Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD1210

PROJECT PAPER

ON PROPOSED ADDITIONAL GRANTS TO

REPUBLIC OF GUINEA
IN THE AMOUNT OF SDR 48.8 MILLION
(US$72 MILLION EQUIVALENT)

REPUBLIC OF LIBERIA
IN THE AMOUNT OF SDR 77.8 MILLION
(US$115 MILLION EQUIVALENT)

REPUBLIC OF SIERRA LEONE
IN THE AMOUNT OF SDR 66.3 MILLION
(US$98 MILLION EQUIVALENT)

FROM THE IDA CRISIS RESPONSE WINDOW

FOR THE

EBOLA EMERGENCY RESPONSE PROJECT

NOVEMBER 10, 2014

Health, Nutrition, and Population Global Practice (GHNDR)
Africa Regional Integration Department (AFCRI)
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2014)

Currency Unit	=	GNF, LRD, SLL
US$1	=	7,030 GNF, 84.50 LRD, 4,375 SLL
US$1	=	SDR 0.67643895

FISCAL YEAR

January 1	–	December 31 (Guinea, Sierra Leone)
July 1	–	June 30 (Liberia)

ABBREVIATIONS AND ACRONYMS

AAA	Analytic and Advisory Activities
AF	Additional Financing
AfDB	African Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ASEOWA	Africa Union Support to Ebola Outbreak
AU	African Union
BMGF	Bill and Melinda Gates Foundation
C4D	Community for Development
CCC	Community Care Center
CDC	US Centers for Disease Control and Prevention
ChAD3-ZEBOV	Chimpanzee adenovirus
CHW	Community Health Worker
CI	Confidence Interval
CMV	Cytomegalovirus
CPI	Consumer Price Index
CRW	Crisis Response Window
CWB/CP	Continuous Warm Blood
DFID	Department for International Development
DPT3	Third Diphtheria, Pertussis and Tetanus
DRC	Democratic Republic of Congo
EBOV	Ebola virus
ECC	Ebola Care Center or Unit
ECOWAS	Economic Community Of West African States
ECUETC	Ebola Care Unit Ebola Treatment Center
EDPLN	Emerging and Dangerous Pathogens Laboratory Network
ERF	Emergency Response Framework
E&S	Environment and Social
ESSAF	Environmental and Social Screening Assessment Framework
EERP	Ebola Emergency Response Project
EFMTF	Ebola Fund Management Task Force
ETU	Ebola Treatment Unit

EU	European Union
EVD	Ebola Virus Disease
FAO	Food and Agricultural Organization of the United Nations
FDI	Foreign Direct Investment
FMT	Foreign Medical Team
GDP	Gross Domestic Product
GFD	General Food Distribution
GNF	Guinean Francs
GNI	Gross National Income
GOARN	Global Outbreak Alert & Response Network
GoL	Government of Liberia
HPAI	Highly pathogenic avian influenza
H1N1	Human respiratory infection caused by a particular influenza virus H1N1 strai also known as swine flu
H5NI	Influenza A virus subtype of the influenza A virus which can cause illness in humans
HCW	Health Care Waste
HEA	Health Emergency Account
HIPC	Heavily Indebted Poor Countries
HIV	Human Immunodeficiency virus
HR	Human Resource
HSSP	Health Systems Strengthening Project
HWMP	Healthcare Waste Management Plan
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IMAI	Integrated Management of Adolescent and Illness
IEG	Independent Evaluation Group
IFRC	International Federation of Red Cross
IMF	International Monetary Fund
IPAU	Integrated Project Administration Unit
IPC	Infection Prevention and Control
IPF	Investment Project Financing
IRC	International Rescue Committee
KAP	Knowledge, Attitude, and Practice
LMIS	Laboratory Information Management System ()
LRD	Liberian Dollars
MDG	Millennium Development Goal
MERS-CoV	Middle East Respiratory Syndrome Coronavirus
M&E	Monitoring and Evaluation
MSF	Médecins Sans Frontières
MoAbs	Monoclonal Antibodies
MoFED	Ministry of Finance and Economic Development
MoH	Ministry of Health
MoHS	Ministry of Health and Sanitation
MoHSW	Ministry of Health and Social Welfare
MOU	Memorandum of Understanding

MRU	Mano River Union
MMR	Maternal Mortality Ratio
NaCSA	National Commission for Social Action
NASSCORP	National Social Security and Welfare Corporation
NCG	National Consultative Group
NERC	National Ebola Response Center
NGO	Non-governmental Organization
NHS	National Health Scheme
NICD	National Institute for Communicable Diseases
NIH	National Institutes of Health
NMRC	Naval Medical Research Center
NRC	National Response Center
NTF	National Task Force
NTT	National Technical Team
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
OP/BP	Operations Policy/Bank Policy
ORAF	Operational Risk Assessment Framework
ORS	Oral Rehydration Salt
OTCBB:CONX	Corgenix Medical Corporation
PAD	Project Appraisal Document
PDO	Project Development Objectives
PFM	Public Financial Management
PHAC	Public Health Agency of Canada
PHEIC	Public Health Emergency of International Concern
PIH	Partners In Health
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
R & D	Research and Development
ReLASV(R)	Antigen Rapid Test for Lassa virus
RNA	Ribonucleic acid
rVSVZEBOV	Vesicular stomatitis virus
SARS	Severe Acute Respiratory Syndrome
SDR	Special Drawing Rights
SLL	Sierra Leonean Leones
SMS	Short Message Service
SOP	Standard Operating Procedures
SPL	Social Protection and Labor
TA	Technical Assistanc
TFR	Total Fertility Rate
TOT	Train of Trainers
UN	United Nations
UNICEF	United Nations Children’s Fund
UNMEER	United Nations Mission for Ebola Emergency Response
UNMIL	United Nations Mission in Liberia
UNOPS	United Nations Office for Project Services

USAID	United States Agency for International Development
USAMRID	U.S. Army Medical Research Institute of Infectious Diseases
VHF	Viral Hemorrhagic Fever
WAEMU	West African Economic and Monetary Union
WAHO	West Africa Health Organization
WASH	Water, Sanitation and Hygiene
WCO	WHO Country Office
WFP	World Food Program
WHO	World Health Organization
WBG	World Bank Group
YESP	Youth Employment Support Project

Regional Vice President:	Makhtar Diop
Country Director:	Colin Bruce
Senior Global Practice Director:	Timothy G. Evans
Practice Manager:	Trina S. Haque
Task Team Leader:	Shunsuke Mabuchi
Co-Task Team Leaders:	Sheila Dutta, Patricio V. Marquez

AFRICA
Additional Financing for Ebola Emergency Response Project

TABLE OF CONTENTS

ADDITIONAL FINANCING – EBOLA EMERGENCY RESPONSE PROJECT (P152359**)**

ADDITIONAL FINANCING Data Sheet

Africa

Ebola Emergency Response Project - Additional Financing (P152980)

AFRICA

GHNDR

Basic Information – Parent			
Parent Project ID:	P152359	Original EA Category:	B - Partial Assessment
Current Closing Date:	30-Sep-2015		

Basic Information – Additional Financing (AF)			
Project ID:	P152980	Additional Financing Type (from AUS):	Scale Up
Regional Vice President:	Makhtar Diop	Proposed EA Category:	B - Partial Assessment
Country Director:	Colin Bruce	Expected Effectiveness Date:	21-Nov-2014
Senior Global Practice Director:	Timothy Grant Evans	Expected Closing Date:	30-Sep-2015
Practice Manager/Manager:	Trina S. Haque	Report No:	PAD1210
Team Leader:	Shunsuke Mabuchi		
Co-TLs:	Sheila Dutta, Patricio V. Marquez		

Borrower				
Organization Name	Contact	Title	Telephone	Email
Ministry Of Finance and Development Planning (Liberia)	Amara Konneh	Minister of Finance	231886611777	Akonneh@mopea.gov.lr
Ministry of Finance (Sierra Leone)	Dr. Kaifala Marah	Minister of Finance and Economic Development	23276111393	marahkml@yahoo.com
Ministry of Finance (Guinea)	Mohamed Diare	Minister		modiare@yahoo.fr

Project Financing Data–Parent (Ebola Emergency Response Project-P152359)

Key Dates

Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date
P152359	IDA-H9900	Effective	16-Sep-2014	17-Sep-2014	24-Sep-2014	30-Sep-2015	30-Sep-2015
P152359	IDA-H9910	Effective	16-Sep-2014	17-Sep-2014	19-Sep-2014	30-Sep-2015	30-Sep-2015
P152359	IDA-H9920	Effective	16-Sep-2014	17-Sep-2014	24-Sep-2014	30-Sep-2015	30-Sep-2015

Disbursements

Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P152359	IDA-H9900	Effective	XDR	16.50	16.50	0.00	16. 5	0.00	100.00
P152359	IDA-H9910	Effective	XDR	34.30	34.30	0.00	34.30	0.00	100.00
P152359	IDA-H9920	Effective	XDR	18.50	18.50	0.00	18.50	0.00	100.00

Project Financing Data (in USD million) – Additional Financing Ebola Emergency Response Project - Additional Financing (P152980)

[ ] Loan [ ] Grant [X] IDA Grant
[ ] Credit [ ] Guarantee [ ] Other

Total Project Cost:	285.00	Total Bank Financing:	285.00
Financing Gap:	0.00		

Financing Source – Additional Financing (AF)	**Amount**
Borrower	0.00
IDA Grant from CRW	285.00
Total	285.00

Policy Waivers

Does the project depart from the CAS in content or in other significant respects?	No
Explanation	
Does the project require any policy waiver(s)?	Yes

Explanation: This project Paper seeks the approval of Executive Directors to provide additional financing for the project from the IDA CRW in the amount of USD285 million entirely on grant terms rather than on each country's standard IDA terms as is prescribed for financing from the CRW.

Team Composition			
Bank Staff			
Name	**Title**	**Specialization**	**Unit**
Shunsuke Mabuchi	Senior Health Specialist	Team Lead	GHNDR
Patricio V. Marquez	Lead Health Specialist	Co-Team Lead	GHNDR
Sheila Dutta	Senior Health Specialist	Co-Team Lead	GHNDR
Trina S. Haque	Practice Manager		GHNDR
Francis Ato Brown	Country Manager		AFMSL
Inguna Dobraja	Country Manager		AFMLR
Cheick Fantamady Kante	Country Manager		AFMGN
Enias Baganizi	Senior Health Specialist		GHNDR
Shiyong Wang	Senior Health Specialist		GHNDR
Noel Chisaka	Senior Health Specialist		GHNDR
Ibrahim Magazi	Senior Health Specialist		GHNDR
Francisca Ayodeji Akala	Senior Health Specialist		GHNDR
Rianna L. Mohammed-Roberts	Senior Health Specialist		GHNDR
Sybille Crystal	Senior Operations Officer		GHNDR
Christine Makori	Senior Counsel		LEGAM
Alexandra Sperling	Legal Analyst		LEGAM
Coleen R. Littlejohn	Senior Operations Officer		AFRDE
Timothy John Bulman	Senior Economist		GMFDR
John Paul Clark	Senior Technical Specialist, Health		GHNDR
Jaime Nicolas Bayona Garcia	E T Consultant, Health		GHNDR
Christophe Lemiere	Senior Health Specialist		GHNDR
Christopher H. Herbst	Health Specialist		GHNDR
Nina Rosas Raffo	Social Protection Specialist		GSPDR
Emily Weedon Chapman	Social Protection Specialist		GSPDR
Renaud Seligmann	Practice Manager		GGODR
Patrick Piker Umah Tete	Sr Financial Management Specialist		GGODR
Celestin Adjalou Niamien	Sr Financial Management Specialist		GGODR

Saidu Dani Goje	Financial Management Specialist		GGODR
Sydney Augustus Olorunfe Godwin	Financial Management Specialist		GGODR
Sanjay Srivastava	Lead Environmental Specialist		GENDR
Daniele A-G. P. Jaekel	Operations Analyst		GPSOS
Tomo Morimoto	Operations Officer		GHNDR
Yvette M. Atkins	Senior Program Assistant		GHNDR
Aissatou Chipkaou	Operations Analyst		GHNDR
Rocio Schmunis	Operations Officer		GHNDR
Xiaoping Li	Senior Procurement Specialist		GGODR
Bayo Awosemusi	Lead Procurement Specialist		GGODR
Alpha Mamoudou Bah	Senior Procurement Specialist		GGODR
Daniel Rikichi Kajang	Senior Procurement Specialist		GGODR
Knut Opsal	Lead Social Development Specialist		GSURR
Demba Balde	Senior Social Development Specialist		GSURR
Faly Diallo	Financial Officer		CTRLA
Inguna Dobraja	Country Manager		AFMLR
Errol George Graham	Senior Economist		GMFDR
Cyrus P. Talati	Senior Economist		GMFDR
Ali Zafar	Senior Economist		GMFDR
Demet Kaya	Senior Economist		DFIRM
Doyle Gallegos	Lead ICT Policy Specialist		GTIDR
Akiko Maeda	Lead Health Specialist		GHNDR
Raymond Muhula	Public Sector Specialist		GGODR
Shiho Nagaki	Public Sector Mgmt. Spec.		GGODR
Zaid Safdar	Senior Operations Officer		GTIDR
Samuel Taffesse	Senior Operations Officer		GFADR
Safiatou Lamarana Diallo	Operations Officer		AFMGN
Felix Nii Tettey Oku	E T Consultant		GENDR
Sheikh Alhaji Yayah Sesay	Operations Officer		AFMSL
Mohamed Hashim Rogers	Consultant		GHNDR

Raihona Atakhodjayeva	Operations Analyst		GHNDR
Non Bank Staff			
Name	**Title**	**City**	
WHO Ebola Response Core Team under the leadership of Dr. Bruce Aylward, Assistant Director General, and the support of Ms. Linda Muller		Geneva	
UNICEF Team		New York	
WFP Team			
Locations			
Country	**First Administrative Division**	**Location**	

Institutional Data			**Actual**	**Comments**
Parent (Ebola Emergency Response Project-P152359)				

Practice Area / Cross Cutting Solution Area

Health, Nutrition & Population

Cross Cutting Areas

[ ] Climate Change

[X] Fragile, Conflict & Violence

[ ] Gender

[ ] Jobs

[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Sector	%	Adaptation Co-benefits %		

Health	80			
Other social services	20			
				Mitigation Co-benefits %
Total	100			
Themes				
Theme (Maximum 5 and total % must equal 100)				

Major theme	Theme	%
Human development	Other communicable diseases	80
Social protection and risk management	Other social protection and risk management	20
Total	100	
Additional Financing Ebola Emergency Response Project - Additional Financing (P152980)		
Practice Area / Cross Cutting Solution Area		
Health, Nutrition & Population		

Cross Cutting Areas

[ ] Climate Change

[X] Fragile, Conflict & Violence

[ ] Gender

[ ] Jobs

[ ] Public Private Partnership

				Mitigation Co-benefits %
Total	100			
☒I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.				

I. Introduction

1. **This project paper seeks approval of Additional Financings (AFs), with level 2 restructuring, for the Ebola Emergency Response Project (P152359) totaling US$285 million equivalent from the IDA Crisis Response Window (CRW) on a grant basis[1], with allocations to Guinea (US$72 million equivalent), Liberia (US$115 million equivalent) and Sierra Leone (US$98 million equivalent).** This makes the total project funds US$390 million equivalent. The Project Development Objective (PDO) remains unchanged and is to contribute in the short term to the control of the Ebola Virus Disease (EVD) outbreak and the availability of selected essential health services, and mitigate the socio-economic impact of EVD in Guinea, Liberia, and Sierra Leone.

2. The AFs would enable the three countries to scale up community-based care and community engagement for earlier triage of suspected EVD cases, more rapid confirmation of infection status, strengthened treatment and care, and safe burials to curb the epidemic. Particularly, in response to the call for addressing the leading bottleneck of human resources at the Ebola high-level summit on October 9, 2014, the AFs will include US$100 million grant to help establish a technical and logistics "hub" under the auspices of UNMEER to support a massive, rapid, and coordinated deployment of qualified high-caliber foreign medical teams (FMTs) to the three affected countries.

3. The AFs will also support an increase in diagnostic capacity for EVD in the three countries by addressing logistical constraints and increasing laboratory capacity for testing to reduce the lag time for confirmation of cases, increasing storage and distribution capacity for essential supplies, addressing selected social issues caused by the EVD outbreak, and carrying out a pre-financing assessment of new technologies (therapies, vaccines, rapid diagnostic) and for the possible establishment of a regional network of institutes of public health in West Africa.

4. Given the urgency of implementing priority activities, as done in the original project, the AF will also include retroactive financing up to 40% of the entire project cost (US$114 million) to allow pre-financing by implementing agencies in the three countries.

