and country-specific RFs with customized annual targets. Results will be reported annually in the Implementation Status Reports (ISRs). WAHO M&E specialists will lead the monitoring and evaluation of the project implementation. As noted in Annex 1, most indicators rely on existing international tools for evaluating IHR and OIE compliance and progress (the JEE tool and OIE PVS evaluation tool respectively) to minimize the burden of data collection on countries. Data sources also may vary by country, and WAHO will establish a mechanism for ensuring the quality of the data.
107. The project will support the strengthening of national health information systems to collect and report quality data. Monitoring and Evaluation will be undertaken at the national level by the three participating countries and aggregated at the regional level by WAHO. The countries will be responsible for conducting annual self-assessments using the JEE and OIE PVS tools, and the JEE will be carried out by external experts biennially to validate the quality of the data and findings from the national self-assessments. In principle, OIE PVS external evaluations would be carried out shortly prior to the JEE to streamline findings into the JEE. WAHO will coordinate the M&E function for the project as a whole, based on an M&E manual detailing the requirements for all countries and at the regional level. This will be harmonized with the project implementation manuals (PIM) for all implementing agencies which are expected to be ready within three months of project effectiveness. WAHO will also implement data collection for specific indicators of regional level activities, and will ensure that all participating countries provide data and information of the required quality on time. WAHO will also provide technical backstopping in M&E to participating countries and encourage cross-country learning. At the national level, the PCUs of the three participating countries would be responsible for collecting and compiling all national level data, with the assistance of external partners through external evaluations, including the US CDC and WHO for the human health sector, and OIE for the animal health sector.
108. M&E in REDISSE I has been developed as: (i) a tool for results-based management, to ensure that data and information on the project's progress—or lack of progress—toward the outcomes under the PDO feed into management and that corrective measures can be taken in time if necessary; (ii) a framework for accountability for progress toward national and regional development objectives attributable to interventions and actions of the regional institution WAHO (alongside with RAHC) and national governments implementing REDISSE I; (iii) an approach to monitor performance of participating countries in REDISSE I to ensure a certain level of regional performance and more or less even contributions from the three countries to regional objectives; and (iv) a platform for communicating the project's results. M&E is also designed to meet the World Bank's routine reporting requirements (specifically, the six-monthly progress report, Implementation Status and Results (ISR) report, which is developed for each country and publicly disclosed), and data and information requirements for the mid-term review.

109. Context and Capacity. Government capacity in the three countries to plan, execute, monitor, and evaluate projects can often be weak. Signs of weak capacity include (but are not limited to) incomplete datasets, field-level data that are not validated, missing information, inconsistent reporting, and the delivery of data and information that are never subsequently reported or used in making decisions or formulating policy.
110. Design of Results Framework. The cross-sectoral aspects and weak capacity have been taken into account in designing the M&E framework for REDISSE I, especially with regard to the number and selection of indicators, the data sources, and the methodologies used to collect data. The main instrument for M&E in the REDISSE I is the Results Framework (Annex 1), which is common to all of the REDISSE I countries and will be reported in the ISRs. It consists of the PDO statement and 6 “SMART” PDO indicators and 9 “SMART” intermediate indicators. Core indicators of the World Bank are included too, such as the core indicator on direct project beneficiaries and healthcare worker trainings.
111. Some indicators are disaggregated by national and regional level and by sex (to calculate percentage of female) for the core indicator on direct project beneficiaries. Where possible, indicators have baselines and targets listed, as well as the frequency for data collection, the data sources, the methodology for calculating baseline and progress values, and responsibilities for data collection. Baselines are proposed as REDISSE I activities with progressive targets being established after determining these baseline values. Sources of data can vary by country, and data quality assurance mechanism will be put in place with WAHO. For some countries, baselines for indicators will be derived as part of project activities to be verified during the first year of data collection. The Results Framework also has a column for defining indicators and entering remarks. Table 1 in Annex 1 presents details on the aspects of the indicators discussed here.
112. Recognizing that REDISSE program directly complements other existing global disease surveillance and response initiatives such as GHSA in West Africa, efforts have been made to harmonize with existing indicators. This would reduce the data collection burden on participating countries as well as enable comparable data to monitor baselines and progress towards achieving common objectives. In February 2016, WHO released the IHR Joint External Evaluation Tool (JEE)⁵² that was developed with input from the GHSA. This tool is intended to measure progress towards fulfilling IHR obligations through transparent assessments by a team of national experts and an external team. As REDISSE I will help countries fulfill the IHR (2005), REDISSE program indicators were developed to coordinate with these other initiatives to the extent possible. Similarly, as the interventions in the animal health sector aim at improving the quality of Veterinary Services towards compliance with OIE international standards, and were designed in accordance with recommendations of PVS Pathway missions, measurement of progress would be done through the use of the OIE PVS qualitative evaluation tool.⁵³

⁵² <http://apps.who.int/iris/handle/10665/204368>

⁵³ All beneficiary countries of REDISSE having undergone at least one evaluation, such evaluation could serve as baseline, or be refreshed at the onset of the project to provide a better accuracy if some significant changes occurred

113. **Monitoring & Evaluation Arrangements.** Monitoring and Evaluation will be undertaken at two levels for REDISSE I: (i) at the regional level by WAHO (and RAHC) and (ii) by the three participating countries in conjunction with external partners such as WHO, CDC, and OIE. WAHO has overall responsibility for coordinating the M&E function of REDISSE I and will ensure that data and information from all countries are produced on time and are of sufficient quality. The Results Framework indicates whether the designated M&E units in the three countries have the delegated responsibility to collect data on REDISSE I indicators or whether that responsibility rests with WAHO. WAHO will provide overall coordination for the M&E function based on one M&E manual describing the requirements for all countries and the regional level. WAHO will design and implement data collection efforts that are best done at the regional level, and it will provide technical backstopping on M&E to the participating countries, put a data quality assurance mechanism in place, collect data on its own, and encourage cross-country learning. Annex 1 presents an overview of the various data collection activities and data sources, including responsibilities for data collection and coordination.
114. **Monitoring and Evaluation Activities.** Monitoring and Evaluation activities for REDISSE I will: (i) generate information on the project's progress; (ii) analyze and aggregate data generated at the regional, national, and local levels; and (iii) document and disseminate key lessons to users and stakeholders across ECOWAS countries together with the communication function of REDISSE I. REDISSE I will receive evaluation and progress reports from all of the countries and will be able to share results and best practices across ECOWAS. The project-level M&E will draw on and strengthen national and regional systems to monitor results and needs across beneficiary countries, consistent with the ECOWAS mandate. The project will put special emphasis on mapping project interventions and results through geocoding of activities and overlay with key development indicators. This information will be accessible through platforms along the lines of the Mapping for Results initiative.
115. **Planning for Monitoring & Evaluation Use.** The implementation of the M&E framework will be tracked during implementation, and will be a central part of project supervision. The opportunity of the mid-term review will be used to also assess some fundamental M&E design issues, and make adjustments accordingly. There will be a strong results-orientation during supervision, with adequate attention devoted to progress with data collection, data quality and the actual use of data in tracking project implementation in Aide Memoires and Implementation Status Reports (ISRs).
116. **Annual review meetings,** organized under the auspices of WAHO would provide a forum for sharing implementation experiences, proposing recommendations on programmatic changes, and generating additional demands for information and analysis. The opportunity of the Mid Term Review will be used proactively to: (i) assess progress to date and continued relevance/realism of the targets; (ii) review the experience with definition of indicators, data collection systems, analysis, and other methodological aspects.

; an external OIE evaluation would be realized also at the closing of the project and intermediate self-evaluation could be carried out at mid-term.

V. ROLE OF PARTNERS

117. In the area of animal health, two international (OIE and FAO) and one regional (AU-IBAR) organizations would be expected to provide support at regional (RAHC) and national levels (ECOWAS participating countries).
118. These institutions have their specific role, mandate and comparative advantages and have established collaborative arrangements, in particular since the last HPAI crises.
- (i) The OIE is the World Organization for Animal Health (its historic acronym has been maintained). The organization was created in 1924 (before the UN). It is ruled by an International Agreement to which 180 member countries have subscribed. Representatives from member countries are designated by their government and they are in general those responsible for the national Veterinary Services in charge of preparing and implementing national policies and legislation for the control of animal diseases, including those transmissible to humans. The main mandates of the OIE are (i) to ensure transparency in the global animal disease situation; (ii) to collect, analyze and disseminate veterinary scientific information; (iii) to encourage international solidarity in the control of animal diseases; (iv) to safeguard world trade by publishing health standards for international trade in animals and animal products; (v) to improve the legal framework and resources of national Veterinary Services; and (vi) to provide a better guarantee of food of animal origin and to promote animal welfare through a science-based approach. OIE standards are recognized as reference on animal diseases and zoonoses by the WTO/SPS agreement. The OIE manages five permanent regional representations and eight sub-regional offices. The OIE has established official collaborations with the World Bank (see below), WHO (GLEWS together with FAO), FAO (GF-TADs; OFFLU; GLEWS), and many other public and private organizations.
 - (ii) The Animal Health Service of the Food and Agriculture Organization (FAO-AGAH). Animal health (AH) issues (highly contagious trans-boundary animal diseases, veterinary public health, emerging vector-borne diseases and Veterinary Services organization) are the responsibilities of the AH Service (AGAH) of the Animal Production and Health Division (AGA). AGAH is managed by the Chief Veterinary Officer (CVO) of the FAO and regroups a multi-disciplinary team of specialists (epidemiology, microbiology, laboratory activities, parasitology, and ecology of tick-borne and insect-borne diseases). Using the complementarities of other services of AGA, AGAH addresses the problems of AH with a holistic approach (socio-economic, livestock policy and institutions, interaction between farming systems and the environment, and AH). The EMPRES (Emergency and Prevention Systems) program focuses on the early detection of TADs. Information systems and disease intelligence are key activities for surveillance, risk assessments, forecast, and preparation of strategic control programs. ECTAD (the Emergency Center for TADs) is a centralized structure, designed to insure a central chain of command with regards to strategies for the prevention and control of TADs. ECTAD is under the leadership

of the FAO CVO, and regroups the various experts working on animal health, animal production, livestock policy, modeling, GIS, and communication, as well as administrative and financial matters.

- (iii) The African-Union InterAfrican Bureau for Animal Resources (AU-IBAR) mission is to provide leadership in the development of animal resources for Africa through supporting and empowering AU Member States and Regional Economic Communities. Its mandate is to support and coordinate the utilization of animals (livestock, fisheries and wildlife) as a resource for human wellbeing in the Member States of the African Union and to contribute to economic development. The specific areas of the mandate are to: improve public and animal health through the control and possible eradication of transboundary animal diseases and zoonoses; improve the management of animal resources and the natural resource bases on which they depend; explore investment options and enhance competitiveness of African animal products; contribute to the development of relevant standards and regulations and enhance compliance by Member States; strengthen institutional capacity and support policy development and harmonization; disseminate information and knowledge on animal resources to Member States, Regional Economic Communities and other relevant institutions; and provide essential support to Member States with special needs or in emergency situations.
- (iv) The Regional Animal Health Centre (RAHC) for West and Central Africa was set up in Bamako in 2006 as an informal platform under the OIE coordination, as a joint initiative of the FAO and the OIE, later joined by AU-IBAR, originally to meet the need for coordination of avian influenza control. In accordance with its new status, the RAHC is under the authority of ECOWAS. It will be a legal entity in its own right and enjoy functional autonomy based on an annual budget provided by the REC (covering at least its “sovereign” expenses), while its staff will be governed by the staff regulations of ECOWAS.