5. **Approval for processing these AFs has been obtained from the Regional Vice President since the project has been under implementation for less than 12 months.** The project implementation progress has been Satisfactory: (i) the project became effective for all three countries within 7 days After its Board approval on September 16, 2014; (ii) funds were fully disbursed within 9 days after the Board approval and 1 day after project effectiveness based on detailed investment plans agreed for the three countries and the signing of memorandums of understanding (MOUs) between the Governments and UN agencies (WHO, UNICEF, WFP, UNFPA, and UNOPS) for project implementation support; and (iii) essential drugs, supplies and PPEs were delivered to all three countries by UNICEF, ambulances and other vehicles were

[1] Management informed the Board of its intention to allocate an additional financing of $270 million from IDA's Crisis Response Window (CRW), bringing the total CRW allocation to $420 million, to support for Emergency Response to the Ebola Outbreak in West Africa at a briefing on October 28, 2014. See "Ebola: Update on WBG Response and Request for Additional CRW Resources" dated October 27, 2014.

delivered to Guinea and Liberia, and food supplies were distributed to more than 100,000 quarantined people through WFP (See Annex 5 for more details). In addition, hazard payments to Ebola workers and health workers providing essential services in high-risk areas and death benefits to families of health workers who died of Ebola were started in Liberia and Guinea; hazard pay to over 3,000 verified staff will start from the month of November, 2014 in Sierra Leone (Annex 5).

6. **The proposed AFs meet the criteria of OP 10.00 Paragraph 12 (Projects in Situations of Urgent Need of Assistance or Capacity Constraints) and will be processed through condensed procedures**: (i) the EVD outbreak is a multi-country disaster and public health emergency; (ii) Guinea, Liberia and Sierra Leone face severe capacity constraints with fragile and under-resourced health systems that are unable to respond to the sudden and rapidly evolving epidemic; and (iii) widespread and entrenched poverty in the three countries will likely increase because of the shock from the epidemic.

7. **Policy Exception:** As with the original project, this AF project paper seeks the approval of Executive Directors to provide additional financing for the original project from the CRW in the amount of US$285 million equivalent entirely on grant terms rather than on each country's standard IDA terms as is prescribed for financing from the CRW. [2] The use of grant financing is appropriate in light of the demonstrable regional and global positive externalities that will flow from mitigating the spread of the deadly virus in the affected countries and reducing the risk of it spreading to at-risk neighboring countries, as well as the rest of the world. The project will thereby benefit the West Africa region and the global community, by minimizing the socio economic impact of the outbreak and protecting lives and livelihoods of the populations at large.

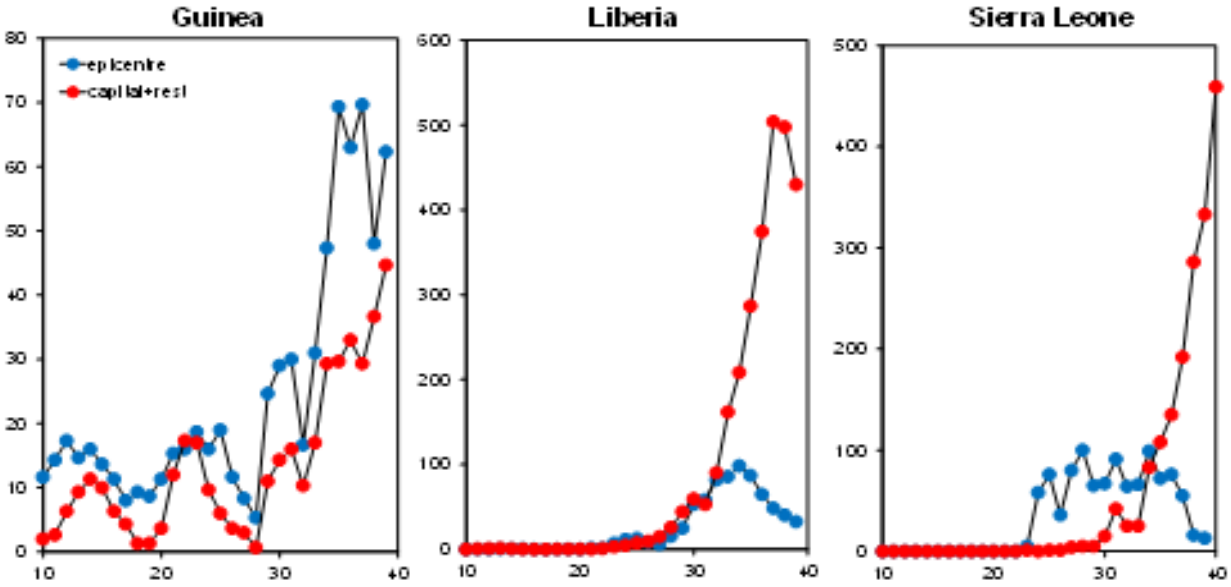
II. Background and Rationale for Additional Financing

8. **The project supports the implementation of global and country level responses based on standard public health approaches to the Ebola Virus Disease (EVD) outbreak.** The standard recommended public health actions for stopping the EVD outbreak include the early identification of cases, isolating and providing care to patients in Ebola Treatment Centers (ETCs), rigorous contact tracing, and safe burial practices, supported by strong social mobilization and sound risk communication practices (WHO, September 2014). The Ebola Emergency Response Project supports the Governments of Guinea, Liberia and Sierra Leone in the implementation of such approaches, by financing: essential supplies and staffing of the ETCs; personal protection equipment (PPE), hazard pay and death benefits for Ebola care givers and other health workers providing essential health services for non-Ebola conditions; safe and dignified burials, and support for contact tracing, social mobilization, and provision of food and other essential services to quarantined and Ebola affected populations (See Annex 5 for implementation status summary).

[2] Under the CRW's implementation framework for IDA17, the terms of assistance for CRW financing are identical to those under which regular IDA assistance is provided to a particular country. For FY15, Liberia will receive 100% of its regular IDA financing on credit terms while Sierra Leone and Guinea will each receive 50% of their regular IDA financing on credit terms and the balance of 50% on grant terms.

9. **Despite ongoing efforts to accelerate the response, the number of EVD cases continues to increase exponentially, overwhelming the current treatment system that relies on an insufficient number of ETCs. Infected cases are not identified, admitted for care, and isolated early enough.** Without effective isolation, each Ebola patient is estimated to transmit the virus to around 1.8 additional people, which doubles infections in 20 days (WHO, USCDC 2014). To address this gap, it is imperative to bring EVD case identification, treatment, and care closer to the community. The epidemic has evolved rapidly in the past two and a half months, and spread geographically from the initial remote epicenter areas to the capital cities of affected countries especially Liberia and Sierra Leone (Figure 1).

Figure 1: Comparison in number of new cases between Epicenter vs. capitals



Source: WHO

10. As of November 11, 2014, WHO data indicate that the total cumulative number of Ebola cases, both confirmed and suspected, has reached 13,463 and killed 5,015. The true human toll of the EVD outbreak is likely to be even higher given the significant underreporting of cases and deaths. Additionally, 522 health workers have been infected and 247 died. As shown in Annex 5, all districts of Liberia and Sierra Leone and part of the districts in Guinea have reported EVD cases, and about half of the cases have been in Liberia.

11. As shown in Table 1 below, the current number of beds in ETCs remains inadequate to accommodate all reported (confirmed, probable, and suspected) cases, and even the recent plan and support from the US and UK Governments to increase the bed supply in the ETCs will not be sufficient to meet the needs of the escalating number of cases requiring isolation and care (WHO, October, 2014). Moreover, the ETCs are concentrated in national capitals—given the large numbers of cases there—and large population centers. For example, in Liberia four out of the current six ETUs are in the Monrovia area. Yet new EVD cases are being identified in all 15 counties. It is extremely difficult for the communities in remote areas to access early case identification, diagnosis, isolation, and treatment in ETCs. As a consequence, EVD patients remain at home without proper isolation and care leading to further transmission among families

(particularly women and girls, who serve as primary caregivers within households) and communities. Given the insufficient number of ETC beds, there is a large need for Ebola Care Unit (ECU) /Community Care Centers (CCC) beds (Table 1).

Table 1: Current number of ETCs and FMTs required and status in Guinea, Liberia and Sierra Leone

Country	Total number of ETCs currently required	Total number of ETCs currently operational	Additional ETCs that will open soon (with FMT already identified)	Total number of ETCs still without FMT	Total number of BEDS currently planned	Existing beds	Beds under construction with FMT identified	Beds under construction with no FMT identified	ECU Beds Needed
Liberia	30	7	9	**14**	2906	786	920	1200	1021
Sierra Leone	17	7	10	**0**	1163	281	882	0	848 (up to 1160)
Guinea	11	2	3	**6**	770	160	190	420	224
COMBINED TOTAL for all 3 affected countries	58	16	22	**20**	4388	1227	1992	1620	2093-2405

Note: One FMT (25-30 people) is defined as: (i) leadership cell (5 people: team lead, deputy, clinical, nursing, logistics); (ii) 3-5 other doctors; (iii) 13-16 other nurses and clinical staff; and (iv) 4 other logistics staff.
Source: WHO estimates, October 2014

12. **To slow down and eventually stop the transmission of EVD, countries and partners have developed and aim to scale up a new community-based care model. The model provides triage of suspected cases, faster case confirmation, immediate isolation and care for the confirmed cases, and referral as necessary and possible to ETCs.** This will be done through establishing controlled settings, called **Ebola Care Units (ECUs) or Community Care Centers (CCCs)**. ECUs/CCCs are relatively inexpensive, located in existing (e.g. building or hut) or purpose-built (e.g. tent) structures where people with Ebola infection can be housed separately from their families and community to prevent transmission of the virus. ECUs/CCCs would be small (8 to 10 beds) to reduce risks of transmission and avoid operational complexity, and be managed by 2-3 front-line health workers – including community health workers or CHWs or equivalent and other supporting staff at any given time. Waste management and disinfection procedures would be established, including procedures for the safe disposal of dead bodies (WHO, October 2014) (See Annex 5 for details). The ECUs/CCCs will be, in many cases, located in the same complex or in proximity to existing health facilities, except when functional health facilities are not available. Probable and suspected Ebola patients will be triaged (for early diagnosis of Ebola) and isolated in the ECUs/CCCs to receive basic and palliative care. Whenever possible, through deployment of available local and foreign trained medical personnel with regular medical and PPE supply, the ECUs/CCCs will go beyond basic palliative care towards higher standards of treatment, including the use of IV fluids.

13. This approach has been developed by WHO with contributions from US CDC, DFID, Global Outbreak Alert & Response Network (GOARN), International Federation of Red Cross (IFRC), International Rescue Committee (IRC), Medecins Sans Frontieres (MSF), Public Health Agency of Canada (PHAC), Save the Children, Partners In Health (PIH), and UNICEF, and adopted with required modifications by the Governments of the three countries as part of the Ebola care continuum to complement ETC-based treatment and address the large number of cases. This approach aims to complement, and not replace, current disease control efforts including the ETCs as part of the continuum of Ebola care. If properly implemented, this enhanced approach can slow down the progression of the epidemic by reducing family and community contact with infected persons and offering care to Ebola patients closer to their homes.

14. Based on the projected number of cases in each district/county, the governments of Liberia, Sierra Leone, and Guinea plan to initially establish 200, 169, and 100 ECUs/CCCs respectively. In Sierra Leone for example, this assumes 1 ECU per chiefdom and 20 in hot spot areas covering 10,000-40,000 population. These facilities need to be established rapidly to achieve the 70-70-60 targets[3] put forward by UNMEER/WHO to contain the disease. Given the widespread nature of cases, however, a greater number of ECUs/CCCs may be necessary to isolate EVD cases and make basic care equally available to community members. In the absence of more ECUs/CCCs being established and staffed adequately for proper care, a logistic system will be needed to quickly and safely transport cases in areas with poor coverage to ETUs.

15. **Along with the community-based care for Ebola, rebuilding essential health services is critical to address the outbreak and mitigate its health impact**. The spread of the current EVD outbreak in the three countries is in part a consequence of weak health systems. As a consequence of the EVD outbreak, essential health services experienced severe decline. For example, institutional delivery in Liberia decreased from 52% in 2013 to 38% in May-Aug 2014, which was the level in 2011 (MOHSW, September 2014). Moreover, in the ECU/CCC model, health facilities are expected to play an important triage function of Ebola cases from other disease cases (e.g., malaria). An urgent effort is thus needed to ensure adequate levels of finance, staffing, commodities, and flow of information for health facilities to provide essential services such as institutional delivery, malaria, and vaccination, and provide sufficient protection and training on infection prevention and control. The outbreak has also highlighted the need to address more effectively peoples' fear and distrust of health care services.

16. **The community-based care model and essential health services need to be supported by robust community engagement in order to gain the community's trust and ownership**. The EVD outbreak is characterized by extremely high levels of fear, anxiety, and frustration, as well as mistrust in the affected communities; this situation has been further accentuated by the lack of service delivery capacity in the health system. This poses huge challenges to gain community support for establishment of ECUs/CCCs and isolation of EVD patients, in addition to identification of probable, suspect and confirmed EVD cases. Further, effective early case detection, referral, isolation, and tracking of suspected patients as well as contact tracing require community support and leadership. Effective engagement with communities as well as restoration of essential health care capacity will be crucial to regain the trust of communities, to

[3] Isolate and treat 70% of suspected cases in West Africa and safely bury 70% of the dead within the next 60 days.

the success of this community-based care approach, and indeed, to the overall battle against the epidemic.

17. **The long lead time between the onset of symptoms and communication of confirmed lab results increases the risk of further transmission of infections, especially in rural areas without easy access to lab facilities**. Surveillance capacity and laboratory services across the three countries remain extremely limited - there are only 2 laboratories in Guinea, 5 in Liberia, and 4 in Sierra Leone, respectively, including mobile laboratories that are capable of effectively diagnosing Ebola infection (See Annex 4 for details). The lab capacity in Liberia, for example, only recently was enhanced with the start of the operation of two US Navy mobile labs (each with a testing capacity of 100 samples per day) to 500 samples per day (WHO data). However, significant challenges remain with respect to limited accessibility, challenges in transporting lab samples from remote areas without laboratory facilities, unavailability of adequate numbers of qualified laboratory staff (due partly to the training requirements of 9-12 months to train a person to work independently in an Ebola laboratory and 3 months to start working under expert supervision), and the lack of an effective Information Management System for efficient management of laboratory results, case identification, and contact tracing data.

18. **Lack of human resources is a critical binding factor to scaling up the continuum of Ebola care**. While the number of ETC beds has been increasing in the affected countries (Table 1), staffing of Foreign Medical Teams (FMTs) manage and operate existing ETUs is lagging behind. Current estimates indicate that an additional 20 medical teams with 25-35 persons per team (a total of about 700 additional medical personnel) are needed to operate 1,620 beds, particularly in Guinea and Liberia. More foreign staff will be needed to support the scale-up of lab capacity, supervise ECUs/CCCs, and quickly train a sufficient number of local staff. Further, there are inadequate numbers of trained health workers to staff new ETCs under construction (e.g. an additional 17 ETUs (each with a 100 bed-capacity) in Liberia funded by the US Government) and proposed ECUs/CCCs. Significant increases in training and supervision capacity, improvement of the working environment, including PPE supply and incentive payment for staff, and reallocation of trained staff to remote areas without easy access to ETUs and health facilities will be critical. So far very few countries have deployed medical teams to the affected countries (See Annex 5 for current and planned deployments). Effective coordination mechanisms to accelerate the deployment of FMTs, including the coordination for medical evacuation and other necessary arrangements for the international workers and volunteers have not been put in place as yet.

19. To respond to this situation, the United Nations Mission for Ebola Emergency Response (UNMEER), based on needs assessments conducted by national governments and WHO, is seeking to mobilize and deploy 'bundled' FMTs from other countries that can staff existing ETUs in a self-sufficient manner. FMT bundles, which are easier to manage and deploy, are expected to consist of at least 25-35 foreign personnel including managers, doctors, nurses and logisticians who, with hired local auxiliary staff, can run a facility largely autonomously. Recent developments have the potential to increase the availability of FMTs. US and EU medical evacuation (medevac) systems are now available – the US system provides capability to evacuate up to two Ebola patients who require bio-containment per week on a reimbursable basis; and the EU guarantees treatment in country and medical evacuation of any international staff using

specialized commercial aircraft or aircraft of member countries. However, there has not been a strong entity to coordinate the negotiations between the governments, ensure the quality of the teams, establish robust logistics and day-to-day support to the FMTs, coordinate medevac and other insurance, and train the staff sufficiently. Clear leadership, accountability and management functions will be required to unlock the deployment of FMTs.

20. **Capacity to store and distribute essential supplies to support the operation of ETCs, ECUs/CCCs, essential services, and communities also needs to increase urgently.** With escalating cases, demand for essential supplies (e.g., basic supplies such as beds, mattresses, linen, mosquito nets, IPC equipment, disinfectants, and basic medical supplies) to establish and operate ETCs, ECUs/CCCs and community activities have been increasing significantly. This overwhelms countries' existing storage capacity (e.g., central and local medical stores) and immediate scale up of the storage and distribution capacity becomes critical. For example, the Government of Liberia plans to develop a central hub and 5 forward logistic bases and a warehouse in-country in their strategy. To respond to this and to operationalize the rapid support by UNMEER, WFP is planning to rapidly activate logistics staging areas in Accra, logistics hubs in Conakry, Monrovia and Freetown, and forward logistics bases within each of the countries to provide retail deliveries to final delivery points (e.g., ETCs, ETUs). These efforts require immediate funding to enable timely distribution of essential supplies.

21. **In addition to these operational solutions to curb EVD infections, it is critical to accelerate the development of new therapies, diagnostics, and vaccines**. The global scientific community has been mobilizing their resources to look at the most promising therapies and technologies and the different ways in which their development can be accelerated. While some therapies, drugs and vaccines have demonstrated promising results in the laboratory, such interventions have yet to be evaluated for safety and efficacy in humans. There is currently no product that is approved for the treatment of EVD. A large number of people affected by the present outbreak in West Africa and the high case-fatality rate have prompted calls to accelerate the evaluation and development of new technologies and interventions. Rapid assessment of criteria and viable options for introducing, establishing, and scaling up EVD therapies and vaccines will therefore be needed to accelerate the process.

22. **The EVD outbreak is already having social and economic consequences that must be addressed and mitigated as a critical part of the global response**. For example, the provision of a range of social support services is needed to care for a growing number of orphans who do not have support from family members. The prolonged shut-down of schools is leading to learning losses, increased risk of drop-outs and emigration of teachers from endemic areas. Also, the prolonged and escalating epidemic is negatively affecting agricultural production due to supply and labor constraints. There has been insufficient attention and funding to provide such essential public services, as focus has been on health responses.

III. Proposed Changes

(1) Summary changes

23. The summary of the proposed level 2 restructuring (no PDO changes) with the AFs is summarized in Table 2. Countries will make decisions through their investment planning process with all partners whether they cover all sub-components below or focus on selected priority areas. Allocations of funds between components will be flexible (except for expenses dedicated for FMTs, pre-investment rapid assessment and hazard pay) by using a combined financing category and through periodic revision of the investment plans, in order to support the countries to respond to the rapidly changing epidemiology of the disease. Special focus will be placed in each activity on building health systems while addressing emergency needs:

Table 2: Proposed changes with AFs

Component	Proposed changes
1. Support to the EVD Outbreak Response Plans and Strengthening Essential Health Services	a. Add support to scaling up Ebola community-based care and essential health services b. Add support to community engagement and community-based responses c. Add support to increase surveillance and lab capacity d. Add increase of storage and distribution capacity e. Add monitoring and Evaluation (M&E) of the response
2. Human Resources Scale Up for Outbreak Response and Essential Health Services	f. Add financing to support scaled up deployment of foreign medical teams (FMTs) and other foreign staff g. Add financing to hazard pay and death benefits h. Add financing to scaling up training.
3. Provision of Food and Basic Supplies to Quarantined Populations and EVD Affected Households	i. Add financing for further food supply to quarantined populations and EVD affected households
4. (New) Provision of Essential Public Services	j. Add financing to provide essential public services to affected populations.
5. (New) Pre-Investment Assessment for Acceleration of Ebola Prevention, Treatment and Preparedness	k. Provide financing to pre-investment rapid assessments and planning of (i) new Ebola therapies, diagnostics, and vaccines, and (ii) establishment of a regional network of institutes of public health

(2) IDA Grant Financing

24. As done under the original financing, these AFs propose to provide IDA CRW funds on a grant basis (US$285 million) to recipient countries. The Governments of these countries will lead, coordinate, and oversee the overall implementation of the project and will contract significant implementation of project activities to UN agencies, NGOs, and faith-based organizations to draw on their areas of comparative advantage in order to ensure scale, speed, and efficiency. In addition, the AFs propose to provide a grant to facilitate the development,

rapid approval and introduction of novel therapies and technologies for EVD as a global public good. Given the urgency of implementing priority activities, as done in the original project, the AFs will also include retroactive financing up to 40% of the entire project cost (US$114 million) to allow pre-financing by implementing agencies.

(3) Brief descriptions of additional activities (See Annex 3 for detailed descriptions including implementation arrangements)

Component 1: Support to the EVD Outbreak Response Plans and Strengthening Essential Health Services

a. Support to scaling up Ebola community-based care and essential health services

25. The AFs will support the delivery of an Ebola basic care package, including triage for suspected cases, isolation, case confirmation, and basic care and support to Ebola patients at ECUs/CCCs as part of the Ebola care continuum (See Annex 5 for detailed services administered in ECUs/CCC and relationship with ETCs), as well as safe burials. It will also support establishment and operation of ETCs as needed.

26. ECUs/CCCs have variations from a full-treatment model to a basic care model, which are very different in level of treatment and care, necessary staffing, and running costs (Table 3). There are further variations in between and within the two models – e.g., some basic care model allows family members to care for patients while others do not allow it. The choice of the type of ECUs/CCCs will be made by each country based on their different contexts and availability of trained health personnel (See Annex 4 for details), and the AFs will finance both types as needed. For example, for the areas without easy access to ETUs, full treatment model ECUS/CCCs may be relevant if skilled health workers are available. Liberia plans to establish 200 CCCs and carried out micro-planning for 32 CCCs in Montserrado and Margibi counties. Sierra Leone plans to have 1 ECU per chiefdom plus 20 ECUs in Western Area (total 169 ECUs). Guinea plans to establish 100 transit centers and 100 community transit centers. The proposed AF funding would finance Government's plans, in coordination with other partners, to establish these ECUs/CCCs, and to further scale up ECU/CCC coverage to serve more remote at risk populations, if the model works effectively. This will reduce the risk of infection among family and community members, especially among women who are the primary care-givers in a household.

Table 3: Spectrum in ECU/CCC model

	"Basic care" model	"Full treatment" model
Treatment/care	Basic care such as food, water, oral rehydration, presumptive treatment of malaria, oral antibiotics, etc.	Full treatment including intravenous (IV) fluids
Staffing	3-4 local community health workers, ~10 staff in total Some ECU/CCCs allow family to participate in care	3-4 expat and/or trained nurses, 20-40 staff in total
Number of beds	~ 5-10 beds	~ 10 beds
Budget size	~US250,000-300,000 to set up and run for 6 months	~US$2 million to set up and run for 6 months

Source: WHO, Save the Children, Partners in Health

27. To promote the active involvement of communities and families, the site and design of an ECU/CCC will be decided in consultation with the affected communities. The affected communities need to be convinced that the isolation of sick patients is key to control the transmission and that there is a greater risk of infection when treating family members at home. Preparation and agreement with communities becomes especially important in areas where resistance and aggression is openly being shown towards response and health workers. With community participation and buy-in, ECU/CCC should use local knowledge and practices to deliver Infection, Prevention, and Control (IPC) measures, using culturally acceptable behaviors.

28. **In addition to the full Ebola intervention package described above, this component will also finance the provision of essential health services, with particular emphasis on maternal and child health**. To strengthen the provision of essential health services and establish the linkage with the continuum of Ebola care and treatment, this component will finance PPE, IPC materials and other essential supplies for non-Ebola focused health facilities, staff, training on the proper use of the PPE and IPC supplies, and essential drugs and equipment for the facilities to provide essential services.

b. Community engagement and community-based responses

29. The proposed sub-component aims to support the community to play leading roles in EVD outbreak responses and disseminate knowledge to modify behaviors, including safe management of dead bodies and burials to reduce transmission at the community level. Whilst the specific model of support will vary by country and community depending on context, the overall concepts of support include:

- **Engaging community and religious leaders**, **local NGOs and the local media** to drive local communication and behavior change strategies on Ebola and develop support structures, protocols and strategies for envisioned community level mobilization at the local political level.
- **Mobilizing locally defined and supervised community health teams** to: a) carry out sensitization activities at the household level, including education on prevention, but also to

provide basic medical supply kits combined and supported with a system to collect waste, and identifying need for referral; and b) engage in case identification, contract tracing, basic surveillance, and community safe burials.

- **Establishing a community-based monitoring system** at district level, including to track-and-adjust the effectiveness of local communication and behavior change campaigns as well as uptake of preventive care seeking behaviors.

c. Support to increase surveillance and laboratory capacity

30. This proposed additional sub-component aims to help reduce the lag time from the onset of the symptoms and communication of laboratory results for proper isolation, referral and care to reduce the risk of infections. Activities will be tailored to each country's needs. Potential activities include but are not limited to: (i) strengthening of surveillance teams and community surveillance; (ii) mobile laboratory installment in "hot spot" areas with a full plan to staff them ; (iii) training (including necessary equipment) and staffing of skilled laboratory technicians as trainers and laboratory staff to meet the minimum biosafety level for Ebola testing (mobile field teams could be engaged to provide support to the national training programs); (iv) support to enable rapid sample collection including logistics (e.g., motorcycles, cold boxes); (v) Laboratory Information Management Systems (LMIS) that integrate data on case identification and contact tracing and links laboratory data to individual case data (e.g., through use of SMS).

d. Increase of storage and distribution capacity

31. This proposed additional sub-component will contribute to finance the scale-up of in-country storage and distribution capacity. Activities include the following:

- **Development of Main Logistics Hubs** in Conakry, Monrovia and Freetown to consolidate the incoming cargo for reception, temporary storage, dispatch and transshipment of international shipments arriving by sea and/or air.
- **Development of Forward Logistics Bases**: Three or more of these bases will be established in each country to give sufficient coverage to the affected areas. These bases will be the most crucial response node and will be set up to ensure immediate response to call-forwards of ETCs, ECUs/CCCs and all essential supporting operational equipment. Retail deliveries to the final delivery points will be from the Forward Logistics Bases, to the extent possible.
- **Supply Chain**: A push supply chain from the Main Logistics Hubs to the Forward Logistics Bases, and a pull system (demand-based supply) from the Forward Logistics Bases to the ETCs/ECUs/CCCs, including the commercially contracted transport and a dedicated fleet for road transport from the Forward Logistics Bases to the final delivery points.

e. Monitoring and Evaluation (M&E) of the Outbreak Response

32. The AFs will provide support for the countries to monitor and evaluate the response implemented by the government, development partners and other stakeholders. This can include but is not limited to the following:

- Management consultancy or other management team (staffing and operational cost) to support the central and district coordination units (e.g., Coordination team in Guinea, IMS in

Liberia, National Ebola Response Center in Sierra Leone) to monitor real-time progress, analyze data and problem-solve bottlenecks on daily basis;
- Mapping and real-time tracking and assessment of responses by different stakeholders, including amount of funds, activities, beneficiaries, progress, performance (e.g., coverage, quality, safety), etc.;
- Integrated information system to track cases from case identification to surveillance and laboratory testing, contact tracing, treatment care and consequences;
- Training of staff on M&E;

Component 2: Human Resources Scale Up for Outbreak Response and Essential Health Services

33. The AFs will supplement the efforts of the Governments and other partners to mobilize and sustain sufficient and appropriately trained health workers to coordinate, manage and implement Ebola response interventions both at the level of (new and existing) ETUs, ECUs/CCCs and health facilities providing essential services:

f. Deployment of foreign medical team (FMT) and other foreign staff

34. To help address this urgent human resources bottleneck, AFs will support the establishment and operation of a Global FMT operations platform under the auspices of UNMEER. The primary function of this operational platform is to serve as a command and control managerial hub to help the governments of the affected countries process, deploy, and coordinate the work of high-quality FMTs. The deployment of the FMTs will be coordinated based on needs assessments by the governments of the affected countries and WHO. To provide an end-to-end policy and logistical support to the FMTs, WHO will provide technical assistance, and logistical support will be provided by other specialized agency in accordance with UNMEER's Operational Framework[4] adopted in Accra on October 15-18, 2014.

35. Initially, the goal will be to support the deployment of 20 FMTs, comprised of 700-1,000 additional health workers by December 2014 to help meet the 70-70-60 targets[5] set by UNMEER and WHO. It will also support the deployment of foreign staff for supervision of ECUs/CCCs, operation of laboratories, training of local health workers, and support to health facilities providing essential health services to revitalize and strengthen health systems. The functions of the FMT operations platform will include the following:

- Policy and strategy coordination to guide all end-to-end support functions for FMT deployment, i.e., identifying, recruiting, training, deploying, supporting the stays and enabling safe return, and to monitor the deployment process and performance.

- Coordinate the interface, negotiation and contractual agreements between the national governments of the affected countries and the governments of countries and institutions

[4] The framework aims to guide coordinated UN-system responses to the EVD outbreak.
[5] Get 70 per cent of the cases isolated and treated, and 70 per cent of the deceased safely buried within 60 days (from the beginning of October to 1 December)

willing to deploy FMTs. The support will include coordination on payment of salaries, hardship payments, health and life insurance, and general welfare of teams.

- Ensure that FMTs meet WHO's classification and minimum standards[6], and (with the technical support of WHO) assess professional qualifications of the FMTs' members (i.e., all members of the FMT must be registered to practice in their home country and have license for the work they are assigned to by the agency), work experience, and the ability to work in high-risk and culturally sensitive environments. Proficiency in the language of host countries will also be certified (e.g., French in Guinea, and English in Liberia and Sierra Leone).

- Logistical and financial support in coordination with governments of affected countries, including: (i) FMTs' travel from home country to host country; (ii) logistics arrangements, including accommodation, food and water logistics for the team; (iii) within country communication and transportation (e.g., allocation of designed vehicles, fuel, insurance, maintenance); (iv) medical and mental support of the FMTs during the assignment; (v) security plan, evacuation and medical repatriation arrangements; (vi) requisite support for the FMTs as they conclude their shifts and return to home country; and (vii) orderly rotation of FMT staff.

- Coordinate pre-deployment training of FMTs by the WHO and other agencies on Infection Prevention and Control measures, and on Ebola clinical standards and protocols.

- Coordinate the assignment of FMTs to ETCs and other facilities (e.g., group of ECUs/CCCs, labs, training centers) in need of FMTs with arrangements for the provision of medical equipment, diagnostics, drugs, and other necessary supplies.

- Management of a database/information system to match the supply of different cadres of qualified medical professionals and demand of affected countries.

g. Hazard pay and death benefit

36. The AFs can also be used to supplement the cost for hazard pay and death benefit to address the HR surge in each country, as an addition to the financing through the original project funds, through the same implementation and financing arrangement as the original project.

h. Training

37. Under the AFs, funding would be made available to support the scaling up of training for health care workers, e.g., building on the successful WHO CARD IMAI (Integrated Management of Adolescents and Illness) collaboration that supports task shifting in case management.

[6] Classification and minimum standards for the FMTs in sudden onset of disasters: http://www.who.int/hac/global_health_cluster/fmt_guidelines_september2013.pdf?ua=1

Component 3: Provision of Food and Basic Supplies to Quarantined Populations and EVD Affected Households

i. Further food supply to quarantined populations and EVD affected households

38. The AFs allow further food supply to quarantined and EVD affected households through contracts with WFP.

(New) Component 4: Provision of Essential Public Services

j. Provision of Essential Public Services to Affected Populations

39. This proposed new sub-component aims to provide the governments with flexible funds (sub-grants) to provide public and other support services to Ebola affected individuals, households and communities. Each government can select the prioritized social issue(s) such as provision of safety nets, orphanage care, support to female-headed households, reopening of schools, seed and fertilizer supply to affected farmers, and develop an investment proposal which will be consistent with project activities and each of the country's Ebola emergency and or economic stabilization and recovery plan (sub-projects). The investment proposal will be presented to each of the country's agencies responsible for coordinating the Ebola response for approval. With a plan satisfactory to the Bank, the funds can be released from the designated account of the project to the proposed implementation agency.

40. The investment plans will be assessed based on the following criteria: (i) clearly identified problem; (ii) analysis of problem structure and key issues; (iii) clear definition of beneficiaries and strategies for identifying them; (iv) potential impact and viability of activities; (v) implementation arrangements with clear roles and responsibilities of key stakeholders; (vi) detailed budget; and (vii) results framework and monitoring.

41. The implementing entities can be public, private, non-profit and/or international agencies and will provide quarterly implementation progress reports to the Agency responsible for coordinating Ebola emergency response in each of the three countries. Auditing of the activities under this component will be part of the overall financial management arrangements of the project.