119. During the past few years, OIE and FAO in particular, have reinforced their collaboration through a MoU based on their complementarities and have: (i) developed a global framework for transboundary diseases (GF-TADs), (ii) co-organized a number of international and regional events, (iii) co-published several articles, (iv) issued common resolutions and recommendations, as well as (v) conducted joint technical and scientific field missions. It is important to note that their collaboration went well beyond the emergency response to the HPAI crisis, but paved the way for a future strengthened animal health system needed for the prevention and control of emerging and re-emerging global diseases of animal origin. In addition, the OIE and FAO have reinforced their collaboration with WHO to form the “Tripartite” to better address threats at the animal-human-ecosystem interface. The RAHC, which was set up in Bamako in 2006, is now under ECOWAS and collaborates with the three AH institutions. The strengthening of the RAHC should reinforce the collaboration of the OIE, FAO and AU-IBAR in support to the ECOWAS countries.

120. At National level,

- OIE activities include: AH Standards and Guidelines development and implementation (trainings of Delegates and focal points) ; Trade Issues/SPS; National Official Data Collection and Dissemination; Certification; OIE AH Information system; Performance of Veterinary Services assessment and PVS Gap Analysis; veterinary legislation upgrading; Laboratory network optimization; twinnings between diagnostic laboratories and Veterinary education establishments);
- AGAH activities include: Surveillance and Epidemiological Analysis; Contingency Planning, Strategy Development and Emergency Preparedness; Good Emergency Management Practices; Comprehensive Livestock Sector Development: production, health and policy; Improvement of National AH Services and Delivery; and Laboratories (support, targeted research and epidemiological surveys, technology transfer);
- Both OIE and AGAH are involved in: Capacity Building; Global Early Warning System; and Coordinated Response to Emergencies.

121. While countries participating in the project will ultimately decide when and how to engage with those three organizations in support to their respective national project activities, the OIE will play a critical role at regional level in supporting the strengthening of the RAHC as well as the implementation of the regional project animal health activities.

122. At Regional level, these activities could include:

(i) Coordination

- a. M&E of national animal health activities;
- b. Use and extension of the coordination/consultation mechanism established by PRAPS;
- c. Harmonization of national animal health surveillance strategies and mechanisms;
- d. Shared information among national Veterinary Services regarding country animal health status;
- e. Strategic thinking on transversal themes of regional interest (legislation; regional control bodies; borders control; database; etc.).

(ii) Technical Support

- a. Technical assistance to participating countries upon their request on designing and/or revising national surveillance and emergency plans;
- b. Facilitate collaborative process to establish bridges between IHR and PVS;
- c. Develop national and regional epidemiological database and facilitate sharing of information among participating countries, linked with the World Animal Health Information System (WAHIS) of OIE;
- d. Develop manuals and technical guides on good practices in epidemio-surveillance;
- e. Support to the management (previously funded by the FAO/ECTAD project) of the epidemiological surveillance network (RESEPI) and diagnostic laboratories network (RESOLAB), whose activities in West Africa are now associated with the RAHC.

(iii) Training

- a. Design and conduct a program of continuous and specific training located at RAHC/CRSA especially designed for Veterinary services and Laboratories staff (epidemiology-surveillance; early detection; diagnostic methods, etc.);
- b. Conduct a specific training program for the OIE Delegates and national focal points directly concerned by the Project (reporting; laboratories; wildlife; communication);
- c. Support national training program (design and/or revision of national training program; design of training curricula; manuals; etc.).

Annex 4: Implementation Support Plan

Regional Disease Surveillance Systems Enhancement Program in West Africa

Strategy and Approach for Implementation Support

1. The implementation support plan (ISP) for the project has been developed based on the specific nature of the project activities, lessons learned from past operations in the region, countries and sectors, and the project's risk profile as described in this PAD. The ISP will be reviewed regularly and revised as and when required.
2. The implementation support plan includes regular, thorough reviews of implementation performance and progress to be carried out by a team of WB specialists with the project implementing agencies (three participating countries) and with the key supporting agency (WAHO). In addition to these formal implementation support missions and field visits, which will be carried out at least semi-annually given project urgency and complexity, special workshops will be held at key decision points in the project. Midway during the project, the WB team will hold a Mid-term review mission to take stock of project implementation and to take any corrective actions, as necessary. The MTR is expected to take place in December 2019. Prior to that mission (by end November 2019), the implementing agencies, under the coordination of WAHO and the Regional Steering Committee, will prepare and send to the WB a report summarizing project progress, highlighting any particular issues that require special attention. At the end of the project, the WB team will prepare an Implementation Completion Report (ICR) which will summarize achievements made under the project. This report will also include an assessment of the project by the project implementing agencies. This process will also be guided and coordinated by WAHO.

Implementation Support Plan

3. The WB team will monitor progress on several fronts including: (i) key performance indicators as identified in the Results Framework; (ii) project components; (iii) compliance with key legal conditions and covenants; (iv) progress made against the project implementation plan and the procurement plan; (v) whether estimated project costs are sufficient to cover planned activities and whether reallocations of the Grant/Credit funds are required; (vi) compliance with the WB's financial management and disbursement provisions; and (vii) compliance with environmental and social safeguards. In addition, the World Bank will also review the findings and results of third party assessments, community-based monitoring, and social audits which will be undertaken during the course of project implementation. The WB team will also 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, including user-satisfaction assessments.
4. In addition to monitoring project progress, the WB team will work closely with all implementing agencies and with WAHO to provide technical support as needed. The implementation support team will include public health specialists (including disease surveillance, and laboratory specialists), animal health specialists, commodity procurement

and management specialists, specialists on social mobilization/advocacy, specialists with experience in implementation of training programs, M&E specialists, and operations staff that will provide necessary just-in-time advice and support. The WB procurement specialist will carry out annual ex-post review of procurement that falls below the prior review thresholds and will have separate focused missions depending on the procurement needs that arise. The WB financial management specialist will review all financial management reports and audits and take necessary follow-up actions as per WB procedures. The Bank team members will also help identify capacity building needs to ensure successful project implementation.

5. Given the complexity of the project (3 countries and multisectoral interventions), the Bank team will have a meeting every two months with the WB colleagues based in the field and those working in education and social protection (as well as gender and governance if needed).
6. The specific support in implementation during the project period is outlined below:

Table 19: Support in implementation during project period

Time	Focus	Skills Needed	Total Staff weeks	Number of trips
	Overall coordination	Task Team Leaders (TTLs)		
Year 1 (resource estimate: US\$300,000)				
	Project launch	Task team: total TTL – health specialists Animal health specialists Commodity specialists Social/mobilization specialists Training programs specialists Monitoring and Evaluation specialists Operations Officers FM specialists Procurement specialists	56 10 7 5 7 7 5 10 3 3	1 for each specialist listed
	Regular implementation support mission	Task team: total TTL – health specialists Animal health specialists Commodity specialists Social/mobilization specialists Training programs specialists Monitoring and Evaluation specialists Operations Officers	25 5 3 3 3 3 3 5	1 for each specialist listed
	Regular	Task team: total	29	1 for each

	implementation support mission	TTL – health specialists Animal health specialists Commodity specialists Social/mobilization specialists Training programs specialists Monitoring and Evaluation specialists Operations Officers FM specialists Procurement specialists	5 3 3 3 3 3 5 2 2	specialist listed
Years 2-5 (resource estimate: US\$1,000,000)				
	Bi-annual implementation support missions (technical and fiduciary reviews)	Task team: total TTL – health specialists Animal health specialists Commodity specialists Social/mobilization specialists Training programs specialists Monitoring and Evaluation specialists Operations Officers FM specialists Procurement specialists Consultants on specialized issues)	33x2 7 3 3 3 3 3 5 2 2 2	1 for each specialist listed
	Special workshops (as required)	Specialists (as required)	5	1 for each specialist
	Mid-Term Review (December 2019)	Task team: total TTL – health specialists Animal health specialists Commodity specialists Social/mobilization specialists Training programs specialists Monitoring and Evaluation specialists Operations Officers FM specialists Procurement specialists Consultants on specialized issues)	31 5 3 3 3 3 3 5 2 2 2	1 for each specialist listed
	Implementation Completion Review Mission (July 2023) ICR preparation	Task team: total TTL – health specialists Animal health specialists Monitoring and Evaluation Specialists Operations Officers ICR Authors	24 5 2 2 5 10	1 for each specialist listed

Annex 5A: Economic and Financial Analysis

Regional Disease Surveillance Systems Enhancement Program in West Africa

- 1. There is a strong economic case for investing in integrated disease surveillance and response systems.** Preventing and controlling zoonotic disease outbreaks yields large economic benefits by reducing the threats of epidemics and pandemics. Such benefits of disease surveillance go well beyond the health benefits of reducing the number of infections, reducing mortality and morbidity, and health care costs. Disease outbreaks affect economic activity by decreasing demand (as personal income, investment, and exports fall) and supply (as agriculture production falls and businesses in many sectors close), and reduces labor, capital, and productivity, which are the major components of growth (UNDP, 2014). The estimated forgone output due to the latest Ebola epidemics in Guinea, Liberia and Sierra Leone was over 12 percent of the countries' combined output. The regional loss of output due to slower growth rate was estimated to be US\$7.35 billion in 2014 (World Bank, 2014). Globally, the economic impacts of severe pandemics have been estimated at 4.8 percent of the global gross domestic product (GDP) or approximately US\$3 trillion in the 21st century (Jonas, 2013). Compared to the estimated required investments to build a well-functioning global disease surveillance system and response, the expected annual returns on investment of avoiding such large losses are estimated as high as 123 percent (World Bank, 2012).
- 2. By strengthening cross-sectoral and inter-country capacity for integrated disease surveillance and response, the REDISSE project will enhance the ECOWAS member states capacity to rapidly detect and respond to public health threats of national and international concern.** Ultimately, the project will contribute towards significantly reducing the burden of diseases, particularly among poor and vulnerable populations, mitigating the public health and economic risks posed by infectious diseases in humans and animals, and decreasing the threats of future disease outbreaks, thereby promoting global health security. On a global scale, the creation of a regional network in West Africa will serve to harness the power of other regional networks to improve regional and global cooperation of the ECOWAS member countries for the attainment of better population health outcomes and to promote global health security.

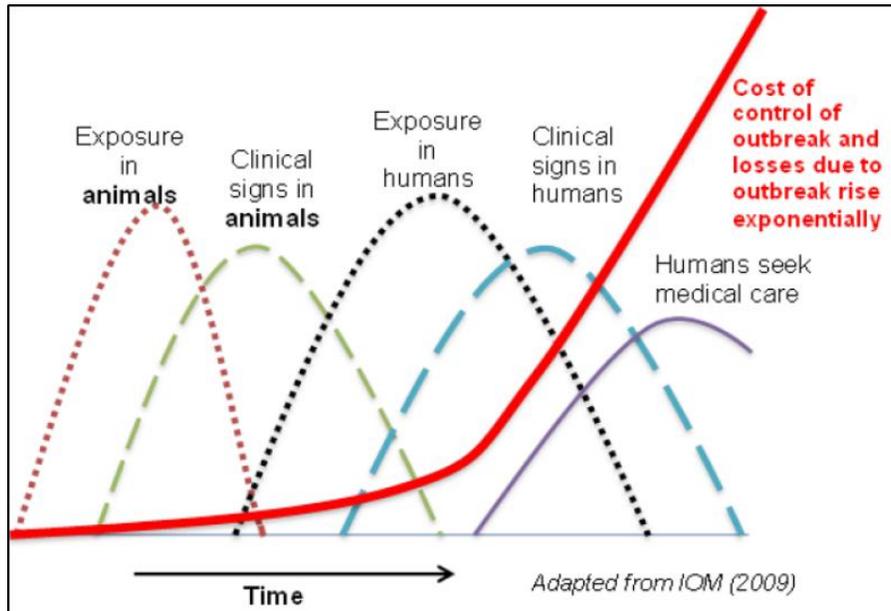
RATIONALE FOR PUBLIC SECTOR PROVISION/FINANCING, IF APPLICABLE

- 3. There are three primary rationales for a publicly-provided regional approach to disease surveillance and response network in West Africa.** The first is simply the overwhelming economic burden that infectious diseases, individually and collectively, place on the region, constraining regional and national economic development. Communicable diseases decrease productivity, undermine the human resource base and deter foreign investment in Africa. For example, tuberculosis (TB) causes approximately US\$12 billion in annual losses to the global economy. TB patients lose an average of 3-4 months of work time annually with lost earnings amounting to between 20-30 percent of household income (Fonkwo, 2008). It has been shown that malaria inhibits economic growth by 1.3 percent per year in malaria-endemic countries (Gallup and Sachs, 2000). The impact of AIDS on the economic growth is estimated to be 1.5 percent per year; which means that over 25 years their economies would

be 31 percent smaller than otherwise expected. Infectious diseases, particularly those that cause epidemics, continue to make costly disruptions to trade and commerce in every region of the world. The annual potential economic losses due to pandemics are high, at least, US\$30 billion (Jonas, 2013). The economic impact associated with HPAI H5N1 between 2003 and 2006 resulted in nearly 2 percent loss of the regional East Asia GDP (IOM, 2009). In an interconnected world, a pathogen from a remote village can reach major cities in any continent in 36 hours (Jonas, 2013). On the animal health side, the OIE estimates that around 10 percent of animal production is lost through diseases in countries with poor performing Veterinary Services; most of these diseases could be prevented and/or controlled in a cost-efficient manner.

4. **The second rationale rests on the status of a disease surveillance system as a global public good, which is both non-rival and non-exclusive.** The benefit from preventing the spread of infectious disease is spread across individuals and countries, but there is no practical way to restrict the benefits to those who pay for maintaining it (non-excludable). Additionally, the consumption by one person does not reduce the availability to others, within or across nations (non-rivalrous) (Jonas, 2013; WHO, 2005). The benefits of a surveillance and response system go beyond national borders since an undetected, or uncontrolled outbreak is more likely to spread to other countries (WHO, 2005). These benefits accrue to all countries and thus describe a ‘pure’ global public good. A consequence of global public goods is that there is no practical way to make those who benefit from it to pay (‘free-rider’ problem). For that reason, it is best if the surveillance and response to infectious diseases are funded by governments rather than by individuals (WHO, 2005). Finally, there are also externalities that justify the public financing of disease surveillance and response system. For instance, reducing risks of zoonotic diseases may increase countries’ capacity to trade livestock internationally. It may also result in poverty alleviation for two reasons: Firstly, the burden of infectious diseases affects the poor disproportionately; secondly, livestock represents a relatively large share of poor’s household income, and animal diseases inexorably reduce their welfare and increase their vulnerability (Jonas, 2013).
5. **The third rationale is based on the sharing of resources to enhance efficiency.** Examples of resurgent polio, meningitis, cholera and yellow fever in West African countries that were thought to have eliminated or controlled them demonstrate the need for a coordinated regional response. Pooled procurement and management of other commodities or services, such as long-lasting insecticidal bed nets or TB treatments, could result in financial savings due to economies of scale. Costly high-level resources, such as level 3 reference laboratories, specialized research institutions, and advanced training facilities may efficiently serve the needs of more than one country. It would be wasteful and duplicative to establish these resources in every country, particularly when the critical mass of highly trained personnel and the volume of services are considered. There are also cost savings realizable through the implementation of the One Health approach. The World Bank estimates that the total cost savings are 10 percent to 15 percent of the system’s total cost, depending on the prevalence of diseases (World Bank, 2012).
6. **Delays between the onset of the epidemic and the implementation of control measures are costly.** Too often detection, diagnosis, and control of disease outbreaks are attempted only with delay and after many humans are infected. When contagion grows exponentially, the cost of controlling the epidemic outbreaks rise in tandem. Whereas the recent EVD outbreak could have been controlled for less than US\$200 million in April 2014, according to UN estimates, by Fall 2014, this cost had already risen to US\$4 billion. When public veterinary authorities are not prepared and equipped to control outbreaks, or to detect them in the first place, delays in control and eradication are likely. Furthermore, when outbreak control fails, prevention of an epidemic becomes more challenging and more costly as contagion spreads, and eventually becomes impossible. Mitigation of the epidemic then remains the only policy option. Delays in detection and control are ultimately very costly because contagion and mitigation costs grow exponentially (Figure 8).

Figure 8. Early Control of zoonotic diseases is cost-effective and prevents human diseases



Source: Jonas, 2013; p.5.

COST-BENEFIT ANALYSIS

7. **The economic analysis will determine whether the expected benefits of the project justify the expected costs.** The main challenge in economic evaluations of multi-intervention projects is to combine all possible outcomes into a single, composite, measure of effectiveness (or benefits). To overcome this challenge, cost-benefit analysis (CBA) is used. In CBA costs and outcomes are valued in a commensurate unit, often money. It allows a direct comparison of costs and benefits of the project, the costs and benefits of alternatives use of the project resources (economic costs) and compares costs and benefits of interventions beyond the health sector.
8. **The REDISSE program aims to address systemic weaknesses within the animal and human health sector that hinder effective disease surveillance and response.** This objective will be achieved by: (i) strengthening the capacity of selected ECOWAS member countries to fulfill their obligations under the WHO IHR (2005) and the OIE Terrestrial Animal Health Code; (ii) reinforcing sustainable and effective regional collaboration and collective action to detect and respond promptly to priority infectious diseases threats in West Africa including zoonotic diseases; and (iii) establishing an efficient linkage of country health systems to a regional disease surveillance and response network. The project will contribute to reducing the burden of diseases particularly among the poor and vulnerable populations, mitigate the public health and economic risks posed by infectious diseases in humans and animals, and diminish the threats of future disease outbreaks and, consequently, promote global health security.

9. **The economic analysis of the REDISSE program examines the economic rationale for investing in disease surveillance and response in West Africa.** The analysis identifies potential benefits of the project's components and activities, quantifies them into monetary units and compares with project costs through a CBA. The analysis also includes an appraisal of the potential to leverage financial contributions from national governments and the international community to sustain the project's interventions in the long run.
10. **Assessments of disease surveillance and response systems have mostly focused on the economic returns of avoiding pandemics** (World Bank, 2012; IOM, 2009). These assessments focus on the general impacts of a pandemic on economic activity, labor, and productivity. While these certainly are the main mechanism by which pandemics affect the economy, models tend to generalize by using a high level of aggregation that makes it difficult to address more specific questions (Rich et al., 2005). The modeling approach depends on the balance between data availability and model sophistication. This analysis adopts a comprehensive perspective by modeling the health and economic impacts of reducing the likelihood of disease outbreaks (and pandemics) in West Africa due to the implementation of the REDISSE project. The benefit-cost ratio is given by:

$$CBA = \frac{B_{REDISSE}}{C_{REDISSE}} = \frac{\Sigma(B_h + B_e)}{C_{REDISSE}} \quad (1)$$

11. Where, B_h is the total health-related benefits of the project (associated costs of avoided mortality and morbidity) and B_e represents the total economic losses avoided for preventing pandemics. Health benefits are associated with fifteen diseases of epidemic potential identified, and economic benefits are measured by the impact on the different economic sectors. Therefore:

$$B_{h_{i,j}} = \Sigma(B_{hmort_{i,i}} + B_{hmorb_{i,j}}) \quad (2)$$

12. Where $B_{h_{i,j}}$ is the health related benefits resulting from preventing disease i in country j . As defined above, this can result from reduced mortality and morbidity. The economic benefits are given by:

$$B_e = \Sigma(B_{e_{t,j}}) \quad (3)$$

13. Where $B_{e_{t,j}}$ is the economic benefits resulting from preventing a pandemic in the economic sector t in country j . The economic sectors are agriculture, transport, manufacturing, and services (including tourism).

Human Diseases of Epidemic Potential

14. **The first step is to estimate the risks of disease outbreaks in West Africa.** A previous analysis reviewed global databases such as the WHO's *Disease Outbreak News*, ProMED-mail, HealthMap, and the Global Public Health Intelligence Network to compile a list of validated disease outbreaks (Chan et al. 2010; Bogich et al. 2012). Among the fifteen West African countries included in the REDISSE program, thirteen diseases caused at least one

outbreak from 1996 to 2009 (Annex 1), totaling 73 recorded events. Three additional well-publicized meningitis outbreaks which were not part of the original dataset were included in this analysis. If an outbreak occurred in multiple countries, it is listed in the country in which the outbreak began. The list was then complemented by the Zaire ebolavirus and HIV-2. Zaire ebolavirus, one of five species of ebolavirus, was the species responsible for the 2014 West African outbreak.⁵⁴ HIV-2 has spilled over into humans, at least, eight times in West Africa in the last hundred years, twice resulting in sustained human-human transmission (Sharp and Hahn, 2011), although it has largely stayed confined to West Africa and is currently declining relative to HIV-1.⁵⁵ However, it is representative of other viruses not captured by the Bogich et al. dataset which still pose epidemic potential in West Africa. This compilation resulted in a list of fifteen diseases of human epidemic potential in West Africa the REDISSE program will help mitigate. These diseases are distinct from diseases which are endemic or seasonal in West Africa, such as malaria.

15. **These fifteen diseases were stratified according to two criteria:** 1) untreated mortality rate (high > 20%, moderate 5-20%, low < 5%); and 2) spread potential (typical outbreak having more or less than 1,000 cases). These two criteria were determined from a review of the 76 reported events described above. There were thus six categories of diseases (described in Table 1). The stratification yielded groups of diseases that also have similar elements of response and control. This stratification was necessary for two reasons: firstly, it simplified the resulting cost-benefit model; and, secondly, it yielded a more well-behaved distribution of probabilities as there are fewer cases with zero or one event in the fourteen-year time frame considered (1996 – 2009). The annual probability of each disease outbreak happening in the region was calculated by dividing the number of outbreak events from 1996 to 2009 by fourteen years. For the high-mortality/high-spread disease group, which included Zaire ebolavirus and avian flu only, a different method to estimate probability was used. Zaire ebolavirus had not previously occurred in West Africa, so there is limited data to estimate its annual outbreak potential. However, it clearly can be transmitted there and likely continues to circulate in animal populations, increasing the chance of future spillover. Avian flu does not yet have the ability to transmit easily from person to person, but it is hypothesized that only a few mutations or re-assortments could permit this (Trombetta et al., 2015). Therefore, the annual probability of a pandemic disease with high mortality and high spread potential was estimated to be 0.03 (World Bank, 2012). A seventh disease category was taken into account the probability of a catastrophic event, similar to the 1918 flu pandemic, which is estimated in 0.01 (World Bank, 2012).⁵⁶

Table 20: Annual probabilities of outbreak of each category of disease

	Spread Potential	
	High (> 1000 cases)	Low (< 1000 cases)
Mortality	High	<i>Ebola</i>
		<i>Crimean-Congo</i>

⁵⁴ The other four species of ebolavirus are Sudan ebolavirus (native to Central and East Africa), Reston ebolavirus (Philippines), Tai Forest ebolavirus (Cote d’Ivoire), and Bundibugyo ebolavirus (Uganda).

⁵⁵ While HIV-1 is the version of HIV responsible for the global HIV pandemic and derives from SIVcpz (of chimpanzees) in Cameroon, HIV-2 derives from SIVsm (sooty mangabees, a species of monkey).

⁵⁶ A “once in a hundred years’ event” (World Bank, 2012).