(New) Component 5: Pre-Investment Assessment for Acceleration of Ebola Prevention, Treatment and Preparedness

k. Pre-investment Rapid Assessment and Planning of New Ebola Therapies, Diagnostics, and Vaccines, and Establishment of a Regional Network of Institutes of Public Health

42. The AFs will finance a 6-10 week rapid assessment and planning, to determine criteria and viable options for introducing and scaling up the use of EVD novel therapies, diagnostics and vaccines in the Ebola affected countries, including options to address health system gaps,

and possible forms of public-private partnerships, market-guarantees, and indemnities, among others. The assessment will be carried out in relation to novel therapies and technologies that the scientific community has identified as most promising for enhancing the response to the EVD outbreak. Under the coordination of WHO, a Scientific Advisory Committee of international, regional and national experts will provide guidance on which novel therapies, diagnostics, and vaccines are most promising and how their development can be accelerated with due attention to ethics, safety, efficacy, and efficiency. Based on the recommendations from this group, the assessment will examine innovative financing options that will minimize time for development and introduction and scaled up the use of these novel therapies, diagnostics, and vaccines. This exercise will be done in full compliance with applicable scientific protocols and regulations.

43. The AFs will also finance a rapid assessment of options and planning for the establishment/upgrading of a regional network of public health infrastructure and institutions for the effective surveillance, prevention, detection and control of infectious diseases, including EVD. This exercise will be designed to ensure ownership by and legitimacy with African governments, and will be informed by earlier work done by the African Union and WHO. It will draw on expertise from African experts in epidemiology and infectious disease control, WHO, and specialized institutions that perform similar functions, such as the United States Centers for Disease Control and Prevention.

44. Given that Ebola and other infectious diseases are zoonotic—most likely from interactions with bats and other animals—the assessment would also focus on options for the development of 'One Health' arrangements—that is, collaborative efforts between public health, veterinary and environmental services. This would facilitate the sharing of information, and enable holistic analysis of risks and joint responses to prevent and control outbreaks of diseases of animal origin, such as Ebola, in accordance with WHO's International Health Regulations. It will draw on expertise from African experts in epidemiology and infectious disease control, WHO, and specialized institutions such as the United States Centers for Disease Control and Prevention (US CDC).

IV. Indicative Allocation of Additional Financing

- Costing has been done for each proposed additional activity by country, based on: (i) epidemiology, necessary beds and staffing; and (ii) country strategies (e.g., to establish ECUs/CCCs) and estimate.
- Indicative allocation also considered large scale support from US to Liberia, and from UK to Sierra Leone (thus more allocation to Guinea than the country would have received simply based on (i) and (ii).
- Costing by countries, WHO, UNICEF and WFP were used as references.
- Allocations between components is indicative and flexible. US$100 million for FMTs (part of Component 2), and US$3 million for the pre-investment assessment (Component 5) will be set aside based on the contract between the three governments and UN or other agencies. The rest of the funds (US$182 million) – US$46 million for Guinea, US$69

million for Liberia, and US$67 million for Sierra Leone is being programmed in detail through the investment plans developed by the governments and development partners.

(In USD million)

Component	Proposed additional activities	Guinea	Liberia	Sierra Leone	Total
1. Support to the EVD Outbreak Response Plans and Strengthening Essential Health Services	• Ebola community-based care and essential health services • Community engagement and community-based responses • Surveillance and lab capacity • Storage & distribution capacity • Waste management and water and sanitation • M&E of the response	32	50	45	127
2. Human Resources Scale Up for Outbreak Response and Essential Health Services (except FMTs – see last row for FMTs)	• Human resource arrangements to operate ETUs, ECUs/CCCs and community engagement activities • Hazard pay and death benefit. • Scaling up training	7*	7*	10*	24
3. Provision of Food and Basic Supplies to Quarantined Populations and EVD Affected Households	No changes	2	2	2	6
4. (New) Provision of Essential Public Services	• Provision of Essential Public Services to Affected Populations	5	10	10	25
5. (New) Pre-Investment Assessment for Acceleration of Ebola Prevention, Treatment and Preparedness	• Pre-investment rapid assessment of new Ebola therapies, diagnostics, and vaccines	1	1	1	3
(New addition to Component 2)	• Scale up deployment of FMTs and other foreign staff	25	45	30	100
Total		**72**	**115**	**98**	**285**

* Cost for local staffing to ETUs, ECUs/CCCs are included in the Component 1 costing. Additional finance for deploying FMT is separated.

V. Monitoring and Implementation Support

45. An important lesson learned from the original grant is the need for clear monitoring and implementation support structure, process and instruments. Proposed arrangements include the following:

- Detailed delivery tracking dashboard that visualizes the progress against work-plans and contracts for UN agencies, the governments and other implementation agencies will be developed and updated by implementation agencies, governments and the Bank at least on a weekly basis.
- The dashboard will be shared with the governments' Ebola Coordinators leading the EVD outbreak response in each country, and during the government-led meetings with partners every week. Delayed progress will be highlighted and discussed to resolve problems.
- World Bank's Country teams led by Country Managers, as well as at least 1 health specialist in each country on a rotational basis will engage in the daily monitoring, with back-ups from the task team.
- Investment plans and UN contracts will be reviewed periodically (e.g., every month) and revised as needed to address the rapidly changing issues.
- Implementation of hazard pay will continue to be supported by the Bank's FM team both in-country and in headquarters to ensure the speed of implementation and robust risk management. The hazard pay process has been documented as a part of the project implementation manual, which will be adapted to changing situation.
- Procurement by the government will be supported by the Bank's procurement specialists, with possible intensive missions as needed. The Standard Operating Procedure (SOP) for the use of disbursed funds has been developed in Liberia to support rapid implementation, and will be adapted for Guinea and Sierra Leone.

VI. Appraisal Summary

Economic and Financial Analysis

46. A new economic impact assessment from the WBG dated October 8, 2014, shows that if the epidemic was to significantly infect people in neighboring countries, some of which have much larger economies, the two-year regional financial impact (total of 2014 and 2015) could reach US$32.6 billion (Table 4).

Table 4: Lost GDP due to Ebola in dollars as a percentage of 2013 GDP

	Short-term impact 2014	*Medium-term impact (2015 - Low Ebola)*	*Medium-term impact (2015 - High Ebola)*
Guinea	130 million (2.1%)	-43 million (0.7%)	142 million (2.3%)
Liberia	66 million (3.4%)	113 million (5.8%)	234 million (12.0%)
Sierra Leone	163 million (3.3%)	59 million (1.2%)	439 million (8.9%)
Core Three Countries	359 million	129 million	815 million
West Africa	2.2 – 7.4 billion	1.6 billion	25.2 billion

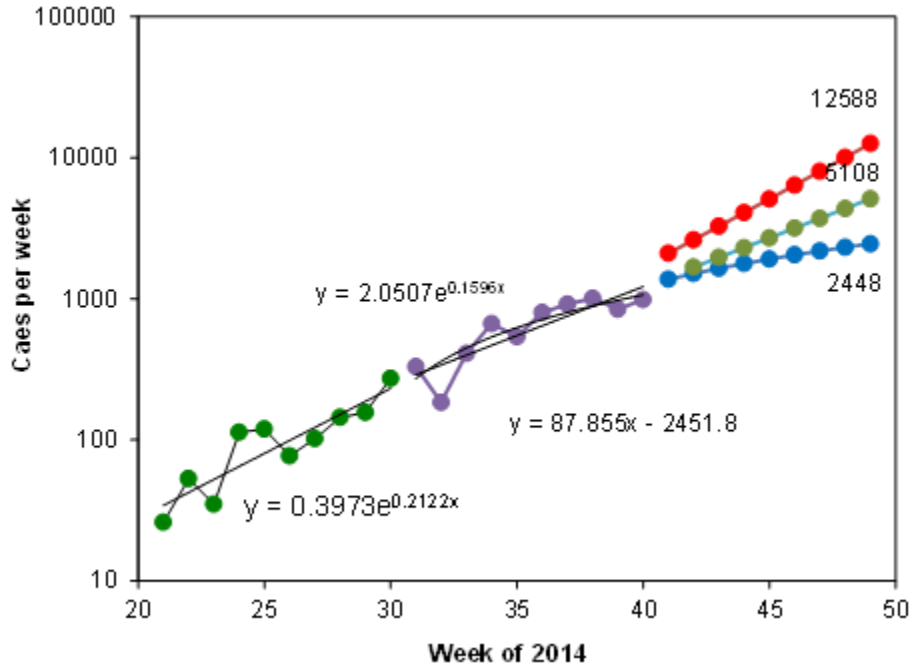
Note: All values are expressed in 2013 US dollars.

Source: World Bank, September 2014

47. As it is far from certain that the epidemic will be fully contained by December 2014 and in light of the considerable uncertainty about its future trajectory, two alternative scenarios were used to estimate the medium-term (2015) impact of the epidemic, extending to the end of calendar year 2015. A "Low Ebola" scenario corresponds to rapid containment within the three most severely affected countries, while "High Ebola" corresponds to slower containment in the three countries, with broader regional contagion (Table 4).

48. The economic impacts of Ebola are already very serious in the core three countries – particularly Liberia and Sierra Leone – and could become catastrophic under a slow-containment, High Ebola scenario of 10,000 - 12,000 cases per week by December 20014 as suggested by scenario simulations done by WHO (WHO, Figure 2).

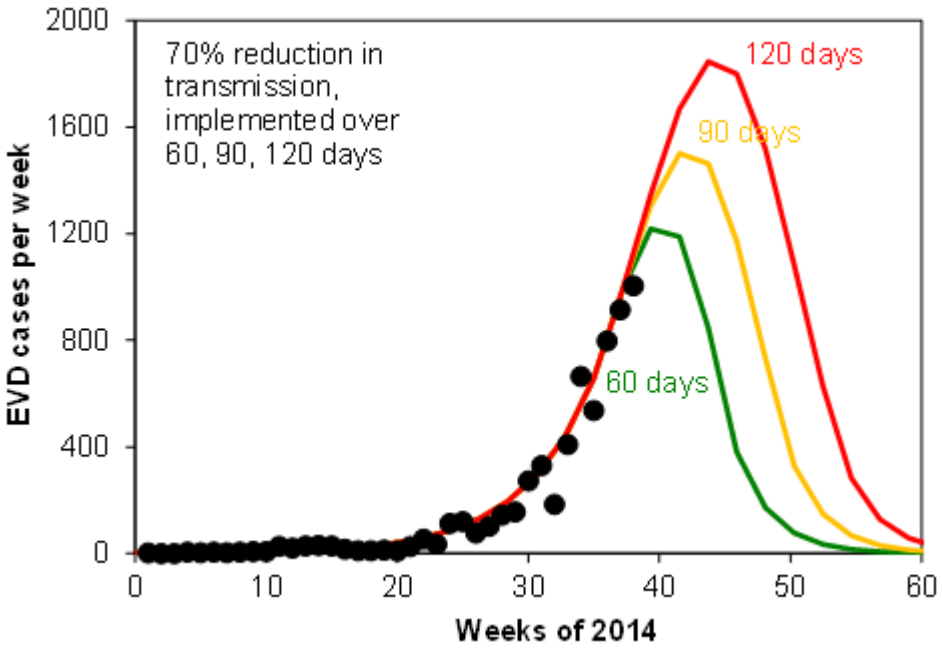
Figure 2: Scenarios of the EVD Evolution in Guinea, Liberia and Sierra Leone



Source: WHO

49. In contrast, the economic impact could be limited if immediate actions stop the epidemic and alleviate the "aversion behavior" or fear factor that is causing neighboring countries to close their borders and airlines and other regional and international companies to suspend their commercial activities. As shown in Figure 3, as simulated by WHO, with the sustained and effective control and mitigation proposed under these AFs with other partners, a significant benefit/averted loss can be expected. The differences between "Low Ebola" and "High Ebola" scenarios in GDP losses in 2015 are US$686 million for three countries, and US$23.6 billion for West Africa (WBG estimate dated October 8, 2014). This makes a strong economic case for large-scale investments such as these AFs now rather than later to avoid the "High Ebola" scenarios.

Figure 3: Simulation of Expected Impact with Sustained Control and Mitigation Effort in Guinea, Liberia and Sierra Leone



Source: WHO

50. **Rationale for Public Provision and Bank Involvement.** Unlike a slow-onset disaster such as a drought, where a more thorough preparation of a regular investment project may be preferable, Guinea, Liberia and Sierra Leone are already experiencing the human and socio-economic impact of the still evolving EVD epidemic. Even if all EVD transmission could be halted today, the impact of the deaths of the people already infected and the socio-economic consequences will be materialized over the medium term in the three countries and in the region. Given the infectious nature of the EVD, this epidemic needs to be addressed through close, well-coordinated joint efforts as a region and globally. Otherwise, no matter how successful one country can be in stopping this disease, in the short run it will be afflicted with new cases in the country and other countries (as reported, EVD cases have been reported in several countries,

including in the United States and Spain, and more recently in Mali). Public and external financing on grant terms is therefore justified to support a Regional/Global Public Good.

51. The Bank's involvement adds significant values to the EVD outbreak responses of the three countries: (i) in-country technical assistance by the country offices and deployed health specialists help the governments to convene partners, identify critical gaps and channel funds to most important gaps in the most efficient and fastest way; (ii) it channels funds to the governments and strengthen their emergency response functions (e.g., hazard payment and death benefit); (iii) it holds UN agencies and other implementation agencies accountable for results to the governments, through contracting between the governments and implementation agencies, and through rigorous monitoring and implementation support by the Bank. Furthermore, the Bank's financial and coordination support to the FMTs deployment can strengthen the end-to-end support functions for the FMTs and accountability of the international agencies, and accelerate the deployment.

Technical Analysis

52. As described in details in Annex 4, the community-based care (ECU) model has been developed and modified by key technical agencies such as WHO, US CDC, DFID, GOARN, IFRC, IRC, MSF, PHAC, Save the Children, PIH, and UNICEF, based on the field experiences of EVD outbreak response in the three countries. Rigorous protocols for triage, isolation and care have been developed, and the importance of providing necessary care and preventing further infections are carefully balanced. Pilot ECU operations also have been started. The scale up of the model through the AFs will be carefully monitored by the governments and all the development partners. The approaches in community engagement (e.g., engagement with local and religious leaders) are also based on the experiences in the EVD responses so far, as well as other activities used to contain infectious diseases such as Polio Eradication Initiatives in Nigeria.

53. Building on the original project design, the AFs will also leverage the implementation capacity and comparative advantages of each UN agency (e.g., UNICEF, WHO, WFP) through contractual arrangements with the government. Contracting the NGOs that are rooted in each district/county to manage ECUs/CCCs will also facilitate the acceptance of the ECU concept and operational process by the community. Implementation arrangements for hazard pay and death benefits have been established through the implementation of the original grant.

Financial Management

54. A Financial Management (FM) assessment was conducted on the FM arrangements for the Ebola Emergency Response Project which now will be used for the Additional Financing. Implementing entities for the project will be:

- **Sierra Leone**: National Ebola Response Center (NERC) formerly known as Emergency Operation Center (EOC) does not have a Fiduciary Agent at the moment to manage its funds hence there is need to urgently recruit one but in the meantime, the Integrated Project

Administration Unit (IPAU) is being engaged to manage the accountability of the EERP's funds. The Fiduciary Agent is being appointed in November 2014, and the IPAU will then supervise and support its fiduciary and procurement activities.

- **Guinea**: The Project Implementation Unit (PIU) at the Ministry of Health (MoH) has acquired a seconded accountant from the Village Community Support Program Project. The PIU requires its capacity to be strengthened by appointing a qualified accountant within the MoH to support the project and by recruiting a qualified and experienced Financial Management Officer as well as internal auditor for the project. In addition, the PIU needs to acquire and set-up an adequate computerized accounting system. These requirements have been included as dated covenants in the original project.

- **Liberia**: The Ministry of Health and Social Welfare (MOHSW) that has an Ebola Fund Management Task Force (EFMTF) and Incidence Management System (IMS), which is headed by an Assistant Minister. The IMS will coordinate the operations of the project while operational and procurement procedures will be managed by the Health System Strengthening Project (HSSP) Coordination Office, and FM will be managed by the Project Financial Management Unit (PFMU) that is already established under the Ministry of Finance.

- **UN Agencies**: WHO, UNICEF, WFP, UNOPS and UNFPA are expected to implement the project in the three countries. These UN agencies are expected to account for the funds using their institutional accounting rules and regulations. They are expected to provide, on a quarterly basis, their Fund Utilization Reports that show funds received and related expenditures alongside progress reports to the Bank and the governments of Guinea, Liberia and Sierra Leone. With regard to the external audit of UN Agencies, the Bank will pursue audit elimination in accordance with Bank Policy and Procedures as the Bank receives the UN Agency audit reports and they are also available on the UN organization's website.

- **NGOs and sub-grants**: NGOs will be used by some of the implementing countries under Component 1, e.g. in Liberia while sub-grants will be provided to implementing entities under component 4. Should this be the case, it will be essential that the NGO or sub-grant institution selected have adequate FM arrangements in place that include having a manual of accounting policies and procedures to be used by the project and an accountant to prepare budgets, accounts and financial reports. These reports will be sent to the country's implementing entity within 30 days after the end of the quarterly period to enable the implementing entities to consolidate the interim financial reports and submit them to the Bank within 45 days after the end of the quarterly period. Other desirable FM arrangements that the NGO or sub-grant institution should have are a computerized accounting system and internal auditor. However, the government's internal and external auditors should also be allowed access to audit the NGO or sub-grant institution with respect to the project.

55. The FM arrangements[7] that will be used for the Additional Financing will remain the same as that of the EERP. However, all three countries still have to finalize the Project

[7] FM arrangements include budgeting, accounting, internal control and internal audit, funds flow , financial reporting and external audit arrangements.

Implementation Manual that includes FM provisions, in accordance with the Financing Agreements. The role of internal audit in auditing the project especially hazard/indemnity pay and death benefits under Component 2 as well as Ebola community-based care and essential health services under Component 1, will be very essential. Project resources will be provided to support the internal audit function. Internal Auditors in all the three countries will have to conduct quarterly internal audits based on a risk based approach and submit their reports to the Bank within 45 days after the end of the quarter although where necessary, there will be cases that require special audits to be done. Given that the project duration is about a year, a single audit for the project is proposed, in accordance with the FM processing instructions of OP/BP 10.00.

56. Governance and anti-corruption mechanisms are encouraged to be put in place and they include having a complaint handling mechanisms and having a proper communication strategy to inform the public through the media on all aspects of the project in order to manage expectations thus enhancing transparency and accountability. In addition, the publication of budgets, financial reports and audited financial statements on the implementing entities websites is highly encouraged. However, it is important to note that according to the World Bank Policy on Access to Information, the Bank will make publicly available the borrowers' audited annual financial statements.

57. With regard to disbursements, a report based method of disbursements will be used to make advances to the Governments of Sierra Leone, Guinea and Liberia. Others mechanisms that can be used include direct payments, reimbursements and special commitments. Disbursements to all UN agencies will be made using advances to an official UN organization account upon signing the contracts with the Governments and approval of the disbursement by the national implementing entity.

58. The conclusion of the assessment is that the financial management arrangements in place meet IDA's minimum requirements under OP/BP10.00, and therefore are adequate to provide, with reasonable assurance, accurate and timely information on the status of the Project required by IDA. The overall Financial Management residual risk rating of the Project is "Substantial" for Guinea and Liberia and high for Sierra Leone.

Disbursement Arrangements

59. The Disbursement Arrangements that will be used for the Additional Financing will remain the same as that of the original project.

60. **For all UN Advances under Components 1,2,3 4, and 5,** a UN Advance account with commitment will be established to facilitate disbursements that are consistent with the Un Agency cash flow requirements. The Ceiling of the UN Advance Account will be the equivalent of 100 percent of the contract amount.

61. For all others expenditures under the project components, Advances will be provided to the Designated Accounts, based on a forecast of expenditures against components and

Disbursement Categories for the twelve months. The forecast will be based on the Annual Work Plan (Investment plan) that will be provided to IDA and cleared by the task team leader prior to implementation

62. The following table specifies the categories of Eligible Expenditures that may be financed out of the proceeds of the Financing ("Category"), the allocations of the amounts of the Financing to each Category, and the percentage of expenditures to be financed for Eligible Expenditures in each Category:

Category	**Amount of the Grant Allocated (expressed in USD)** **Guinea**	**Amount of the Grant Allocated (expressed in USD)** **Liberia**	**Amount of the Grant Allocated (expressed in USD)** **Sierra Leone**	**Percentage of Expenditures to be Financed (inclusive of Taxes)**
(1) Goods, works, non-consulting services, consultants' services, Training and Operating Costs for Components 1,2,3 and 5 of the Project excluding Compensation Benefit under Component 2	60	98	78	100%
(2) Compensation Benefits under Component 2 of the Project	7	7	10	100%
Component 4 of the Project	5	10	10	100%
TOTAL AMOUNT	72	115	98	

Procurement Analysis

63. Procurement under the proposed AFs will be carried out in accordance with the 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 ("Procurement Guidelines") and the 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 ("Consultant Guidelines").

64. There are no major changes anticipated in the institutional arrangements on the Government side of the three project countries for the implementation of the activities under the proposed Additional Financing. The procurement risk rating remains as "High".

65. Given the continued emergency nature of the operation, the flexibilities and simplifications applicable for FCS operational environment as well as provided in OP 10.00 for rapid response to crises and emergencies will continue to be applied to the operations under the AFs. The detailed procurement arrangements, including the applicable procurement methods and prior review thresholds will remain the same as for the initial project. However, in addition to the various UN agencies, the Governments could hire NGOs, universities, and research institutions on sole-source basis whenever justifiable for their unique roles and the emergency nature of the activities.

Environmental Analysis

66. The environmental categorization for the Project remains unchanged for the Additional Financing. The project has been assigned an environment category B given the anticipated environmental and social risks and impacts resulting from the proposed interventions which are minor and can be easily localized. Measures to mitigate the impacts are already standard practice among the non-public sector service providers. The four components proposed under the emergency project are not expected to have significant environmental footprints.

67. The Project triggered the Environmental Assessment Policy (OP4.01) due to potential environmental health impacts and risks associated with the emergency assistance works to help combat the EVD within the three hardest hit countries within the West African region. A draft ESSAF (Environment and Social Screening and Assessment Framework) has been designed following board approval to help screen potential environmental/social impacts and risk from subproject works and provide appropriate mitigation measures. The draft ESSAF is currently undergoing consultation with key stakeholders and public disclosure prior to submission to Bank and for Infoshop disclosure.

68. As this Additional Financing is an immediate follow up to the approval of the original project, and the safeguard instruments and arrangements are still under development, it is not possible to comment on the performance of the existing safeguard arrangements since project implementation. A safeguard specialist is working closely with the governments to set up a robust arrangements,

69. The capacity assessment for the implementation of the proposed safeguard arrangements within the three affected countries is summarized as follows:

Sierra Leone

- At the National level, National Ebola Response Center (NERC) has been formed. The NERC will make project-related decisions (e.g., investment plan for Component 1) and provide oversight of the Project progress. The MoHS will lead the implementation of Component 1 with technical support from WHO. The MoHS will also contract out part of the work to technical agencies (e.g., WHO, UNICEF, UNFPA) to ensure the rapid delivery of services.

- The MoHS has been engaged in various Bank investments projects and as such, it has Project coordinating units which are very familiar with Bank Safeguard policies and procedures. The responsibility for screening the intervention actions and implementation of any designed mitigation is with the MoHS and NERC. Additionally, the Sierra Leone Environmental Protection Agency has national environmental legislative requirements and screening procedures which are consistent with those of the E&S policy requirements of the Bank. Additionally the National Commission for Social Action (NaCSA) which will play a key role in the implementation of Component 2 of this project has experience in Bank Safeguard requirements given their experience in managing ongoing Bank Social Protection investments in the country.

- **Healthcare Waste Management Plan (HWMP):** A comprehensive national medical waste management plan was developed as part of the Sierra Leone HIV/AIDS Response (SHARP) and Health Sector Reconstruction and Development (HSRDP) projects in 2002 with the MoHS as the implementing ministry. This HWMP will be updated to reflect the current WHO protocols for handling medical waste from the treatment of the EVD. The updated HWMP will be publicly disclosed both in-country with an accompanying information campaign and also on World Bank Infoshop to comply with Bank consultation and disclosure policies. The MoHS is taking lead role to update the HWMP in coordination with the NERC.

Liberia

- Several taskforce units have been set up at the National level to help coordinate the Ebola emergency response Plan. However, at the project level, the National Technical Team (NTT) will make project-related decisions (e.g., investment plan for Component 1) and provide oversight of the project progress. The Ministry of Health and Social Welfare (MoHSW) will lead the implementation of Components 1 and 2 and contract out part of the work to technical agencies. The MoHSW has experience in Bank E&S requirements and due diligence procedures through years of overseeing many bank financed projects in the country. The responsibility for screening of the intervention actions and implementation of any designed mitigation is with the MoHSW and NTT. Additionally, the Liberia Environmental Protection Agency has environmental legislative requirements and screening procedures which are consistent with those of the E&S policy requirements of the Bank.

- **HWMP:** A comprehensive national medical waste management plan is being developed/revised under the restructured Health Systems Strengthening project (HSSP - P128909). The update of the HWMP shall reflect the current WHO protocols for handling medical waste from the treatment of the EVD. The updated HWMP shall be disclosed

publicly in-country with an accompanying information campaign and World Bank Infoshop to comply with Bank consultation and disclosure policy. The MoHSW is taking lead role to update the HWMP in coordination with the NTT.

Guinea

- The Inter-ministerial Committee headed by the Minister of Health was established on April 5, 2014 to oversee the implementation of the Emergency Ebola Action Plan. However, at the project level, the National Health Crisis Committee will make Project decisions (e.g., on the investment plans for Component 1) and provide oversight of the Project progress. Implementation of Component 1 will be led by the Ministry of Health (MoH) and part of the work will be contracted to relevant technical agencies (e.g., WHO, UNICEF). The MoH has experience in Bank E&S requirements and due diligence procedures through years of overseeing many bank financed projects in the country. The responsibility for screening of the intervention actions and implementation of any designed mitigation is with the MoH and National Health Crisis Committee. Additionally, the Guinea Environmental Protection Agency has environmental legislative requirements and screening procedures which are consistent with those of the E&S policy requirements of the Bank.

- **HWMP:** A comprehensive national medical waste management plan exists but will need to be updated to reflect the current WHO protocols for handling medical waste from the treatment of the EVD. The updated HWMP must be publicly disclosed both in-country with an accompanying information campaign and also on World Bank Infoshop to comply with Bank consultation and disclosure policies. The MoH will take lead role in updat the HWMP in coordination with the National Health Crisis Committee.

Social Analysis

70. As these AFs are immediate follow ups to the approval of the original project, social assessment for the AFs is unchanged from the original EERP.

71. As evidenced in an initial socioeconomic assessment of the impact of Ebola on Sierra Leone prepared by the Government and international partners, the epidemic has already had a number of significant social impacts. Similar negative impacts have been observed in Guinea and Liberia. These include:

- **High mortality of health sector workers:** To date, at least 522 health workers had been infected with 247 deaths. This has further worsened the already low doctor to patient ratio.
- **Overwhelmed existing health infrastructure:** The country was not prepared for a medical crisis of this magnitude given the low bed capacity, and inadequate health-related equipment and logistics.
- **Reversal of gains made in the health sector:** Prior to EVD, the government had been implementing the Free Health Care (FHC) initiative as well as other curative and preventive treatment programs. Remarkable progress had been made in child and maternal health care indicators. With the onset of EVD, non-EVD health care services are not being delivered as

the existing hospitals are occupied with Ebola cases and private hospitals are closed. Moreover, people are also scared of going to seek medical attention for fear of contracting the disease, as well as being tagged as "Ebola suspect". Additionally, resources meant for various programs in the Ministry of Health and Sanitation have been diverted to the containment of the EVD scourge. This is reversing the gains made in addressing child mortality (MDG 4), maternal mortality (MDG5), and HIV/AIDS Malaria and other diseases (MDG6).

- **Reversal of gains made in education sector**: Reopening of schools has been suspended indefinitely. This has many effects including teachers paid for no services rendered; the likelihood of drop-outs among students, which in turn is likely to increase teenage pregnancies. This will make it difficult to achieve the MDG 2.
- **Diversion of efforts aimed at improving water and sanitation services**: Reduced implementation of water projects in local councils as both skilled local and expatriate staff abandoned EVD affected areas; this increases possibility of water-borne infections.
- **Reduced social cohesion**: Ebola survivors, burial teams, orphans and HCWs in general have been stigmatized and hence some of them have been rejected by their families and friends. Ebola survivors are not able to engage in their daily livelihoods due to stigma.
- **Gender and women's empowerment:** Women are the primary care-givers in the family and in fulfillment of their matrimonial obligations they get infected through spouse, children, close family members and friends. The economy that has been hit most (trade, agriculture and tourism) is dominated by women. Hence, they deserve a special attention and care.
- **Children are adversely affected:** Many children are being infected and have died or have been orphaned with associated stigma and psychosocial problems.
- **Denial, panic and fear among the community members as well health workers and stigma to patients cured.**

72. The AFs will neither involve displacement of population (except on a limited and temporary basis in cases of quarantine and Ebola treatment centers), nor require land acquisition. In addition, in terms of community health and safety, the expected impacts of the proposed project will result in positive effects. There are no Indigenous Peoples present in any of the project areas and adverse impacts in terms of cultural heritage are not expected.

73. It is necessary to promote sustainable Ebola health service provision in villages and poor urban areas where local people live and where health posts are understaffed. Also, sensitization and information programs and assistance in referral to modern health systems to inform local people, particularly women, have been introduced alongside implementation of the essential health care package. These activities will continue to be supported under the AFs by funding scaled up community engagement and behavioral changes involving community leaders and religious figures, as well as social mobilization for the identification of infected people and contact tracing.

Annex 1-1: Revised Results Framework and Monitoring Indicators

Guinea, Liberia, Sierra Leone**: Ebola Emergency Response Project (P152359)**

Revisions to the Results Framework		**Comments/ Rationale for Change End of project target (number)**
PDO		
Current	*Proposed*	
To contribute in the short-term to the control of the Ebola Virus Disease (EVD) outbreak and the availability of selected essential health services, and mitigate the socio-economic impact of EVD in Guinea, Liberia, and Sierra Leone.	*No change*	
PDO indicators		
Current	*Proposed change**	
1. Availability (at any given time) of at least two weeks needs of PPEs and other required IPC supplies in the Ebola treatment centers (ETCs) and referral centers	*No change*	
2. Number of health workers who received financial incentives (hazard/indemnity pay and death benefits) to provide medical care to EVD patients and for other essential health needs	*Increased target* (See Annex 1-2 for details)	Increased funds for hazard pay.
3. Number of people in the quarantined areas and other Ebola-affected households who received food and other basic supplies	*Increased target* (See Annex 1-2 for details)	
	4. Ebola care units (ECUs) established and fully operational.	One of the focuses of additional financing - No stock outs of essential supplies is essential and attainable target.
5. Project beneficiaries	*No change*	

Revisions to the Results Framework		**Comments/ Rationale for Change**
Intermediate Results indicators		
Current	*Proposed change**	
6. Number of expatriate health workers who receive salary payments to provide medical care to EVD patients and for other essential health needs.	*Increased target* (See Annex 1-2 for details)	US$100 million will be additionally made available to accelerate the deployment of foreign medical teams.
7. Total food distribution (metric ton).	*Increased target* (See Annex 1-2 for details)	
8. Presence (%) of information, communication and education programs per district to raise public awareness and change behaviors to prevent the further spread of EVD.	”Community health and social mobilization staff deployed for door-to-door communication and case identification in target chiefdoms/sub-districts/counties”.	Original indicator definition was not clear. Social mobilization is a critical intervention to ensure that the Ebola continuum of detection, treatment and care and control is effective.