	(> 20 %)	<i>Avian Flu (potential)*</i> Typical Size** = 20,000 cases Annual Prob = .03 Range = .01-.05	<i>Hemorrhagic Fever</i> <i>Lassa Fever</i> <i>Anthrax</i> <i>HIV-2</i> Typical Size = 25 cases Annual Prob = .29 Range = .14-.5
	Moderate (5-20%)	<i>Cholera</i> <i>Meningococcal meningitis</i> <i>Dysentery</i> Typical Size = 10,000 cases Annual Prob = .79 Range = .6-1.00	<i>Shigella</i> <i>Yellow Fever</i> Typical Size = 800 cases Annual Prob = .79 Range = .6-1.00
	Low (< 5%)	<i>Dengue</i> <i>Measles</i> Typical Size = 5,000 cases Annual Prob = 0.14 Range = .05-.25	<i>Rift Valley Fever</i> <i>Polio</i> Typical Size = 500 cases Annual Prob = 0.21 Range = 0.1 - .3

Note: *"Catastrophic Outbreak", Annual Prob. = .01, number of cases = millions.

** Typical outbreak size estimated from reviewed Disease Outbreak News reports.

Endemic Human Diseases

16. **In addition to diseases of epidemic potential, West Africa also has a high burden of endemic diseases, such as HIV, malaria, tuberculosis or typhoid.** While the disease surveillance system would likely enable some reduction in the burden of such diseases, it is difficult to estimate how much, as its main purpose is to detect disease outbreaks in the early stages and existing efforts such as the Global Fund already support diagnostic capacity for these diseases. Therefore, this analysis does not calculate the expected impact on endemic diseases.

Health Impacts (Benefits)

17. **The benefits of strengthening a regional disease surveillance and response system include the direct benefits of limiting cases, deaths, and disabilities from the disease.** Potential health benefits include (i) benefits derived from averting cases; (ii) benefits derived from averting deaths; (iii) social and psychological benefits stemming from less

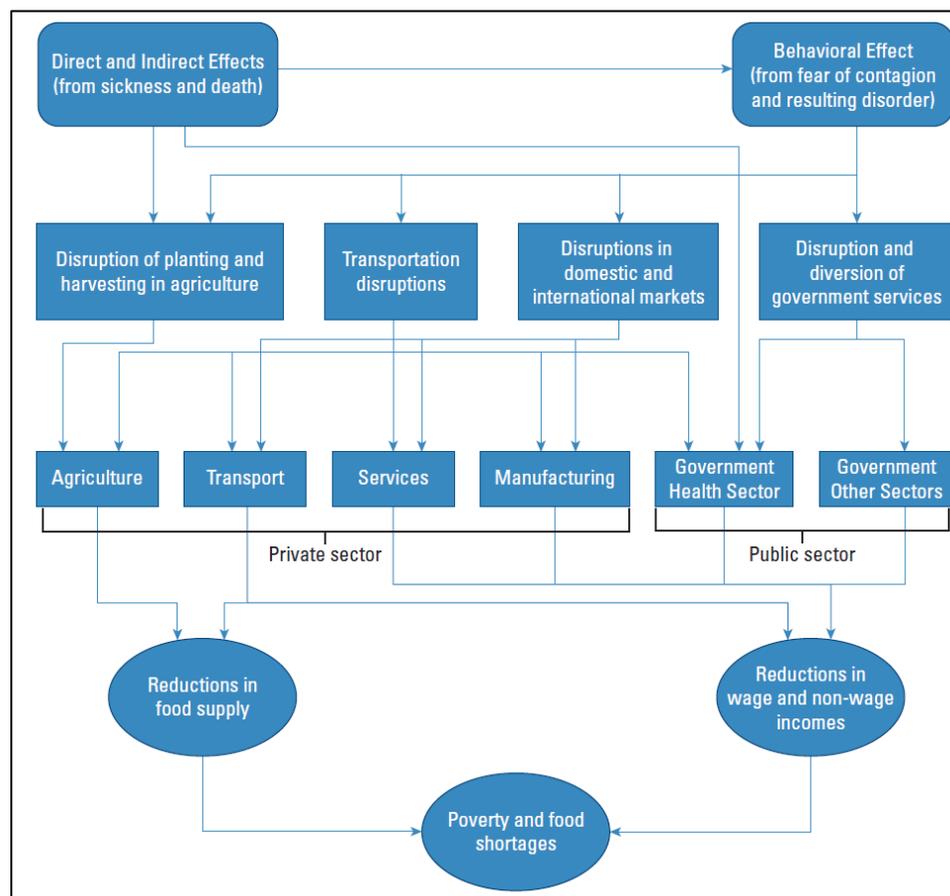
apprehension and greater peace of mind when large outbreaks of serious infectious diseases are rare or non-existent. The number of cases and deaths averted can be estimated using epidemiological models and historical data from previous outbreaks. Benefits are expressed in terms of economic consequences of the burden of diseases avoided by early detection and rapid response. Estimating these benefits involves assessments of current costs of treat diseases and the expected costs of future outbreaks.

18. **Valuing gains from reduced mortality is a long-standing debate in the research literature.** Major issues are the ethical and equity debate around the task of how to value a life saved. One possibility for such task is to apply the resource costs of alternative means of saving a life. Alderman et al. (2004) estimated the savings for saving an infant's life through a measles campaign as US\$1,250. An alternative approach is to measure the impacts, and the monetary benefits, regarding productive life years gained due to reduced mortality. This is done by calculating the number of years gained as a result of project interventions and calculating the economic benefit of these years. The approach adopted in this analysis considers the economic impacts globally, which means specific health impacts are considered in within the different scenarios of economic output lost.

Economic Impacts (Benefits)

19. **Disease outbreaks affect the economy in two different ways.** Firstly, by the direct effects of morbidity and mortality on the use of health-care resources and the reduction in the labor force participation (temporarily or permanently through workers being ill, dying, or caring for the sick). Secondly, behavioral effects result from the fear of contagion. It also reduces labor force participation (workers staying at home for fear of exposure), disrupts transportation, motivates governments to restrict entry of citizens from afflicted countries, closes borders, and affects private sector decisions to disrupt trade, travel, and commerce (Figure 2) (World Bank, 2014).

Figure 9: Broad Channels of Short-Term Economic Impact



Source: World Bank, 2014; p.7.

20. **Behavioral changes have large impacts on the economic activities as people seek to avoid infection.** Individuals are likely to change their behavior by (i) reducing air travel; (ii) avoiding travel to infected destinations; and (iii) reducing consumption of services such as restaurant dining, tourism, mass transport, and nonessential retail shopping (Jonas, 2013). The SARS outbreak in 2003, for example, infected “only” 8,000 people and resulted in fewer than 800 deaths. However, air travel to Hong Kong SAR, China declined by 75 percent during the epidemic and by 50-60 percent, on average, during the four-month period the outbreak was active. Retail sales declined by 15 percent at the peak, and by about 9 percent over the four-month period (Jonas, 2013; Siu and Wong, 2004).

Estimating the Costs of Disease Surveillance System

21. **After the completion of the REDISSE program additional resources from governments, regional and international partners will be necessary to maintain the investments.** This section focuses on estimating the fixed and operational costs associated with the functionality and maintenance of a disease surveillance and response network, and exploring sustainable sources for the long-term financing of activities under the REDISSE program. Estimating the costs to establish and maintain a disease surveillance and response network is necessary to

determine the funding gaps and to calculate the return on investments for such interventions (World Bank, 2012).

22. **The costs of a permanent global disease surveillance system, up to OIE and WHO standards, were estimated at US\$1.3 billion per year for 139 low-and-middle-income countries (LMIC) (FAO et al., 2008).**⁵⁷ For 49 low-income countries (LIC), the estimated costs are US\$852 million per year. The same report estimates that more than 50 percent of these costs would be operating costs, and the remaining would be investments in hardware (laboratories, equipment) and human skills (training, etc.). However, this estimate was based on the early detection and response to HPAI H5N1 and excluded the cost of fully controlling epidemic outbreaks (World Bank, 2012).
23. **In a more recent exercise, the World Bank estimated that, depending on the disease risk, the costs of bringing the surveillance and response systems up to OIE and WHO standards range from US\$1.9 to US\$3.4 billion per year (World Bank, 2012).** This was the cost for 139 low- and middle-income countries. For the 60 low-income countries studied, if the disease risk prevalence is low, the total estimated costs are approximate US\$900 million per year (or US\$1.10 per Veterinary Livestock Units per year). And, with high prevalence risk, it rises to US\$1.4 billion per year (or US\$1.75 per Veterinary Livestock Units per year). The study assumes that 45 percent of the total budget should be allocated to animal health, 41 percent to human health and 14 percent to joint planning and communication activities. Also, 55 percent should be allocated to recurrent costs and 45 percent of investment costs (World Bank, 2012).
24. **The Commission on the Global Health Risk Framework for the Future estimates at US\$4.5 billion per year the total costs of implementing disease surveillance and response system (GHRF Commission, 2016).** This figure includes expenditures for strengthening national veterinary and human public health systems; funding research and development; and financing global coordination and contingency efforts (GHRF Commission, 2016). The US\$4.5 billion represents a per capita of 65 cents per person per year. Katz and colleagues developed a framework to estimate fixed and operating costs associated with developing and sustaining the International Health Regulation (IHR) core capacities across an entirely public health system (Katz et al., 2012). These parameters are used to estimate the costs to bring the surveillance and response systems up to OIE and WHO standards in West Africa. Table 3 displays the cost requirements disaggregated by core IHR capacity and fixed and operating costs.⁵⁸

⁵⁷ These costs were calculated for a 12-year period (2008-2012).

⁵⁸ Based on West Africa population in 2013 = 334,028,922. (World Bank Development Indicators, 2016).

Table 21: Estimated costs to bring the surveillance and response systems up to OIE/WHO standards - West Africa countries (US\$)

Core Capacity	Fixed Cost (US\$)	Operating Cost (US\$)	Total	%
National Legislation, Policy and Financing	92,393.14	-	92,393.14	0.03%
Coordination and National Focal Points Communication	1,013,986.35	191,064.54	1,205,050.89	0.41%
Surveillance	6,482,011.76	32,301,849.37	38,783,861.13	20.72%
Response	25,229,894.95	3,128,681.90	28,358,576.84	9.77%
Preparedness	3,559,188.14	69,857,973.67	73,417,161.81	41.54%
Risk Communications	5,406.85	1,373,276.41	1,378,683.25	0.78%
Human Resources	5,406.85	346,304.48	351,711.33	0.19%
Laboratories	61,126,613.29	11,416,106.47	72,542,719.75	25.91%
Points of Entry	188,558.38	800,082.78	988,641.15	0.50%
Total	97,703,459.69	119,415,339.62	217,118,799.30	100%

Source: based on parameters from GHRF Commission, 2016; and Katz et al., 2012.

25. **Given the volatility of donors' funding, innovative financing tools and mechanisms need to be explored to provide new ways to create long-term, predictable funding streams.** Alternative financing options are identified, medium and long term financing scenarios will be estimated – linked to current and expected trends in the total health expenditures, development assistance to health and other macroeconomic indicators (external trade, economic growth, etc.). Based on the initial review of the literature, possible options are (IOM, 2009): (i) long-term twinning arrangements between human and animal health institutes of high-income and resource-poor countries, funded by specific budget lines in those high-income countries; (ii) long-term commitments of governments to fund WHO/IHR 2005 and FAO/OIE in supporting global disease surveillance systems; (iii) establishment of special endowments through nonconventional donors; (iv) imposition of a levy on internationally traded meat; and (v) public-private partnerships. The estimated costs of the disease surveillance and response represent .5 percent of total health expenditures in the sub-region and approximately 5 percent of the development assistance to health allocated to West Africa annually.

Modeling the Potential Disease Outbreak Impacts

- 26. Measuring the impacts of disease outbreaks is challenging given these are sporadic events, with limited data points to estimate probabilities.** To overcome the uncertainties around the likelihood of a value of key parameters (probability of outbreaks and the associated economic damage), this analysis used a simulation model. The likely impacts of the proposed intervention are treated as random variables with hypothesized distributions. More specifically, 1,000 simulations for the next 50 years (2016-2065) using an annual probability of an outbreak in West Africa within a range 0.01 to 0.03, which covers the possibility of a mild, moderate and severe outbreak (World Bank, 2012; Jonas, 2013).⁵⁹ The analysis also assumes the total economic impact in a given year will impact the GDP within a range between -0.07 and -4.8 percent, which also covers the estimated impact of mild, moderate and severe pandemics (GHRF Commission, 2016; McKibben and Sidorenko, 2006).⁶⁰
- 27. The cumulative sum of the economic and health impacts of simulated events for each of these seven disease categories are calculated under three scenarios:** status quo (no disease surveillance) and intervention, i.e. the REDISSE program. The impacts of the REDISSE program are then modeled as reducing health and economic costs due to animal and human disease outbreaks, the possible values for this reduction will be 50 percent or 100 percent as proposed by previous World Bank study (World Bank, 2012). This allows calculating the potential costs and benefits associated with the implementation of the project interventions.

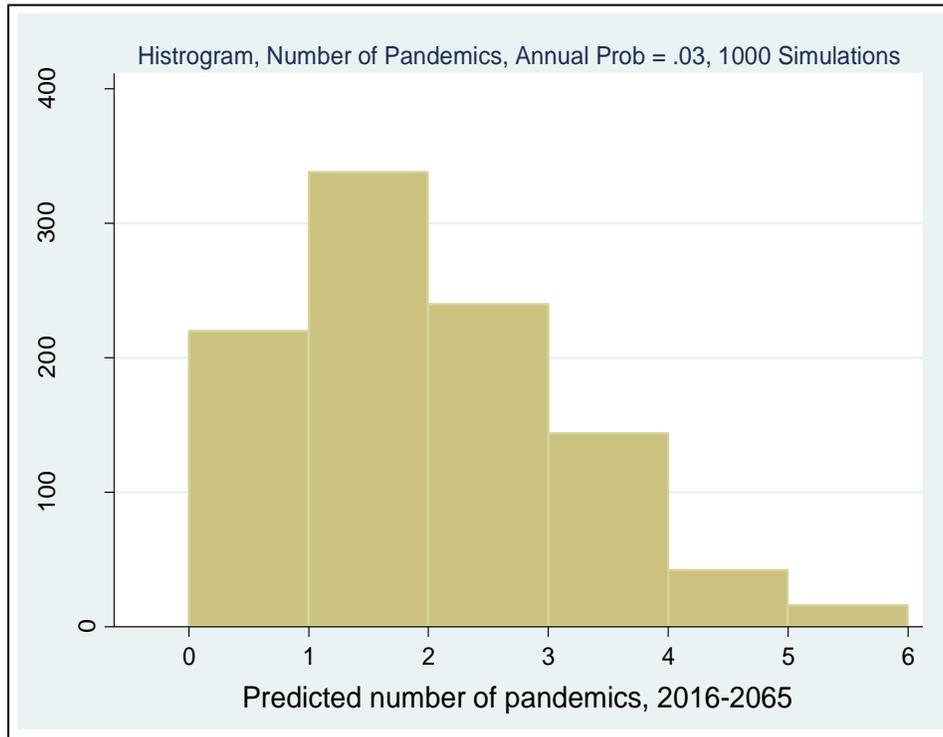
RESULTS (ECONOMIC BENEFITS)

- 28. Results from Markov Chain Monte Carlo (MCMC) simulations are presented in Figures 3 and 4.** As discussed above, the key parameters and model assumptions are:
- Annual probability of outbreaks in West Africa equal to 0.03 (World Bank, 2012; Jonas, 2013);
 - The probability of an outbreak event to occur in any year is independent of other events to occur in other years within 50 years' time frame;
 - West Africa GDP equal to US\$742.1 billion (2013 USD);
 - Assuming a 4 percent annual real GDP growth rate in the time frame of 50 years, and a loss of output associated with an outbreak event equal to 4.8 percent of the regional GDP;
 - The model does not consider global GDP losses, only GDP losses in West Africa.

⁵⁹ An alternative to be tested is to calculate impacts by using each of the seven categories of disease – the six categories from table 2 plus a seventh branch for a catastrophic pandemic originating in West Africa.

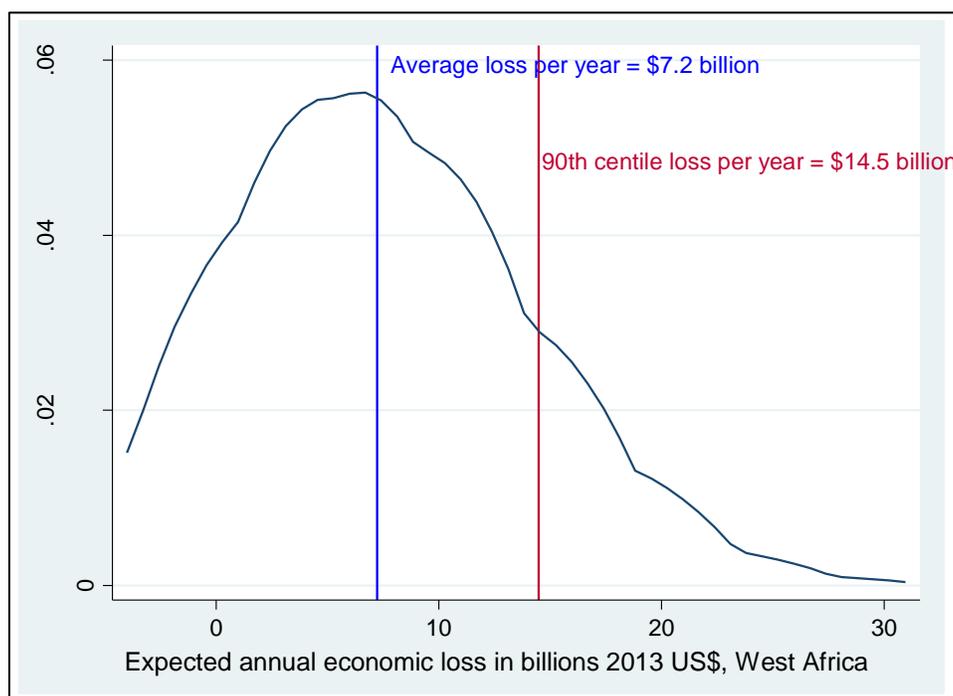
⁶⁰ Previous work has estimated the economic loss that occurred as a result of each of the 20th-century pandemics as 0.7–4.8 percent of global GDP (GHRF Commission, 2016; McKibben and Sidorenko, 2006).

Figure 10: Distribution of Expected Number of Outbreaks in 50 years, West Africa



29. **The total annual benefit of controlling an outbreak in West Africa is, on average, equal to US\$7.2 billion.** The distribution of expected economic losses presented exhibits a relatively long right tail, which means there is a nontrivial chance of seeing extreme losses (however, the tail is shorter than similar exercises at the global level). It is assumed that this estimate includes the health related benefits (avoided mortality and morbidity) and the economic benefits as described in equation (1). Applying the distribution of costs proposed by the World Bank (World Bank, 2008), the estimated losses resulting from mortality are equal to US\$864 million (12 percent), the estimated productivity losses due to morbidity and absenteeism sum US\$2 billion (28 percent), and the expected losses resulting from behavior changes to avoid infection are equal to US\$4.32 billion (60 percent). The analysis is likely to underestimate the benefits of disease surveillance and response system; the reasons are: (i) does not calculate the expected impact on endemic diseases; (ii) it takes into account only the impacts in West Africa; and (iii) it assumes the risk of pandemic events this century will be the same within the time frame considered (50 years).

Figure 11: Distribution of Expected Economic Losses Due to Outbreaks in 50 Years, West Africa



30. **The net present value of the project costs, assuming a constant rate of disbursement, is estimated at US\$313 million.** By applying the estimated average annual impact constant for the five first years of the project, it is possible to calculate a benefit-cost ratio equal to US\$108.73, i.e. for each US\$1 invested through the project, there will be an expected return of US\$108.73.61. Although extremely high, this result is based on parameters subject to high variability. Additionally, this is based on the expected economic impacts estimated through simulations over a 50 years' period, for a more accurate measure of the project's five years of implementation a different simulation is necessary (5 years' time frame). The sensitivity analysis below examines alternatives to this scenario.

Sensitivity Analysis

31. **Given the uncertainties around key parameters of the model, a sensitivity analysis (SA) was conducted to estimate changes in the results given plausible variations on the value of key parameters.** Additional simulations were tested based on the following parameters:

- Annual probability of an outbreak: 0.01 - 0.03;
- Economic costs of outbreak: 0.7 - 4.8 percent reduction in output during a year with an outbreak (which covers the scenarios of a mild, moderate and severe outbreak);
- Effectiveness of surveillance and response system (reduces economic impact of outbreaks): 50 and 100 percent;

⁶¹ US\$34.06 billion/US\$313.2 million = US\$108.73. The US\$313.2 is the net-present value of the project total costs (US\$332 million) applying a 3 percent annual discount rate.

- Time horizon: 5 years and 50 years;
- 3 percent annual discount rate.

32. **Table 3 contains the different scenarios resulting from a combination of different probabilities of pandemic and severity of an outbreak.** Economic annual impacts vary from US\$0.19 billion (mild pandemic with a 0.005 probability) to a US\$7.22 billion (severe outbreak with a probability equal to 0.03).

Table 22: Expected Economic Impacts - West Africa, 50 years, 100 percent preventive effort, billion US\$ saved annually

100% reduction		Annual Probability of Outbreak				
50 years		0.5%	0.75%	1%	2%	3%
Cost of Pandemic (GDP losses)	-0.70%	\$0.19	\$0.26	\$0.38	\$0.70	\$1.09
	-2.75%	\$0.73	\$1.02	\$1.49	\$2.71	\$4.20
	-4.80%	\$1.26	\$1.76	\$2.59	\$4.69	\$7.22

33. **Table 4 shows the annual benefit-cost ratio of the scenarios in Table 3.** The values in Table 3 represent the amount of annual economic losses per year over a 50 year period, which are then truncated to the five-year time frame of the project and discounted to net present value. Therefore, the data in Tables 3 and 4 are not cumulative, but rather represent the additional GDP the region would have per year given 100 percent outbreak prevention. Another way to measure the return on investment includes cumulative GDP gains, as wealth saved each year from outbreak prevention yields additional economic returns in all subsequent years. Cumulative returns on investment are shown in Annexes 5C and 5D. Because cumulative returns on investment mean that savings in one year pay dividends in subsequent years and represent real wealth not lost, these estimates show an even more positive economic effect of outbreak prevention than the annual benefit-cost ratio.