*** Indicate if the indicator is Dropped, Continued, New, Revised, or if there is a change in the end of project target value**

Annex 1-2: Revised Project Results Framework
Africa: Ebola Emergency Response Project (P152359)

Project Development Objective (PDO): The Project aims to contribute in the short term to the control of the Ebola Virus Disease (EVD) outbreak and the availability of selected essential health services, and mitigate the socio-economic impact of EVD in Guinea, Liberia, and Sierra Leone.									
PDO Level Results Indicators*	**Core**	**Unit of Measure**	**Baseline**	**Target Values**		**Frequency**	**Data Source/ Methodology**	**Responsi-bility for Data Collection**	**Description (indicator definition etc.)**
				Yr 1					
Indicator one: Availability (at any given time) of at least two weeks needs of PPEs and other required IPC supplies in the Ebola treatment centers (ETCs) and referral centers		%	Guinea: 0% Liberia: 0% Sierra Leone: 0%	Guinea: 80% Liberia: 80% Sierra Leone: 80%		6 month (from AF launch)	WHO logistic report Independent audit	WHO Independent audit agency	
Indicator two: Number of health workers who received financial incentives (hazard/indemnity pay and death benefits) to provide medical care to EVD patients and for other essential health needs		Number	Guinea: 0 Liberia: 0 Sierra Leone: 0	(Updated) Guinea: 5,000 Liberia: 8,000 Sierra Leone: 5,000 (Original – Guinea: 2,300 Liberia: 7,500 Sierra Leone: 1,460		6 month (from AF launch)	Report from the independent agency responsible for hazard/ indemnity pay and death benefit	Ebola coordi-nation units/MOH	
Indicator three: Number of people in		Number	0	(Updated) Guinea: 175,000		6 month (from AF	WFP progress report	WFP/ MOH	

the quarantined areas and other Ebola-affected households who received food and other basic supplies				Liberia: 169,000 Sierra Leone: 200,000 (Original - Guinea: 140,000 Liberia: 135,000 Sierra Leone: 120,000)		launch)			
Indicator four: (New) Ebola care units (ECUs/CCCs) established and fully operational.		Number	Guinea: 0 Liberia: 0 Sierra Leone: 0	(New) Guinea: 42 Liberia: 53 Sierra Leone: 4		6 month (from AF launch)	Ebola coordi-nation unit report	Ebola coordi-nation units/MOH	"Fully Operational" includes the no stockouts of essential supplies and equipment, and no gaps in staffing
Indicator five: Project beneficiaries	Core	%	0						
INTERMEDIATE RESULTS									
Indicator six: Number of expatriate health workers who receive salary payments to provide medical care to EVD patients and for other essential health needs		Number	0	(Updated) Guinea: 180 Liberia: 420 Sierra Leone: 125 (Original – Guinea: 7, Liberia: 6, Sierra Leone: 7)		6 month (from AF launch)	Ebola coordi-nation unit report/ WHO	Ebola coordi-nation units/MOH	

Indicator seven: Total food distribution		Metric ton	0	(Updated) Guinea: 8,100 Liberia: 8,100 Sierra Leone: 6,700 (Original – Guinea: 6,500, Liberia: 6,500, Sierra Leone: 4,000)		6 month (from AF launch)	WFP progress report	WFP/ MOH	
Indicator eight: (New) Community health and social mobilization staff deployed for door-to-door communication and case identification in target chiefdoms/sub-districts/counties		Unit	Guinea: 0 Liberia: 0 Sierra Leone: 0	(New) Guinea:3,800 Liberia: 2,000 Sierra Leone: 2,000		6 month (from AF launch)	Ebola coordi-nation unit report	UNICEF/ Ebola coordi-nation units/ MOH	

Annex 2. SORT Table

Risk Categories	Rating (H, S, M or L)
1. Political and governance	High
2. Macroeconomic	High
3. Sector Strategies and policies	Substantial
4. Technical design of project	Substantial
5. Institutional capacity for implementation and sustainability	High
6. Fiduciary	High
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other: Beneficiaries	High
Overall	**High**

Annex 3: Detailed Descriptions of Additional Financing Activities

Component 1: Support to the EVD Outbreak Response Plans and Strengthening Essential Health Services

a. Support to scaling up Ebola community-based care and essential health services

1. This proposed additional sub-component will support the delivery of an Ebola basic care package, including triage for suspected cases, isolation, case confirmation, and basic care and support to Ebola patients at ECUs/CCCs as part of the Ebola care continuum (See Annex 4-2 for detailed services administered in ECUs/CCC and relationship with ETCs). It will also support establishment and operation of ETCs as needed, and reactivation of essential health services at health facilities for non-Ebola conditions to support an integrated system.

2. ECUs/CCCs have variations from full-treatment model to basic care model, which are very different in services, staffing and running cost (Table 4). There are further variations in between and within the two models – e.g., some basic care models allow family members to care patients while others do not allow it. The choice of the type of ECUs/CCCs will be made by each country based on their different contexts (See Annex 4 for details), and the AFs will finance both types as needed. For example, for the areas without easy access to ETUs, the full treatment model may be relevant if skilled health workers are available. Liberia plans to establish 200 CCCs and carried out micro-planning for 32 CCCs in Montserrado and Margibi counties. Sierra Leone plans to have 1 ECU per chiefdom plus 20 ECUs in Western Area (total 169 ECUs). Guinea plans to establish 100 transit centers and 100 community transit centers. The proposed AF funding would finance Government's plans, in coordination with other partners, to establish these ECUs/CCCs, and to further scale up ECU/CCC coverage to serve more remote at risk populations, if the model works effectively.

3. The Ebola basic care package also includes safe burials. Management of dead bodies and burials will be performed by a team trained in infection prevention and control measures and with the agreement and support from the affected communities. The teams will require all the necessary material such as PPE, body bags, disinfectant and transportation. Incineration of cadavers on the basis of agreement reached with affected communities and bio-medical waste will also be included as part of the basic package.

4. The AFs will finance a comprehensive package to establish and operate the ECUs/CCCs. This includes but is not limited to the following:

- **Set up cost**: Purchase of tents and/or construction, upgrading, expansion and maintenance of physical facilities for patients such as health posts and centers, secondary-level hospitals, birth centers and community health clinics located in affected areas; staff housing as needed. It will also be critical to secure electricity and water.
- **Basic supplies**: Beds, mattresses with disposable plastic covers, linen, mosquito nets (where needed), utensils, buckets, body bags.

- **IPC equipment**: PPE, including hoods, gloves, face shields, masks, gowns, boots, aprons; hand hygiene supplies, including, soap and clean water, alcohol based hand sanitizer, chlorinated water.
- **IPC training and operational costs**: Adaptation and implementation of IPC measures in ECUs/CCCs and the development of safety surveillance systems in each of the affected countries using mobile phone technology and leveraging existing platforms.
- **Environmental cleaning and management of linen**: Heavy duty/rubber gloves, detergent, chlorine, cleaning tools, rags and paper towels.
- **Basic Medical Supplies**: Infrared thermometer, Oral Rehydration Solution, paracetamol, antimalarials (where applicable), broad spectrum antibiotics (where applicable), as well as disposable clothes for patients.
- **Water, sanitation and management of hazard waste:** Infrastructure (e.g., for water supply, latrines, incinerators), supplies and training of personnel, etc.
- **Electricity**: Power generators, fuel and other necessary supplies.
- **Safe burial supplies and training**: Body bags and bags for waste disposal, and incineration facility as appropriate, as well as training for safe burial teams.
- **Personnel**: Salary, hazard pay and other benefits as appropriate.
- **Ambulances and vehicles:** To transport patients to the ECUs/CCCs and ETUs, and to facilitate lab testing and reporting, safe burials, and supportive supervision.
- **Training:** For ECU personnel on IPC and appropriate triage, isolation and care, waste management, etc.
- **Management and supervision:** Personnel and other operating cost to manage and supervise the ECUs/CCCs.
- **Food/Nutrition/WASH:** Provision of food, water, and nutrition supplements for admitted cases.
- **Communication equipment**, including mobile phones for SMS reporting and distance advice if direct supervision cannot be done regularly.

5. **The development, management and daily operations of the ECUs/CCCs could be contracted out to NGOs, UN agencies or other institutions by the Government as available and appropriate.** For example, Liberia plans to contract to NGOs rooted in each county to train, administer and supervise ECUs/CCCs in each county. The same arrangements and/or use of UN agency will be used for Guinea and Sierra Leone. Bulk procurement and distribution of necessary inputs to run ECUs/CCCs (equipment, supplies and vehicles) listed above will be procured by UN agencies.

b. Community engagement and community-based responses

6. The proposed sub-component aims to support the community to play leading roles in EVD outbreak responses and disseminate knowledge to modify behaviors, including safe management of dead bodies and burials to reduce transmission, at the community level. Whilst the specific model of support will vary by country and community depending on context, the overall concepts of support include:

- **Engaging community and religious leaders**, local NGOs and the local media to drive local communication and behavior change strategies on Ebola and develop support structures,

protocols and strategies for envisioned community level mobilization at the local political level,

- **Mobilizing locally defined and supervised community health teams** to: a) carry out sensitization activities at the household level, including education on prevention, but also provide basic medical supply kits combined and supported with a system to collect waste, and identifying need for referral; and b) engage in case identification, contact tracing, basic surveillance, and community safe burials.
- **Establishing a community-based monitoring system** at district level including to track-and-adjust the effectiveness of local communication and behavior change campaigns as well as uptake of preventive care seeking behaviors.

The following section provides more details on each of these aspects, with additional detail including some of the inputs funded under the sub-component summarized in Annex 4.

7. **Engagement of community and religious leaders** and other social actors includes enhancing knowledge and agreement at the local political level on EVD and response; working with local leaders to develop protocols for community participation and selection of community health teams; and support to their communication and community mobilization activities, including safe and dignified methods for infection prevention (e.g., protective methods, infection control, sanitation, waste management, burial, case detection and referral).

8. Financing under this activity will include support towards, but is not limited to: a) carrying out rapid assessments in local environments to inform local knowledge and strategies; b) developing protocols for community engagement and targeted communication strategies; c) payment to hire facilitators (MOH, NGOs) including relevant salaries, incentives, transportation costs and benefits; d) costs for facilitators to convene and train local leaders (including provision of health and life insurance); and e) costs to cover media materials and activities, including airtime on local radio/television or local theatrical productions.

9. **Mobilizing locally defined and supervised community health teams** (e.g., religious groups, teachers, Ebola survivors, women groups, village committee, etc.) will play critical roles in household sensitization efforts, including prevention, early case detection and basic surveillance. Community teams will carry out house-to-house prevention education including "no touch" practices and isolation of patients within the household, provide home kits (e.g., bed nets, ORS, hygiene kits) to households, and identify and refer symptomatic household members to ECUs/CCCs (case identification and referral). The teams should also be able to identify all who may have been exposed to a person with Ebola, and check for signs of illness for up to 21 days after exposure (contact tracing and referral of suspect cases to ECUs/CCCs). The teams will be locally selected and headed by a trained senior community health worker with support from local leaders and supervision from ECUs/CCCs or health facilities.

10. Financing under this activity will include support towards, but is not limited to: a) training of community health teams, CHWs supervisors and their supervisors; b) salaries and hardship incentives and appropriate health insurance for health teams, CHW supervisors, and their supervisors; c) protective gear for these outreach teams as deemed important locally (and sensitization of communities around such gear); d) transportation for outreach teams (motorbikes,

bikes); e) home kits to households, drugs and other essential supplies (e.g., bed nets, ORS/Zinc, hygiene kits) to community members; and f) mobile phones and supportive technology for teams and supervisors.

11. **Establishing a community-based monitoring system** aims to support ongoing efforts at the district level to track the effectiveness of local communication and behavior change campaigns as well as the uptake of preventive care seeking behaviors, and quickly identify and address fears and rumors on Ebola as they arise. The district level monitoring system will be closely linked to the contact tracing and surveillance activities carried out by community health teams (supervised by the CHW), as well as the local stakeholders and leaders engaged in communications campaigns. Support will be provided towards the deployment of rapid qualitative assessment teams to conduct KAP studies as needed, the use of relevant micro-plans and SMS platforms (u-Report type, or the Laboratory Information Management System: LMIS, described in the lab section below) for monitoring, and other community-based monitoring efforts.

12. Financing under this activity will include support towards, but is not limited to: a) training of local social and behavioral data monitoring research teams and supervisors; b) funding research teams and activities (including salaries, health and life insurance for these researchers, as well as transportation costs and protective gear); c) fund SMS platform coordination centers and research tools; and d) reach agreement with mobile operators.

13. The proposed AFs will finance the scale-up of the comprehensive activities in all Ebola affected districts (currently 47 districts) in three countries (See Annex 4 for the current list). Partners mapping for the community engagement in three countries conducted by UNICEF suggested that there are around 10-30 local and international NGOs and institutions who support each of these affected districts in Liberia and Sierra Leone (although scale of activities by such NGOs/institutions is unknown and will need to be further explored). The activities will be coordinated with them to avoid duplications.

14. It is expected that the implementation of this sub-component will be managed by the Governments with contracts to local and international NGOs in each district, or by UNICEF managing the sub-contracts to local and international NGOs as needed.

c. Support to increase surveillance and laboratory capacity

15. This proposed additional sub-component aims to help reduce the lag time from the onset of the symptoms and communication of laboratory results for proper isolation, referral and care to reduce the risk of infections. To this end, support will be provided to strengthen surveillance capacity and decentralize testing using mobile field teams that can rotate for up to 6 months. In addition, support will be provided to districts/counties with access to testing by improving transport logistics. Since many of the affected communities are in remote locations with bad road infrastructure, targeting this effort will increase the turnaround time for testing and reporting results.

16. Activities will be tailored to each country's needs. Potential activities include but are not limited to: (i) strengthening of surveillance team and community surveillance; (ii) mobile laboratory installment in "hot spot" areas with a full plan to staff them; (iii) training (including necessary equipment) and staffing of skilled laboratory technicians as trainers and laboratory staff to meet the minimum biosafety level for Ebola testing (mobile field teams could be engaged to provide support to the national training program); (iv) support to enable rapid sample collection including logistics (e.g., motorcycles, cold boxes); (v) Laboratory Information Management System (LMIS) that integrates data on case identification and contact tracing and links laboratory data to individual case data (e.g., through use of SMS).

17. Implementation of this sub-component will be through the Governments with possible contracting to appropriate agencies (e.g., WHO, universities, research institutes) who can manage surveillance team and Ebola laboratories, and UN agencies for appropriate support functions (e.g., construction, training by WHO, logistics and laboratory supply by UNICEF). This will be managed in close collaboration with the partners who are supporting existing laboratories in the affected countries.

d. Increase of storage and distribution capacity

18. This proposed additional sub-component will contribute to finance the scale-up of in-country storage and distribution capacity. Activities include the following:

- Development of **main Logistics Hubs** in Conakry, Monrovia and Freetown to consolidate the incoming cargo for reception, temporary storage, dispatch and transshipment of international shipments arriving by sea and/or air.
- Development of **forward Logistics Bases**: three or more of these Bases will be established in each country to give sufficient coverage to the affected areas. These bases will be the most crucial response node and will be set up to ensure immediate response to call-forwards of ETCs, ECUs/CCCs and all essential supporting operational equipment. Retail deliveries to the final delivery points will be from the Forward Logistics Bases, to the extent possible.
- **Supply chain**: A push supply chain from the main Logistics Hubs to the Forward Logistics Bases, and a pull system (demand-based supply) from the Forward Logistics Bases to the ETCs/ECUs/CCCs, including the commercially contracted transport and a dedicated fleet for road transport from the Forward Logistics Bases to the final delivery points.

19. This sub-component will be contracted by the Governments to WFP or other appropriate UN agencies as a part of UNMEER's coordinated initiative.

e. Monitoring and Evaluation (M&E) of the Outbreak Response

20. The AFs will provide support for the countries to monitor and evaluate the response implemented by the government, development partners and other stakeholders. This can include but is not limited to the following:

- Management consultancy or other management team (staffing and operational cost) to support the central and district coordination units (e.g., Coordination team in Guinea, IMS in Liberia, NERC in Sierra Leone) to monitor real-time progress, analyze data and problem-solve bottlenecks on daily basis;

- Mapping and real-time tracking and assessment of responses by different stakeholders, including amount of funds, activities, beneficiaries, progress, performance (e.g., coverage, quality, safety), etc. – consultancy/staffing, information system, and other operational cost;
- Integrated information system to track cases from case identification, surveillance and laboratory testing, contact tracing, treatment care and consequences (linked with LMIS described above) – consultancy/staffing, information system, and other operational cost;
- Training of staff on M&E;
- Impact evaluation of the entire response or specific responses – consultancy/staffing and other operational costs.

Component 2: Human Resources Scale Up for Outbreak Response and Essential Health Services

21. The AFs will supplement the efforts of Governments and other partners to mobilize and sustain sufficient and appropriately trained health workers to coordinate, manage and implement Ebola response interventions both at the level of (new and existing) ETUs, ECUs/CCCs and health facilities providing essential services:

f. Deployment of foreign medical team (FMT) and other foreign staff

22. To help address this urgent human resources bottleneck, AFs will support the establishment and operation of a Global FMT operations platform under the auspices of UNMEER. The primary function of this operational platform is to serve as a command and control managerial hub to help the governments of the affected countries process, deploy, and coordinate the work of high-quality FMTs. The deployment of the FMTs will be coordinated based on needs assessments by the governments of the affected countries and WHO. To provide an end-to-end policy and logistical support to the FMTs, WHO will provide technical assistance, and logistical support will be provided by other specialized agency in accordance with UNMEER's Operational Framework[8] adopted in Accra on October 15-18, 2014.

23. Initially, the goal will be to support the deployment of 20 FMTs, comprised of 700-1,000 additional health workers by December 2014 to help meet the 70-70-60 targets[9] set by UNMEER and WHO. It will also support the deployment of foreign staff for supervision of ECUs/CCCs, operation of laboratories, training of local health workers, and support to health facilities providing essential health services to revitalize and strengthen health systems. The functions of the FMT operations platform will include the following:

- Policy and strategy coordination to guide end-to-end support functions for FMT deployment, i.e., identifying, recruiting, training, deploying, supporting the stays and enabling safe return, and to monitor the deployment process and performance.