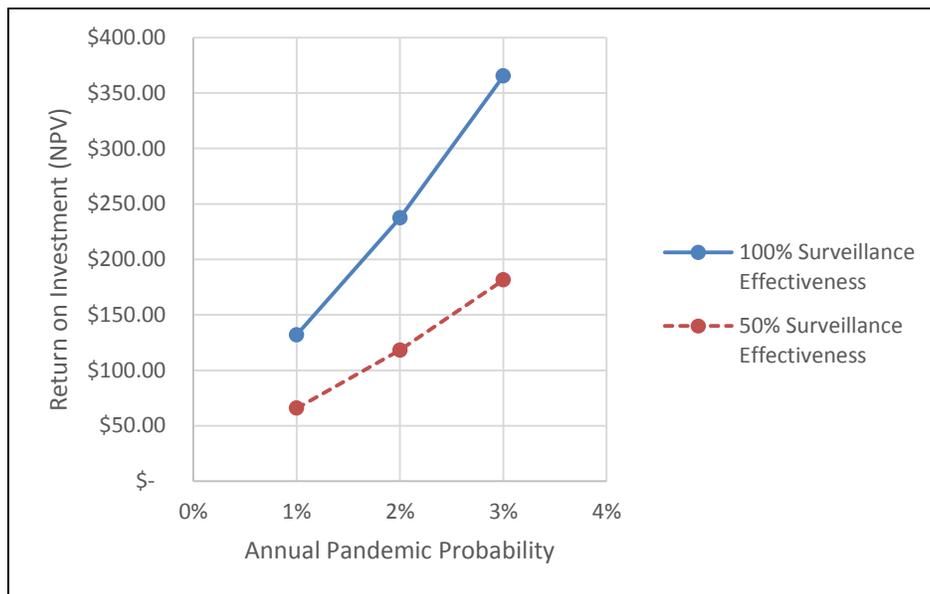
Table 23: Annual Benefit-Cost Ratio, not cumulative - West Africa, 5 years, 100% preventive effort, Annual US\$

100% reduction		Annual Probability of Outbreak				
50 years		0.5%	0.75%	1%	2%	3%
Cost of Pandemic (GDP losses)	-0.70%	\$2.86	\$3.92	\$5.72	\$10.54	\$16.42
	-2.75%	\$10.99	\$15.36	\$22.44	\$40.81	\$63.25
	-4.80%	\$18.98	\$26.51	\$39.01	\$70.63	\$108.73

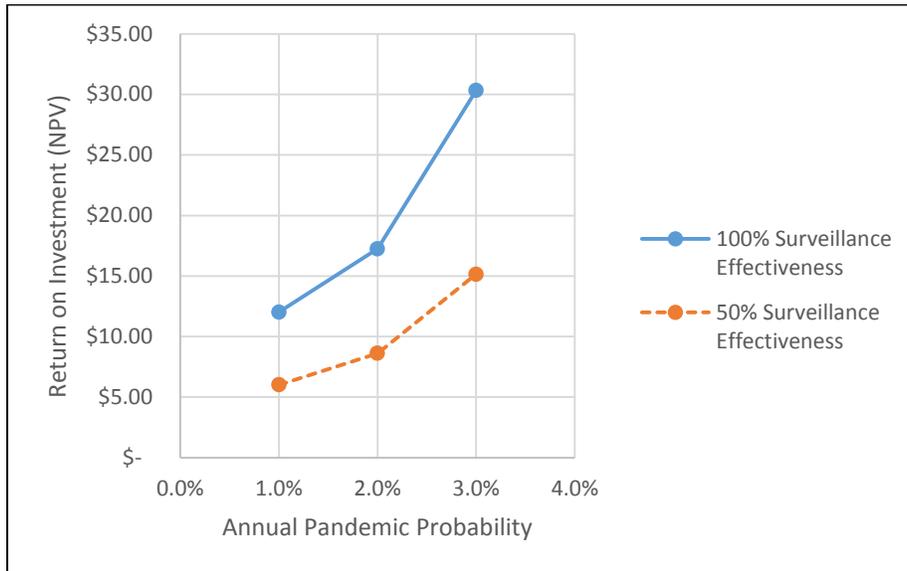
34. **The cumulative return on investment is calculated for the alternative, more conservative, scenario with a 2 percent annual probability of a pandemic with moderate economic consequences (decline in output of 2.75 percent of GDP).** The benefit-cost ratio was calculated for the periods of 5 years and 50 years. For five years, the benefit-cost ratio is US\$17.25, i.e. for every dollar invested in prevention, there will be an expected return of US\$17.25. For 50 years, for every dollar spent on disease surveillance, there will be an average return equal to US\$237.37. Applying the same parameters used to estimated the US\$108.73 above, te cumulative return amounts to US\$631.02 (annual probability equal to .03 and GDP losses equal to 4.8 percent). These benefit-cost ratio estimates under various scenarios are presented in Annex 5D and Tables A1 and A2.

Figure 12: Return on Investment for REDISSE

a) *Pandemic reduces output by 2.75 percent, 50 years' period, cumulative benefits (3 percent discount rate)*



b) Pandemic reduces output by 2.75 percent, 5 years' period, cumulative benefits (3 percent discount rate)



Livestock Diseases

35. Livestock disease is vastly underreported in sub-Saharan Africa (ILRI, 2012). Of the estimated 253 million livestock units (LSUs)⁶², it is estimated that 10 percent are lost annually due to diseases (death, slaughter or destruction)⁶³ and only half of these losses are from diseases reportable to the World Organization for Animal Health (OIE) (ILRI, 2012). To measure the potential economic benefits regarding LSU losses avoided as a result of the REDISSE program, three scenarios were considered: 20 percent, 50 percent, and 100 percent of loss reduction.⁶⁴ It has been estimated that livestock accounts for 44 percent of agricultural GDP in West Africa, including animal products such as manure and animal labor and LSUs in West Africa have been estimated in 65.5 million (FAO, 2007).⁶⁵ Based on these parameters, it is possible to calculate the economic benefits of reducing LSU losses from animal disease (Table 5). Based on these calculations, the economic benefits of an animal disease surveillance system would be largely realized by an absolute reduction in LSU losses.

⁶² 1 LSU is equivalent to 250 kg of animal.

⁶³ Slaughter is distinguished from destruction in that some of the animal meat can be recovered from a slaughtered LSU, but not from a destroyed LSU, and is thus considered a fraction of an LSU).

⁶⁴ Scenarios adopted by the World Bank (World Bank, 2012).

⁶⁵ Agriculture employs 60 percent of the active labor force and accounts for 35 percent of GDP (U.S. Government's global hunger and food security initiative, 2016).

Table 24: Estimated Impacts in terms of LSU losses avoided, West Africa

Scenario	Status Quo	50% improvement	100% improvement
Annual LSU Losses from OIE notifiable diseases	3.28 million*	1.64 million	--
Economic Impacts (losses, billion) **	US\$5.71	US\$2.85	--

* Estimate from FAO, 2007.

** Assuming agriculture GDP accounts for 44 percent of West Africa GDP.

Annex 5B: REFERENCES

- Berhman, J., Alderman, H., and J. Hoddinott (2004). "Hunger and malnutrition". Copenhagen Consensus Challenge Paper.
- Bogich, T.L., R. Chunara, D. Scales et al. (2012). "Preventing pandemics via international development: A systems approach". PLOS Medicine 9(12): e1001354.
- Chan, E.H., T.F. Brewer et al. (2010). "Global capacity for emerging infectious disease detection". PNAS 2010; 107(50):21701-6.
- FAO-OIE-WHO-WBG (2008). "Contributing to One World, One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystems Interface".
- Fonkwo, PN (2008). EMBO reports, Vol. 9 (Special Issue). doi:10.1038/embor.2008.110
- Gallup, J.L., and J.D. Sachs (2000). "The Economic Burden of Malaria". Center for International Development at Harvard University, Working Paper No 52
- GHRF Commission (2016). "Global Health Risk Framework for the Future. The neglected dimension of global security: A framework to counter infectious disease crises".
- Katz,R., V. Hate et al. (2012). "Costing Framework for International Health Regulations (2005)". Emerging Infectious Diseases, CDC, Vol. 18(7): 1121-1127
- International Livestock Research Institute (2012). "Mapping of poverty and likely zoonoses hotspots"; Zoonoses Project 4. Report to Department for International Development, UK. Nairobi, Kenya.
- IOM (2009). *Sustaining global surveillance and response to emerging zoonotic diseases*. Washington, DC: The National Academies Press.
- Jonas, Olga B. 2013. "Pandemic Risk." Background Paper, World Development Report. World Bank, Washington DC.
- The National Academies Press. Mckibben, W.J., and A. Sidorenko (2006). "Global macroeconomic consequences of pandemic influenza". Center for Applied Macroeconomic Analysis.
- Rich, K.M., A. Winter-Nelson, and G.Y. Miller (2005). "Enhancing Economic Models for the Analysis of Animal Disease". Rev. Sci. Tech. Off.Int.Epiz, 24(3), 847-856.
- Sharp, P.M., and B.H. Hahn (2011). "Origins of HIV and the AIDS pandemic". Cold Spring Harb Perspect Med, Sep 1(1): a006841.

Siu, A., and Y.C. R. Wong (2004). "Economic Impact of SARS: The Case of Hong Kong." Hong Kong Institute of Economics and Business Strategy, Working Paper 1084. April.

Smith et al. (1996). "Dairy development in West Africa: Current status and issues concerning further development". In Livestock Development Policies in the Humid and Sub-humid Zones of Sub-Saharan Africa. Proceedings of a seminar held on 5-9 Feb 1996 in Abidjan, Cote d'Ivoire. CTA Publication 67-93.

Taubenberger, J.K., and D.M. Morens (2006). "1918 Influenza: The mother of all pandemics". *Rev Biomed* 2006; 17:69-79.

Trombetta, C., S. Piccirella, D. Perini, et al. (2015). "Emerging Influenza Strains in the Last Two Decades: A Threat of a New Pandemic?" *Vaccines* 2015; 3(1):172-85.

UNDP (2014). "Assessing the Socio-Economic Impacts of Ebola Virus Disease in Guinea, Liberia, and Sierra Leone: The Road to Recovery".

Wint, W. and T. Robinson (2007). "Gridded livestock of the world". Food and Agriculture Organization (2007);

World Bank (2012). "The Economics of One Health". Economic and Sector Work. People, Pathogens, and our Planet, volume 2.

World Bank (2011). "Animal Health Disease Atlas."

World Bank (2014). "The Economic Impact of the 2014 Ebola Epidemic: Short- and Medium-Term Estimates for West Africa."

World Health Organization (2005). "Evaluating the Costs and Benefits of National Surveillance and Response Systems: Methodologies and Options". WHO/CDS/EPR/LYO/2005.25

Annex 5C: Human outbreaks by disease and country in West Africa (Data from Bogich et al 2012.)