[8] The framework aims to guide coordinated UN-system responses to the EVD outbreak.
[9] Get 70 per cent of the cases isolated and treated, and 70 per cent of the deceased safely buried within 60 days (from the beginning of October to 1 December)

- Coordinate the interface, negotiation and contractual agreements between the national governments of the affected countries and the governments of countries and institutions willing to deploy FMTs. The support will include coordination on payment of salaries, hardship payments, health and life insurance, and general welfare of teams.

- Ensure that FMTs meet WHO's classification and minimum standards[10], and (with the technical support of WHO) assess professional qualifications of the FMTs' members (i.e., all members of the FMT must be registered to practice in their home country and have license for the work they are assigned to by the agency), work experience, and the ability to work in a high-risk and culturally sensitive environments. Proficiency in the language of host countries will also be certified (e.g., French in Guinea, and English in Liberia and Sierra Leone).

- Logistical and financial support in coordination with governments of affected countries, including: (i) FMTs' travel from home country to host country; (ii) logistics arrangements, including accommodation, food and water logistics for the team; (iii) within country communication and transportation (e.g., allocation of designed vehicles, fuel, insurance, maintenance); (iv) medical and mental support of the FMTs during the assignment; (v) security plan, evacuation and medical repatriation arrangements; (vi) requisite support for the FMTs as they conclude their shifts and return to home country; and (vii) orderly rotation of FMT staff.

- Coordinate pre-deployment training of FMTs by the WHO and other agencies on Infection Prevention and Control measures, and on Ebola clinical standards and protocols.

- Coordinate the assignment of FMTs to ETCs and other facilities (e.g., group of ECUs/CCCs, labs, training centers) in need of FMTs with arrangements for the provision of medical equipment, diagnostics, drugs, and other necessary supplies.

- Management of a database/information system to match the supply of different cadres of qualified medical professionals and demand of affected countries.

24. In implementing the FMTs support, the governments of the three countries will sign the contract with the responsible UN agencies under UNMEER's coordination.

g. Hazard pay and death benefit

25. The AFs can also be used to supplement the cost for hazard pay and death benefit to address the HR surge needs in each country, as an addition to the financing through the original project funds. The same implementation and financing arrangement as the original project will be used for three countries.

[10] Classification and minimum standards for the FMTs in sudden onset of disasters: http://www.who.int/hac/global_health_cluster/fmt_guidelines_september2013.pdf?ua=1

h. Training

26. Under the AFs, funding would be made available to support the scaling up of training for health care workers, e.g., building on the successful WHO CARD IMAI (Integrated Management of Adolescent and Illness) collaboration. The IMAI tools support task shifting from specialized physicians to general doctors or medical officers, from these generalists to nurses, from nurses to lay counsellors, and from the clinical team to patients and the community (for details see Annex 4). This will be implemented by WHO and other relevant agencies based on the contract between the government and such agencies.

Component 3: Provision of Food and Basic Supplies to Quarantined Populations and EVD Affected Households

i. Further food supply to quarantined populations and EVD affected households

27. The AFs allow further food supply to quarantined and EVD affected households. The AFs will use the same arrangement as the original grant – procurement and distribution by WFP based on the contract between the government and WFP, using local NGOs for last-mile delivery.

Component 4: (New) Component 4: Provision of Essential Public Services

j. Provision of Essential Public Services to Affected Populations

28. This proposed new sub-component aims to provide the governments with a flexible fund (sub-grant) to provide public and other support services to Ebola-affected individuals, households and communities. Each government can select the prioritized social issues such as provision of safety nets, orphanage care, support to female-headed households, reopening of schools, seed and fertilizer supply to affected farmers, and develop an investment proposal which will be consistent with project activities and each of the country's Ebola emergency and or economic stabilization and recovery plan (sub-project). The investment proposal will be presented to each of the country's agencies responsible for coordinating the Ebola response for approval. With the plan satisfactory to the Bank, the fund can be released from the designated account of the project to the proposed implementation agency. The investment plan will be assessed based on the following criteria: (i) clearly identified problem; (ii) analysis of problem structure and key issues; (iii) clear definition of beneficiaries and strategies for identifying them; (iv) possible impact and viability of activities; (v) implementation arrangement with clear roles and responsibilities of key stakeholders; (vi) detailed budget; and (vii) results framework and monitoring.

29. The implementing entity can be public, private, non-profit and international agencies and will provide quarterly implementation progress reports to the agency responsible for coordinating Ebola emergency response in each of the three countries. Auditing of the activities under this component will be part of the overall financial management arrangement of the project.

30. The proposal will be assessed through the agreed key stakeholders, e.g., head of government's Ebola coordination unit, Minister or delegated personnel of the Ministry of Finance, Minister or delegated personnel of the Ministries relevant to the proposal, and selected development partner(s) (including the Bank's country office). The assessment result will be cleared by the Bank.

(New) Component 5: Pre-Investment Assessment for Acceleration of Ebola Prevention, Treatment and Preparedness

k. Pre-investment Rapid Assessment of New Ebola Therapies, Diagnostics, and Vaccines, and Establishment of a Regional Network of Institute of Public Health

31. The AFs will finance a 6-10 weeks period rapid assessment to determine criteria and viable options for introducing and scaling up EVD novel therapies, diagnostics and vaccines in the Ebola-affected countries. The assessment will be carried out for selected potential therapies, diagnostics and vaccines currently undergoing clinical assessment under the support of different partners (e.g., US Department of Defense, Gates Foundation, Wellcome Trust, US NIH, other research institutions as described in Annex 5 below). Under the coordination of WHO, a Scientific Advisory Committee of international, regional and national experts will provide guidance on promising options, criteria for assessment, quality review of results, and the required implementation arrangements for the novel therapies and technologies for EVD. This will generate an evidence based review of the needs and gaps in the countries, and an investment plan on how to address these including the financial and human resource needs.

32. For example, whole blood collected from patients in the convalescent phase of EVD infection has shown promising results in a small group of EVD cases and can be generated in-country. Studies on the 1995 outbreak of Ebola in the Democratic Republic of Congo (DRC) indicated that seven out of eight people survived after being given the therapy. In the United States, blood transfusions have been administered with good results in hospitals that are treating infected health care workers who have been repatriated as part of their treatment protocol.

33. Whole blood is a life-saving product for emergency use that together with convalescent blood and plasma might be the only available clinical option in the treatment of Ebola patients at present. People produce antibodies in the blood in an attempt to fight off an Ebola infection, and it is hoped the antibodies used by the immune system to fight Ebola can be transferred from a survivor to a patient to give the immune system a boost. However, large-scale data on the effectiveness of the therapy is lacking. To find out whether this approach works for Ebola, is safe and can be put into practice to reduce the number of deaths in the present outbreak, an international team of scientists has been setting up a study to determine the effectiveness of using the blood of Ebola survivors as a treatment. Ebola survivors, contributing to curb the epidemic by donating blood could reduce fear of the disease and improve their acceptance in the communities. The study will start in Guinea and is led by the Institute of Tropical Medicine in Antwerp, Belgium, in collaboration with the University of Liverpool, London School of Hygiene and Tropical Medicine, University of Oxford, Aix-Marseille University, the French Blood Transfusion Service, Institute Pasteur, and the French National Institute of Health and Medical Research. The consortium also includes the National Blood Transfusion Centre in Conakry,

Guinea, the Institut National de Recherche Biomedicale in Kinshasha (DRC), and the Belgian Red Cross-Flanders. The Wellcome Trust is also working on the project. The European Union has given 2.9m euros to fund the project and WHO is backing it up.

34. However, the availability, quality and access to safe blood and blood products remain a concern. The proposed assessment will identify potential scale, necessary investments for safe collection, screening, and production of blood derived products from convalescent Ebola patients. A similar assessment will be carried out for other promising therapies.

35. Besides helping to assess the needs and gaps for strengthening blood transfusion services in the affected countries and building capacity for the collection and testing of sufficient convalescent blood or plasma from recovered Ebola patients, the undertaking of this proposed assessment and subsequent investments and interventions would be crucial to improve the health system as a whole since the affected countries have very limited capability for blood and plasma collection or viral screening, and lack infrastructure, equipment, and trained personnel. The importance of ensuring adequate, accessible, and safe blood has been well recognized at the global and African regional level through several World Health Assembly resolutions supporting such actions, particularly in low resource countries. Whole blood and labile blood components are now on the WHO's Essential Medicines List emphasizing the crucial role of transfusions in public health for different conditions that range from child delivery in case of hemorrhage, surgeries, to trauma care. Development of sustainable local blood services for an adequate supply of safe blood should be a priority for putting in place an effective and safe health system.

36. The assessment would focus on each country's needs, including: (i) communications regarding the collection and use of convalescent blood products and social mobilization, donor motivation, recruitment and retention; activities including identification and outreach to EVD recovered patients as potential donors for convalescent blood and plasma; (ii) support to enable mobile blood and plasma collection, testing, processing and storage including logistics, and making blood supply, convalescent blood and plasma available in ETU's (e.g., vehicles, equipment, reagents, consumables and other supplies); (iii) training on blood and plasma collection, testing and processing of blood and staffing of skilled staff as trainers; (iv) training of clinicians and nurses on clinical transfusion; v) data and information management for blood safety.

37. Another rapid assessment will also be supported under this component to analyze the potential options for the establishment in the region of a network of institute of public health to lead the research on causes, diagnosis, prevention and cure of infectious diseases including EVD, in collaboration with veterinary and environmental services to operationalize "One Health" approaches in the countries in accordance with the WHO's International Health Regulations.

Annex 4: Revised Implementation Arrangements and Support

Following the original grant, the implementation arrangements for the AFs will be determined through the investment planning process by the governments and development partners. Implementation agencies that can deliver results most efficiently in the fastest way will be selected. The selection of the UN agencies will be in line with the roles and responsibilities defined under the UNMEER framework (See Annex 5).

Component	Proposed additional activities	Implementation Arrangement Options (Not exhaustive)
1. Support to the EVD Outbreak Response Plans and Strengthening Essential Health Services	a. Ebola community-based care and essential health services	• Financing to the government, and contract out to NGOs • Contract with UN agencies (supplies and equipment, potentially part of ECUs/CCCs)
	b. Community engagement and community-based responses	• Contract with UNICEF • Financing to the government, and contract out to NGOs
	c. Surveillance and lab capacity	• Contract with WHO • Financing to the government, and contract out to research agencies or lab group
	d. Storage and distribution capacity	• Contract with WFP
	e. M&E of the response	• Financing to the government, and contract out to consulting firms, etc.
2. Human Resources Scale Up for Outbreak Response and Essential Health Services	f. Human resource arrangements to operate ETUs, ECUs/CCCs and community engagement activities	• Contract with UN Agencies or other agencies (to be confirmed) for foreign medical teams (FMTs) • See a. above for local health workers
	g. Hazard pay and death benefit.	• Financing to the government
	h. Scaling up training	• Financing to the government, and contract out to NGOs • Contract with UN agencies (e.g., WHO)
3. Provision of Food and Basic Supplies to Quarantined Populations and EVD Affected	i. Further food supply to quarantined and EVD affected households	• Contract with WFP

Households		
4. (New) Provision of Essential Public Services	j. Provision of Essential Public Services to Affected Populations	• Financing to the government, and fund transfer to selected implementation agencies.
5. (New) Pre-Investment Assessment for Acceleration of Ebola Prevention, Treatment and Preparedness	k. Pre-investment rapid assessment of new Ebola therapies, diagnostics, and vaccines, and Institute of Public Health	• Contract with WHO

Annex 5: Supplementary Information on the Additional Financing

1. **Implementation Progress of the Original Grant**

Country	Agencies	Progress
Guinea	UN agencies	• 28 vehicles, 8 ambulances, and 57 tons of goods and equipment (total over US$3M, including 600,000 bottles of chlorine, 45,000 boxes of gloves, 50 tents, 70,000 soaps) delivered by UNICEF • Door-to-Door campaigns in 400 villages implemented by UNICEF. • WFP distributed 1,058 Mt of rice and 82.4 Mt of Supercereal+ benefitting over 88,000 people (US$3.6M)
	Government	• Death benefit paid to 9 families of health workers who died of Ebola • Indemnity payment will start to ~2,500 health workers
Liberia	UN agencies	• 100 tons of essential health and hygiene supplies, PPEs (US$1.6M) delivered by UNICEF • 3,000 household hygiene kits have been distributed in communities around SKD stadium, Monrovia. 10,500 kits have been packaged, and 8,680 kits are being distributed to Margibi County • 4 x 5,000-litre water tanks installed in West Point community (serving approximate 7500 people) • WFP delivered 2,430 Mt of food to ~144,600 people partly with WB funds
	Government	• First hazard pay to over 1,000 staff paid for September • Financing to Social Mobilization and contact tracing cleared
Sierra Leone	UN agencies	• 48 tons of materials and essential drugs to ETCs (US$1M), 100 tons of drugs (e.g., antibiotics, intravenous fluids) and PPE (US$1.7M) delivered by UNICEF • 30 ambulances and pickup vehicles (US$~1.5M) delivered by WFP, the rest 40 is in pipeline for delivery • WHO is paying per diem for foreign medical teams through WB funds • WFP delivered food to 265,000 people near Freetown, partly with WB funds
	Government	• Hazard pay has been paid by the government until Sept. Oct payment will be financed by the Bank – list of 3,155 beneficiaries verified. • Procurement plan developed and cleared for fast track implementation.

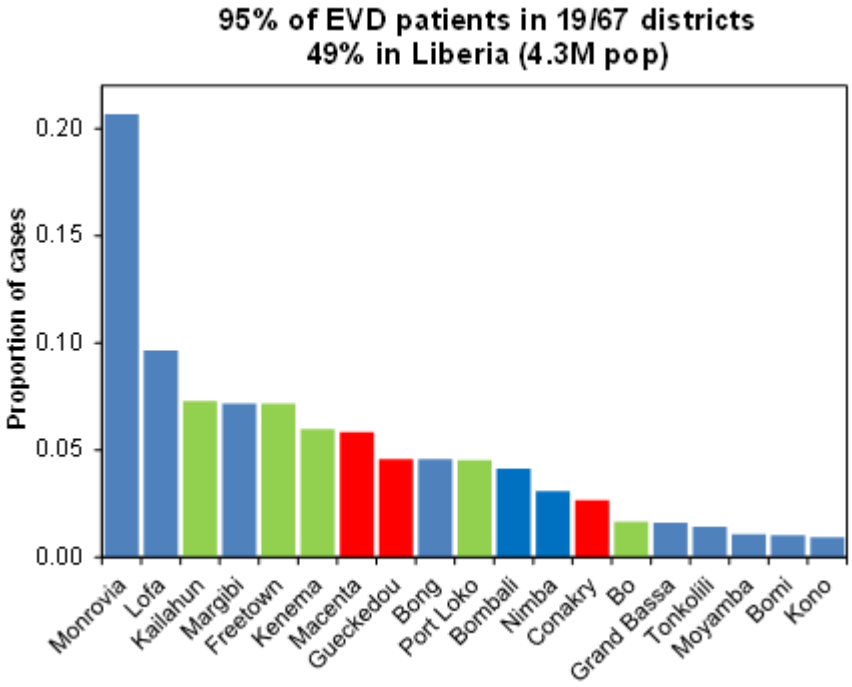
2. **Ebola Virus Disease in West Africa : The First 9 Months of the Epidemic and Forward Projections** (summary of an article by the WHO Ebola Response Team published in the New England Journal of Medicine on September 23, 2014)

On March 23, 2014, the World Health Organization (WHO) was notified of an outbreak of Ebola virus disease (EVD) in Guinea. On August 8, the WHO declared the epidemic to be a "public health emergency of international concern. By September 14, 2014, a total of 4,507 probable and confirmed cases, including 2,296 deaths from EVD (Zaire species) had been reported from five countries in West Africa — Guinea, Liberia, Nigeria, Senegal, and Sierra Leone. By October 9, more than 8,000 cases have been reported in the three most affected countries of Guinea, Liberia and Sierra Leone, with half of those deaths. Of these cases, 95% are concentrated in 19 out of 67 districts in the three countries, and 49% are in Liberia (Figure 4).