Disease

Country	Anthrax	Avian Flu	CCHF	Cholera	Dengue	Dysentery	Lassa	Measles	Meningitis	Polio	Rift Valley	Shigella	Yellow Fever	Total
Benin	0	0	0	1	0	0	0	0	0	0	0	0	1	2
Burkina Faso	0	0	0	1	0	0	0	0	1	0	0	0	6	8
Cote d'Ivoire	0	0	0	3	0	0	0	0	0	0	0	0	4	7
Gambia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ghana	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Guinea	0	0	0	1	0	0	0	0	0	0	0	1	8	10
Guinea-Bissau	0	0	0	1	0	0	0	0	1	0	0	0	0	2
Liberia	0	0	0	4	0	0	0	0	0	0	0	1	4	9
Mali	0	0	0	1	0	0	0	0	0	0	0	0	1	2
Mauritania	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Niger	0	0	0	5	0	0	0	0	0	0	0	0	0	5
Nigeria	0	1	0	4	0	0	0	1	2	1	0	0	1	10
Senegal	0	0	0	3	0	0	0	0	0	0	0	0	3	6
Sierra Leone	0	0	0	3	0	1	2	0	0	0	0	0	2	8
Togo	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	1	1	1	27	1*	1	2	1	4	2	1	2	32	76

Annex 5D: Expected Rate of Return on Investments in Prevention

Table A1: Scenario – 100 percent Surveillance Effectiveness

		Annual Probability of Pandemic		
		<i>1%</i>	<i>2%</i>	<i>3%</i>
Cost of Pandemic (5 years)	- <i>0.70%</i>	\$3.06	\$4.39	\$7.73
	- <i>2.75%</i>	\$12.02	\$17.25	\$30.32
	- <i>4.80%</i>	\$20.99	\$30.09	\$52.88
		Annual Probability of Pandemic		
		<i>1%</i>	<i>2%</i>	<i>3%</i>
Cost of Pandemic (50 years)	- <i>0.70%</i>	\$33.70	\$60.80	\$93.94
	- <i>2.75%</i>	\$131.93	\$237.37	\$365.25
	- <i>4.80%</i>	\$229.50	\$411.76	\$631.02

Table A2: Scenario – 50 percent Surveillance Effectiveness

		Annual Probability of Pandemic		
		<i>1%</i>	<i>2%</i>	<i>3%</i>
Cost of Pandemic (5 years)	<i>-0.35%</i>	\$1.53	\$2.20	\$3.86
	<i>-1.38%</i>	\$6.01	\$8.62	\$15.15
	<i>-2.40%</i>	\$10.49	\$15.04	\$26.41
		Annual Probability of Pandemic		
		<i>1%</i>	<i>2%</i>	<i>3%</i>
Cost of Pandemic (50 years)	<i>-0.35%</i>	\$16.84	\$30.37	\$46.89
	<i>-1.38%</i>	\$65.81	\$118.19	\$181.36
	<i>-2.40%</i>	\$114.26	\$204.39	\$311.69

Annex 6: Systematic Operations Risk-Rating Tool (Sort)

Regional Disease Surveillance Systems Enhancement Program in West Africa

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

I. Political and Governance - SUBSTANTIAL

1. A review of country reports and forecasts published by the Economist Intelligence Unit indicates that political and governance risks are heterogeneous across the ECOWAS region. Of the three countries proposed for the first project in the series, two (2) countries are at substantial risk (Guinea, and Sierra Leone) and one (1) country (Senegal) is at low risk of political instability. A précis of key observations by country follows:

2. Guinea (S): The president, Alpha Condé—who heads the ruling *Rassemblement du peuple de Guinée* (RPG)-*Arc-en-ciel* coalition— will continue to grapple with deeply embedded social and ethnic tensions, as well as the huge additional pressures created by the Ebola epidemic. Health workers, particularly in western Guinea, are still facing violent resistance from locals, who refuse to abide by public health guidelines and link health workers with the spread of the virus. Many commentators are also criticizing the authorities for their ineffective response to the epidemic, and this could further inflame political tensions. Ethno-political strains will remain a major threat to stability. There have been a number of violent clashes between anti-government activists and the security forces in recent months. Following pressure from the UN, the government and opposition leaders agreed to commence talks in early June. Nonetheless, with tensions running high, the potential exists for further unrest before the election.

3. Senegal (L): Threats to political stability will remain low in 2015-16. However, social tensions could rise as President Macky Sall attempts to push ahead with an economic reform program and fiscal consolidation. Separatist violence in the Casamance region will continue to abate, with both the president and rebel groups having signalled their willingness to enter negotiations to end the once seemingly intractable 30-year insurgency.

4. Sierra Leone (S) - The president, Ernest Bai Koroma, and his party, the All People's Congress (APC), have a solid legislative majority and this will support political stability. With the opposition weighed down by internal divisions, the current regime is expected to remain in power until the next polls, which are due in late 2017 or early 2018. The risk of the ongoing Ebola outbreak disrupting overall stability has been reduced as the authorities are finally getting to grips with the disease, which has killed nearly 4,000 Sierra Leoneans since it reached the country in May 2014. The authorities' initial response to the outbreak was inadequate and highlighted both government inefficiency and the country's slow progress on improving public health infrastructure and the provision of basic services. This has fuelled mistrust in the government, and rebuilding the health system and addressing low formal job growth and the high rate of youth unemployment will be high on the authorities' agenda.

II. Macroeconomic - SUBSTANTIAL

5. The risk of emerging external and/or domestic imbalances is substantial and macroeconomic effects could affect the achievement of the PDO. Prices are moderately stable and key operational inputs (including imports) are generally available. The macroeconomic environment has limited effects on individual operations. The implementing partners of the project will maintain attention to economic developments that could jeopardize the quality, objectivity, and regional nature of the Program. However, the EVD epidemic has demonstrated how vulnerable the countries of West Africa are to external shocks. For the three countries hardest hit by the EVD epidemic the following observations are made:

- a. In Guinea, after slowing to an estimated 1.1 percent in 2014, real GDP growth will contract by 1.5 percent in 2015 owing to the disruption caused by the Ebola epidemic, before rebounding to 6 percent in 2016 driven by mining investment. The budget deficit will widen to 8.3 percent of GDP in 2015, reflecting lower revenue owing to the economic contraction, before narrowing to 4.5 percent of GDP in 2016 as the economy recovers.
- b. In Sierra Leone, lower mining revenue and high spending on tackling the Ebola outbreak will cause the fiscal deficit, as a proportion of GDP, to widen from an estimated 3.4 percent in 2014 to 4.6 percent in 2015, before easing to 4 percent in 2016. The economic impact of the Ebola epidemic, together with lower iron ore production and exports, will be significant. We expect GDP to contract by 9.8 percent in 2015. A rebound of 7.5 percent is forecast for 2016 as investment picks up. Average annual inflation will rise to 7.8 percent in 2015, reflecting elevated local food costs due to Ebola. Inflation will ease to an average of 7.6 percent in 2016 as food supplies normalize, offsetting higher world food and fuel prices. The current-account deficit is forecast to widen from 2.7 percent of GDP in 2014 to 10.2 percent of GDP in 2015, owing to a sharp drop in exports, increasing to 11 percent of GDP in 2016 on the back of rising commodity prices and higher imports.

III. Technical Design of Project or Program – SUBSTANTIAL

6. There is substantial likelihood that factors related to the technical design of the project may adversely impact the achievement of the PDO. This is due to the complexity of the project and the implementation environment. The project has four technical components, each with a large number of potential interventions. Strategic prioritization of interventions within each component is the core technical design challenge. To address this, the team: (i) engaged in substantial analytical work to assess and identify key components of and best practices from successful disease surveillance operations and networks⁶⁶; (ii) consulted with key technical partners including the WAHO, WHO, US CDC, USAID, BMGF, OIE, FAO, the Merieux Foundation and the University of Oslo, among others; (iii) held regional and country specific consultations to identify core unmet needs in the context of ongoing and planned support from other partners. It is incumbent on the Task Team to ensure that the project does not become unfocussed in an attempt to address the multiple priorities identified by clients and stakeholders whilst avoiding the opposite outcome of a project that is overly focused and non-flexible.

IV. Institutional Capacity for Implementation and Sustainability – HIGH

7. There is a high likelihood that weak institutional capacity for implementing and sustaining operational engagement may adversely impact the PDO. There may be an issue of absorptive capacity that will need to be addressed by strengthening the programs and/or scaling-up interventions in a phased manner. In addition, although several of the programs have experience facilitating cross-border collaboration as a result of the Ebola epidemic, there is limited experience implementing and sustaining regional programs. The need for effective collaboration within governments and with non-governmental partners contributes to the risk. The project will require active engagement and collaboration between Ministries of Health, Agriculture, Education and Technology/Communications and the local government. The High rating is also due to the perceived weak institutional capacity of Ministries in some countries and the need to clearly articulate the role of local government and non-governmental organizations. Furthermore, there is uncertainty regarding the clients' capacity to sustain the outcomes of the operation beyond the WB's support. The project will address this concern by strengthening institutional capacity.

V. Fiduciary – SUBSTANTIAL

8. The overall fiduciary environment has substantial weakness in the integrity of the procurement system. Difference in procurement, fiscal management and project management capacities among the three countries could result in delays in the acquisition of key project commodities and lead to uneven progress in the implementation of activities and achievement of project targets. To provide a more granular evaluation of the fiduciary environment in each country, financial management and procurement assessments were conducted during project preparation. Extensive technical assistance will also be included in the project to build the capacity at all levels, including financial management, procurement, and monitoring and evaluation.

⁶⁶ MOVING BEYOND ZERO: Post-Ebola Health Systems Strengthening and Fiscal Space Assessment for Guinea, Liberia, and Sierra Leone, World Bank. (IN DRAFT) MAY 2016, pp 63-76.

VI. Environmental and Social – SUBSTANTIAL

9. While the specific project activities will have low to moderate environmental impacts, a breakout of disease among human and/or animals could pose significant environmental and social risks for the project. To this end, the project includes pest and medical waste management plans, as well as mitigation measures for animal waste in the ESMFs. ESMPs and/or Waste Management Plans will be prepared, consulted upon and disclosed during project implementation once sites and works have been identified and finalized.

VII. Stakeholders – SUBSTANTIAL

10. The project is both regional and multi-sectoral and there are a large number of stakeholders with diverse and sometimes non-compatible agendas providing technical, financial and commodity support to countries in the sub-region, especially the three countries most affected by the 2014/2015 EVD Epidemic. In this sort of environment, there is the risk of inefficiency, duplication of effort and overburdening the client with reporting and other requirements from multiple donor partners. In order to mitigate these risks, close and continuous collaboration among partners is required and the World Bank's convening power will be highly instrumental to forging a coalition of national, regional, and global technical and financial institutions to support the disease surveillance and response agenda in West Africa. The WB has already demonstrated that it is well placed to mobilize substantial financing for this multi-sector initiative and to convene premier technical and financial partners engaged in the field of disease surveillance including the U.S. Center for Disease Control (CDC), the World Health Organization (WHO), the World Organization for Animal Health (OIE), the African Development Bank, bi-lateral development partners and private foundations, including the Merieux Foundation and the Bill and Melinda Gates Foundation.

Annex 7: Alignment with Other World Bank-Supported and Other Partners Projects

Regional Disease Surveillance Systems Enhancement Program in West Africa

REDISSE I is being developed to ensure alignment and complementarity with other WB project in the three targeted countries as well as ensure a harmonization platform among partners engaged in those countries. The tables below represent what is being done in these countries.

GUINEA

Areas	Activities	EERP	PHSIP + ERRTF	REDISSE I	Other major partners
Primary care	Commodities and trained human resources for MNCH services at primary level	Supplies to priority 33 triage centers in district hospitals through UNICEF	Comprehensive MNCH support in 3 poorest regions (Faranah, Labe, and Mamou)	Potential supplementary support focusing on surveillance and response	GIZ: Support to health and youth in Mamou, Labe and Faranah (€20M).
	Strengthen community-level demand for MCHN services				
	Strengthen government capacity to plan, implement, and monitor activities		Support the national health system		USAID: US\$25M support to capacity building
	Measles and meningitis campaigns	Urgent support to resume immunization through UNICEF	Support in 3 poorest regions (Faranah, Labe, and Mamou)		UNICEF: US\$12M support on immunizations
idemic preparedness and response	Health facility rehabilitation with Triage and Isolation	54 health facilities through UNOPS		Supplement and take over as needed EERP activities based on gap analysis	AfDB and IDB: Building of 27 triage centers
	IPC procurement for health facilities	Support through UNICEF			UNICEF, AfDB
	IPC training, monitoring, operations support	Support through WHO	At Primary health centers level in 3		WHO

	Integrated disease surveillance and response (IDSR)	Support through WHO	regions		CDC, WHO, French Cooperation
	Lab supplies and equipment	Essential lab supplies through UNICEF			French Cooperation
	Regional surveillance support	Funds to WHO for preparation of REDISSE		One of main focuses	

SIERRA LEONE

Areas	Activities	EERP	HSDSSP+ERRTF	REDISSE I	Other Major Partners
Community level engagement	Support to CHW program	Support to 3 districts	Take over from EERP and add district(s)	Potential supplementary support on surveillance (community level IDSR)	DFID (through WHO): support CHWs, focusing on disease surveillance and sanitation UNICEF support revision and implementation of CHW program
	Environmental health		Regulation staff operations		
Facility-level services	BEmONC and CEmONC and referral support	Comprehensive support to 11 facilities through UNFPA			
	Deployment of clinical teams to address HR gap	Support first 2 years	Take over from EERP as needed after 2 years deployment		
	Emergency medical services (EMS)	Technical design Depot works and implementation roll-out	Take over Operational support to roll-out		DFID: support to fleet management at the district level for vehicles procured by DFID, for routine health services and

					laboratory testing.
	Support on drugs supplies	Emergency drugs supply (complete)			USAID and DFID: provision of essential drugs and supply chain management support
HRH	Medical school support	Operational support to College of Medicine and Allied Health Sciences (COMHAS) through WHO			CHAI/WHO/DFID: support to payroll audit and national HRH Policy/Strategy.
	Clinical Residency Training	Initial staffing only	Comprehensive operational support		DFID: support to post-graduate training through the UK Royal Colleges (teachers) People's Republic of China coop: support to post-graduate training through provision of teachers.
	Auxiliary health worker training	Infrastructure design and development	Implementation and Operational support		
Sector coordination, management	MOHS level support	HSS Hub and IHPAU consultancies and other MOHS operation	Take over from EERP on supporting IHPAU and other MOHS operations		Global Fund: support to operation cost of DHSPPI GF staff.
	District level support	Initial training	Capacity strengthening and support to Maternal Death Surveillance and Response (MDSR)	Support to IDSR and input to MDSR	DFID and JICA: operational and capacity building support to DHMTs to improve management and supervision activities. WHO: support on IDSR UNFPA: initial 5 month support to MDSR in 2016
	Service Level Agreement (SLA)	Staffing and database	Take over EERP		

Project management	Integrated health project administration unit (IHPAU)	Initial staffing	Take over EERP		Global Fund and GAVI: co-finance staffing cost
Epidemic preparedness and response	Infrastructure - Triage and Isolation	Triage and isolation function in priority 23 government hospitals through UNOPS			DFID: co-financing EERP to UNOPS on WASH and IPC USAID: support the rehabilitation of PHUs in 5 districts
	Regional surveillance support	Funds to WHO for preparation of REDISSE	Linkage between MDSR and IDSR	One of main focuses	DFID/Public Health England and CDC: regional program on preparedness and resilience

SENEGAL

Components	Activities	Projects financed by the World Bank			REDISSE I	U.S. Government funding for Health Safety (GHSA+Ebola)	Other partners
		HNFP (US\$42 mil., 2014-2018)	WARDS /CCISD (US\$4.5 mil., 2014-2017)	PRAPS (US\$30 mil., 2015-2021)			
Surveillance and notification system	Prevention					USAID: P&R (US\$530,000) and PREDICT (US\$1.3mil.), FAO (US\$53,000) : focus on zoonotic disease risk assessment; IOM (US\$250,000) : focus on surveillance systems	FAO, IOM

	Immunization	PBF implementation in 6 regions: focus on improving child immunization coverage indicator		Support for the deployment of vaccination campaigns, veterinarian station construction (30), fight against RVF and PPR		USAID: Technical assistance to reduce the number and extent of infectious disease outbreaks	GAVI (Logistic support, equipment) UNICEF (logistics support/EPI focus) WHO
	Antimicrobial Resistance					FAO (US\$53,000 USAID funding): focus on drug and antimicrobial resistance and zoonoses; enhancing food safety regulatory framework	WHO, OIE, FAO
	Construction/rehabilitation and logistics			Infrastructure modernization: construction/rehabilitation of facilities, providing IT, logistics equipment, cold chain equipment	Additional support for the rehabilitation of infrastructures and strengthening of rolling stock logistics		

	Epidemiological surveillance system enhancement		Strengthening regional disease surveillance and control systems in the ECOWAS member states.	Revitalization of epidemiological surveillance activities of the national ESS	Strengthening of reporting system, of active and passive surveillance capacities and of community surveillance networks	Strengthening of real time biological surveillance and community level surveillance (UNICEF with US\$1.3 million. USAID Funding for Ebola activities, focus on strengthening the community alert system)	FAO, CORDS, WHO, USAID, CDC, WAHO, ECOWAS, WAEMU, UNICEF
	Strengthening of the laboratory information system	Support for the implementation of the ANSD's 'continued' DHS; Situational analysis of the existing HIS and development of an HIS plan			Enhancement of IT equipment for surveillance	Integration of hospital and laboratory surveillance data in DHIS-2 routine reports; strengthening of electronic surveillance system (USAID Funding for Ebola activities: US\$1.6 million)	Belgian Technical Cooperation, Luxemburg Cooperation, CORDS, Space Agency, IAEA, Global Fund financing (Euros 469,501) for stakeholders' training on the DHIS2
	Biosecurity and health safety			Control of veterinary drugs		FAO (USAID funding : US\$53,000) with focus on promoting health safety and biosecurity systems	FAO

Strengthening laboratory capacity	Infrastructure and logistic support				Upgrade to laboratory standards through rehabilitation		RESAOLAB : support for the establishment of the national public health laboratory; Global Fund financing (Euros 962,139) for the HSS: health facilities rehabilitation and equipment (5 garrison medical centers, 6 health centers, 15 laboratories, equipment purchases)
	Technical capacity strengthening			Strengthening of ISRA vaccine production capacity	Technical platform strengthening (materials, equipment, mobile lab, maintenance system)	USAID & CDC (through ASLM for US\$50,000): Focus on real-time surveillance capacity enhancement, development of new diagnostic technologies	WHO ; RESAOLAB : Training, QA, biosafety activities
	Strengthening of laboratory information system					CDC financing to PATH (US\$750,000)	PATH (US\$100,000 multi-donor funding) : strengthening laboratory information system

						(establishment of a DHIS-2 platform), and surveillance and technical assistance systems	
	Laboratory governance				Support for quality control missions, metrology, certification and accreditation		
	Laboratory networks					RESAOLAB program (Euros 2 million in 7 countries) Overall strengthening of laboratory systems in West Africa, network implementation	
Preparation and response to epidemics	Management of emergency situations (establishment of rapid response mechanisms)	Ebola plan funding in 8 regions (6 HNFP target regions, Dakar and Diourbel, given the high level of risk)		Establishment of an early warning and rapid response system in case of disease outbreak (response guide + implementation manual)	Development of an integrated response plan and procedure; rehabilitation and equipment of emergency management centers to make them operational; implementation of multi-sectoral regional teams	CDC (US\$500,000) : establishment of EOCs (construction, financing EOCs temporary headquarters, training, technical assistance); EOC integration any disaster and health	UNICEF - Equipment of EOC provisional headquarters; WHO - EOC team training; Bill Gates Foundation - financial support for EOC provisional headquarters

	Deployment of medical and staff countermeasures				Organizing simulation exercises	USAID & CDC: technical assistance	
	Links between Public Health and Law Enforcement					Support to the Ministry of Interior	
Deployment, retention and strengthening of human resources and coordination of same	HR development (training/capacity building, recruitment)			Training of the various veterinary services' stakeholders on the basis of a training plan; training of livestock keepers	Focus on reinforcing the private sector capacity for the IDSR/IHR implementation; integrated training on the One Health approach	USAID: PREDICT (capacity reinforcement); One Health workforce (US\$287,000): biosafety training, biosurveillance, diagnostics); field epidemiologist training program (FETP); support personnel recruitment for MoHSA, CDC (through AFENET for US\$418,000)	WHO: Health workforce technical training; OIE: focal point training; Global Fund

	HR Retention and deployment	Health workforce motivation in the framework of the FBR program (5 out of 6 areas of intervention are poor, landlocked and share borders with other countries)			Support for the implementation of functional community response networks; staff motivation	HRH2030 (USAID Funding for Ebola: US\$2.0 million): focus on risk management for medical personnel, health workforce redeployment at border posts, response capacity institutionalization	Global Fund financing for the HSS (Euros 638,163): recruitment and motivation of community health workers
	Communication			Communication on surveillance and harmonized control of priority diseases and veterinary drugs (focus on livestock keepers)	Development and implementation of a communication plan for the One Health approach	UNICEF (USAID Funding: US\$ 1.3 million for Ebola activities): focus on Ebola communication	

	Coordinati on				Support for the establishment and operation of a multi-sectoral coordination platform; support for the establishment and operation of sectoral and multisectoral technical committees	USAID & CDC: support for the establishment of a multisectoral national platform in accordance with the "One Health" approach	WHO: technical support to improve the coordination and harmonization of procedures between the various technical and financial partners
--	------------------	--	--	--	---	---	--

Annex 8: Enhanced Project Accountability Framework

Regional Disease Surveillance Systems Enhancement Program in West Africa

1. Following from the findings of the detailed FM review that was conducted primarily on the soft expenditures of workshops, training, travel and operating expenses in a number of projects, an enhanced accountability framework has been put in place for this project to provide increased assurance that funds are used for the intended purposes with economy and efficiency and attain value for money.
2. The objectives of a strengthened accountability framework include:
 - Development and implementation of a robust improvement in accountability for the use of project funds that will assist in attaining expected outcomes for the various programs being financed;
 - Provision of guidelines on minimum requirements to be complied with regarding workshops, training, and related activities.

Specific accountability framework for training, workshops, study tours, etc.

3. An enhanced accountability framework is put in place over expenditures in the areas of training, workshops, study tours, etc. as follows:
 - At the beginning of each fiscal year, a separate training summary plan shall be developed and shared with the TTL for review as part of the annual work plan.
 - All training, i.e. local and international, would require prior clearance from the WB's TTL before they are undertaken. The request for clearance should, at a minimum, include the following:
 - A demonstrated linkage between the rationale for the workshop/training/etc. and the Development Objective of the project shall be established;
 - Annual Work Program (AWP) to which the activity falls shall be identified;
 - The number of trainees, their function and mode of selection will be defined. This should also include the number of times during the past 18 months that listed trainees had benefitted from training;
 - Number of years before retirement from service of each of the proposed trainees;
 - The process used for selection of training provider, and if foreign training, rationale for not proposing local training, to be provided;
 - Training prospectus and reference to the beneficial outcome of the training to be provided;
 - Provision of the detailed cost of the event: if local training/workshop/sensitization, the following additional information would need to be provided: i) venue for the event, ii) how venue was or is proposed to be selected, iii) venue rental, refreshments/lunches, per diem, transport cost (air or land travel cost per trainee);
 - No residential local training program will be allowed where the venue of the training is in the locality of the trainees; the preferred choice of locality should be the location

of the majority of officials to be trained.

4. Only on the basis of these above submissions and TTLs' prior clearance will expenses be committed and become eligible for financing under the project.
 - Each PIU will ensure a formal process of accountability is instituted on training expenditures which will include:
 - Submission of training report by the trainee;
 - Certificate of attendance from the training institution;
 - Relevant travel certifications such as air tickets, boarding passes for air travel, hotel bills etc.;
 - Consistent with the Government's cashless policy, air tickets shall be procured directly from the airline through electronic payment or check (no cash payments shall be allowed); and
 - Similar practice shall also be applied in the payment to vendors and tuition fee to training providers.
 - Reduced amount of DSA (Daily Subsistence Allowance) will be paid where training/workshop organizers provide meals and accommodation. Cash advance granted to Project staff must be retired by concerned staff within the timeline specified in the PIM before new advance is granted. Where retirement of an advance is past due, an automatic payroll deduction of the unretired amount should be affected. To keep track of cash advances disbursed, an Advances Register shall be maintained as a control measure.
 - The Project Internal Auditor shall include in their work program periodic random audits of travel advances and withdrawal thereof, as well as a review of the training/workshop conducted. A report of this review shall be provided to the PC as well as the WB TTL.