According to the WHO assessment of a detailed subset of data on 3,343 confirmed and 667 probable Ebola cases collected in Guinea, Liberia, Nigeria, and Sierra Leone as of September 14, the majority of patients are 15 to 44 years of age (49.9% male), and it is estimated that the case fatality rate is 70.8% (95% confidence interval [CI], 69 to 73) among persons with known clinical outcome of infection. The course of infection, including signs and symptoms, incubation period (11.4 days), and serial interval (15.3 days), is similar to that reported in previous outbreaks of EVD. On the basis of the initial periods of exponential growth, the estimated basic reproduction numbers (*R0*) are 1.71 (95% CI, 1.44 to 2.01) for Guinea, 1.83 (95% CI, 1.72 to 1.94) for Liberia, and 2.02 (95% CI, 1.79 to 2.26) for Sierra Leone. The estimated current reproduction numbers (*R*) are 1.81 (95% CI, 1.60 to 2.03) for Guinea, 1.51 (95% CI, 1.41 to 1.60) for Liberia, and 1.38 (95% CI, 1.27 to 1.51) for Sierra Leone; the corresponding doubling times are 15.7 days (95% CI, 12.9 to 20.3) for Guinea, 23.6 days (95% CI, 20.2 to 28.2) for Liberia, and 30.2 days (95% CI, 23.6 to 42.3) for Sierra Leone. Assuming no change in the control measures for this epidemic, by November 2, 2014, the cumulative reported numbers of confirmed and probable cases are predicted to be 5,740 in Guinea, 9,890 in Liberia, and 5,000 in Sierra Leone, exceeding 20,000 in total.

These data indicate that without drastic improvements in control measures, the numbers of cases of and deaths from EVD are expected to continue increasing from hundreds to thousands per week in the coming months.

Figure 4: Distribution of EVD Cases



Source: WHO

3. **Detailed Description on the ECUs/CCCs Model**

Main principles of ECU

Community and Family Engagement: It is expected that the site and design of an ECU should be decided by the community. Care should be provided by community-approved CHWs following appropriate training on infection prevention and control practices, including medical waste management equipment and procedures, and supervised by specialized health personnel (e.g., nurses). Provision of food for patients would also be provided. Without agreement with the community on the need to isolate sick patients or that there is a greater risk of infection when treating family members at home, the ECU's will not be accepted and effectively utilized. Preparation and agreement with communities on ECUs/CCCs becomes even more important in areas where resistance and aggression is openly being shown towards health workers responding to the outbreak (e.g., in Guinea). With community participation and buy in, ECU's should use local knowledge and practices to deliver Infection, Prevention, and Control (IPC) using culturally-acceptable behaviors.

The appropriate geographical location of the ECU is critical and given that it is likely to be context specific, should be determined through strong engagement with the community and health professionals who are familiar with the area and the health needs. In some cases, it may need to be located close to ETCs, where ETCs have inadequate bed space. In other situations, ECUs/CCCs may have to be established in areas with no ETC facility and where referral to an ETC is not possible for logistic, access or capacity reasons. Given that the ECUs/CCCs will be

small, they need to be prioritized in high transmission areas rather than aiming for full coverage in order to keep them at a manageable number so that quality and appropriate supervision can be ensured.

Designated Structure: ECUs/CCCs should be simple, inexpensive, located in existing (e.g. building or hut) or purpose-built (e.g. tent) structures where people with Ebola infection can be housed separately from their families and community to prevent further transmission of the virus. Ideally, ECUs/CCCs should be very small (no more than 8 to15 beds) to reduce the risk of transmission and avoid complex management structures but the size will need to be determined on a case by case basis depending on the context. They should be low tech and manageable by ~5 community health workers (CHWs). In addition, waste management and disinfection procedures will be established, including procedures for the safe disposal and burial of bodies.

Scope of ECU Services: The scope of services to be provided by each ECU needs to be carefully determined by the key stakeholders. While comprehensive care to improve mortality rate includes the ability to administer intravenous (IV) fluids to cases that require it while monitoring their electrolyte balance, the realities on the ground may not allow for this and may lead to transmission of infection to the health care workers if not properly implemented or supervised. On the other hand, when sufficient skilled staff are available, ECU providing full treatment including IV will increase access to sufficient treatment, especially in rural area where ETCs are not available. The decision of whether IV fluids should be administered needs to be guided by the following:

- proximity of ECU to a full ETC or availability of appropriate logistics to quickly and safely transport cases to a full ETCs providing comprehensive care;
- availability and level of skills of health workers including CHWs and availability of a network of skilled supervisors to regularly monitor the CHWs in the ECU;
- availability/proximity of laboratory and other clinical and logistics support needed to comprehensive care including IV fluids administration and electrolyte monitoring;
- availability of effective IPC and supervision to ensure safety of health works in the ECU to prevent them becoming infected in the process of administering care; and
- other considerations, such as availability of foreign health staff, local terrain, etc.

The implementing partners in charge of the ECU along with technical agencies such as WHO and CDC are expected to help the Government and community determine and agree on the scope of services to be provided based on the above important considerations. If a comprehensive package of care cannot be provided in the ECU, it will be essential that effective logistics arrangements be put in place to transport cases that require this level of care to the closest ETC providing such.

Separation of Suspect and Confirmed Cases: Non-Ebola patients should be separated (preferably in different structures) from suspected and probable Ebola cases. Suspect and probable cases should also be separated within the same structure to minimise exposure while at the ECU. A supervision team should come regularly (preferably daily) to assess ECU safety and adherence to standards and to collect samples for laboratory testing of suspected patients.

Standard of Care: Patients are treated with respect and provided with basic care. In all ECU/CCC, patients will, as a minimum, receive food, water, oral rehydration, presumptive

treatment for malaria, and broad-spectrum oral antibiotics (where appropriate and according to national guidelines), antipyretics and analgesics. As described above, IV fluids could be administered when there is enough trained and protected health personnel and regular medical supply. In the absence of conditions required for IV fluids administration, a "No Touch" approach should be observed by the ECU and this includes no injectable drugs, no phlebotomy and no IV fluids administered to ensure the safety of workers. Arrangements should be available for specimen collection for laboratory confirmation of Ebola virus by trained phlebotomists, particularly for ECUs/CCCs operating a "No Touch" approach. Psychosocial support for patients and their families will also be provided.

Only highly probable cases should be admitted to ECUs/CCCs. ECUs/CCCs should have separate areas for suspect cases and Ebola cases (or in absence of laboratory confirmation, dry patients (i.e., with fever and no other symptoms) and wet patients (i.e., fever with vomiting or diarrhoea) where patients can be appropriately triaged following a detailed assessment.

If the ECU is overloaded, patients who present at the ECU with fever only and no history of contact with Ebola patients should be treated presumptively for malaria and other common endemic infections and sent home for re-evaluation after 48 hours. If the fever persists after 48 hours they are revaluated and admitted in the observation area for laboratory testing of Ebola.

Despite safety precautions put in place to separate cases in the ECUs/CCCs, exposure and transmission of Ebola is still possible depending on how effective the measures are implemented. Based on this, any patient that is discharged from an ECU with a negative Ebola test will need to be monitored by the community for symptoms up to 21 days after discharge to ensure that if they do become infected that they are provided with the appropriate and timely care.

Cleaning and disinfection procedures are needed for each ECU and relevant persons trained to implement them under supervision. In addition adequate waste disposal facilities are also critical; an incinerator and power supply is desirable. The SOP for each ECU will need to be agreed between the community and the implementing agencies under the technical guidance of Ministry of Health officials and WHO.

Supervision, Safety and Support: The ECU will be supervised by a supervision team including 1 health care worker trained on IPC who is able to mentor community health workers (e.g. use of PPE), to educate the community, take laboratory samples, and provide PPE supplies as needed.
Associated Activities: Each ECU will have a designated team for the management of dead patients, ensuring they are safely put in body bags and safely buried in respect of family wishes. The bed space in the ECU occupied by deceased patients will need to be thoroughly disinfected before use by another patient. In addition, there will be team, also appointed by the communities, who will monitor the community for suspect cases and refer them to the ECU for diagnosis, isolation and care.

Staffing of ECUs/CCCs: The suggested staffing levels to support the ECUs/CCCs are as follows:

- Five community health workers to support round the clock operation (three during the day and two during the night).
- Three cleaners (two during the day and one during the night).

- At least one guard to ensure security at all times.
- At least one trained community member with social mobilization skills to welcome families and answer the questions of the community at the entrance of the ECU.

In addition, the ECU will need to be supported by:

- Burial teams, assigned by the community to ensure safe disposal of dead bodies in line with procedures outlined in Annex Four.
- A monitoring and supervisory team which is further described in the next section.
- All staff supporting the ECU will be provided with:
    - Incentives appropriate to each individual context and agreed with the community.
    - Training on IPC, and is able to answer simple questions about Ebola disease.
    - Protective equipment and supplies.

Monitoring and supervision: Appropriate monitoring and supervision is critical in ensuring the success of this approach. Given that there is a lot of responsibility and expectation placed on low level community health workers and members of the community, many of whom have never before undertaken such tasks, the monitoring and supervisory roles are critical to ensure that adequate standards are followed. Any deficiencies in the quality of implementation could present a major risk of virus transmission within the ECU thus exacerbating the situation it is set out to address. The composition of the monitoring teams should be defined at the outset together with the government officials, community, implementing partner and technical agencies such as WHO and CDC. The exact composition will vary by context but it should include health professionals.

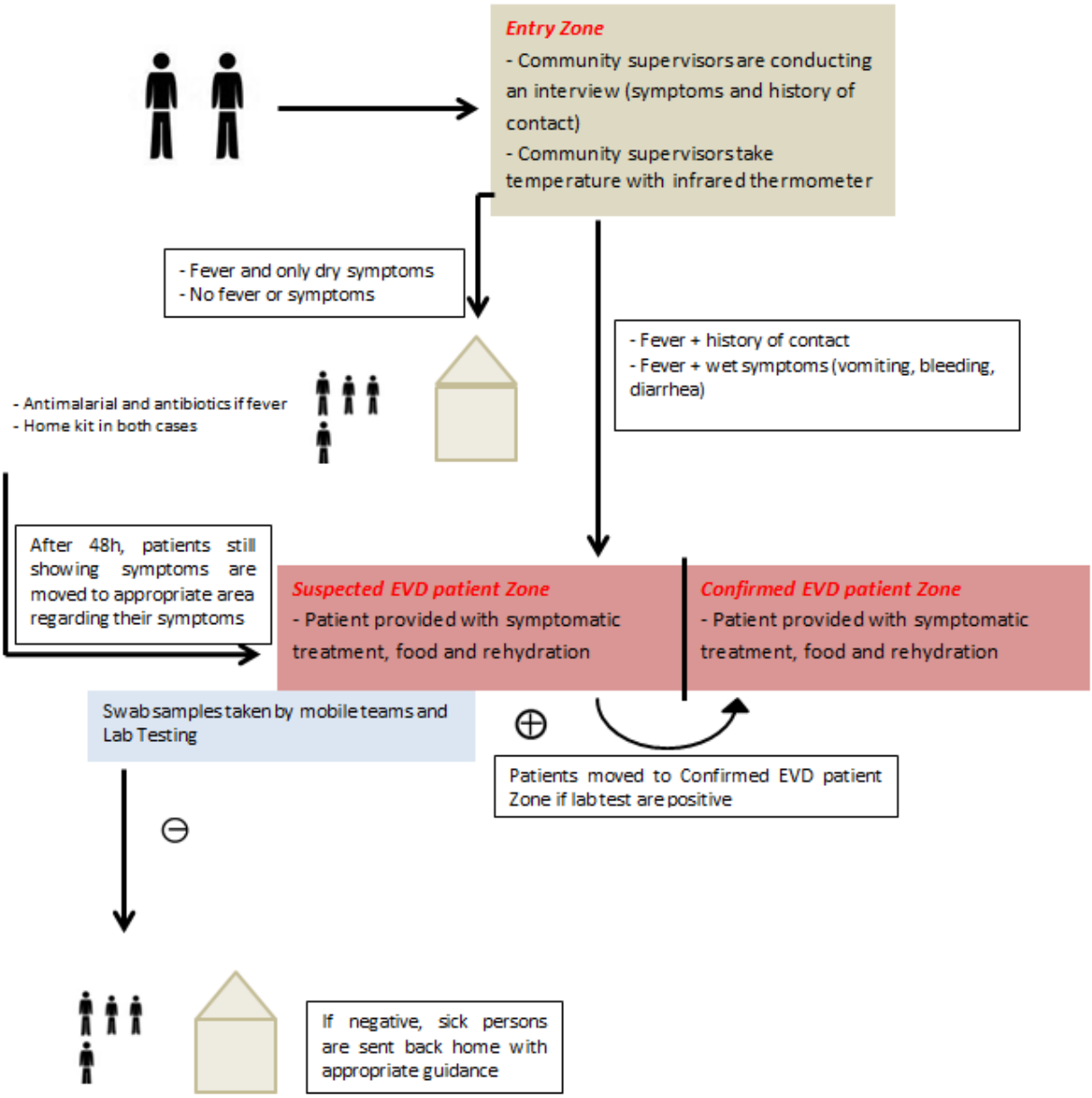
A minimum of once daily supervisory visits is recommended and an even higher frequency desirable if this is feasible. These visits should include direct observation of patient care, interactions with the community health workers and community members in order to identify problems/lapses and address them on the spot.

When an Ebola laboratory is available nearby, daily supervisory visits will need to include collection of samples for the laboratory testing, feedback on laboratory results and compilation of records.

Monitoring should be done with the community to ensure their concerns are addressed, that there is real acceptance and adherence to the approach and they understand what is working well and what should be improved.

Organization Flow for Service Delivery at the Community Level

If Laboratory diagnosis is available



4. **Detailed Description of the Community Engagement Activities**

The proposed component will provide country and community specific support towards 1) mobilizing community and religious leaders, local NGOs and the local media to drive local communication and behavior change strategies on Ebola and develop support structures, protocols and strategies for envisioned community level mobilization at the local political level 2) mobilizing locally-defined community health teams to a) carry out sensitization activities at the household level, including education on prevention, but also provide medical supply kits, and identifying need for referral, and b) engage in case identification, contract tracing and basic surveillance. Critical here will be that these groups are locally selected and headed by a trained and supervised paid senior community health worker with support from local leaders and links to the formal health system (including access to basic supplies). Finally, 3) for planning purposes at district and higher levels, and to track and adjust the effectiveness of local communication and behavior change campaigns as well as uptake of preventive care seeking behaviors, the component will also support ongoing efforts to establish a community-based monitoring system at district level. Table below provides more initial detail on each of these areas of intervention.

Implementation of this sub-component will be managed by the government with contracting to local and international NGOs in each district, or by UNICEF managing the subcontract to local and international NGOs as needed. This may vary by country.

The success of the sub-component relies on the following select assumptions:1) that there are people present in communities that are willing and able to take on the suggested roles; 2) that coherence/cooperation exits within the community to enable take-up of actions; 3) that formal sector health workers and communities accept non formal actors to be an integral and important part of the recovery effort and extended health system; 4) that local leaders fully support the effort; and are willing to provide support at the political level; 5) that the envisioned efforts fits in seamlessly with what others are doing on community health workers in the region; and 6) that there is government buy-in of the proposed support, including on implementation that would be needed from partner organizations and NGO's.

The sub-component relies on key principles for community level engagement in the Ebola response: 1) Family members should not be involved in direct care. Caregivers must remain detached enough to follow strict protocols. Training on these protocols is too long for family members to be involved for their own kin. In addition, emotional attachment can lead to breaks in protocol and transmission of infection; 2) training is a key component. It must be adequate both on protection of the individual in the community as well as on their role in the control of the epidemic; 3) clear job descriptions need to be developed as well as an understanding of roles and responsibilities at the community level vis a vis another; 4) supervision and ensuring good accountability structures will be critical; 5) actors involved must be paid with differentials based on risk of infection (through a combination of financial and non- financial incentives) and life insurance (and possibly some protective gear agreed upon in collaboration with the community) must be provided; 6) access to some medical supplies (home based kits) will be critical and enhance their standing in the community and effectiveness at household level. Finally, it is critical that governments and relevant stakeholders seize this as an opportunity to discuss permanent integration of community health workers and community level groups into the formal

service delivery structure. Discussing plans of integration early will contribute towards the motivation of community level actors involved in the response effort.

Table: Detailed Description of support towards community level engagement

Objectives	What (Tasks)	How	Who	Select Inputs
Support local leaders to implement a local communications campaign and strengthen their capacity to provide support to envisioned household level sensitization	1. Enhance knowledge and agreement amongst local leaders on Ebola, including safe and dignified methods for behavior change for prevention of EVD (protective methods, infection control, sanitation, burial, community detection and referral etc.) or coordinating selection of community teams (and their supervisors) for household sensitization activities (described below) Protocols would need to be developed with religious and community leaders to ensure community participation (in all	1. Conducting rapid assessments and community mappings to understand existing community care and burial practices, and social and cultural factors and determinants around prevention and care seeking 2. Identify respected and accepted local opinion leaders 3. Carry out training of local leaders/NGOs etc. 4. Support development of community-led interventions and strategies 5. Mobilize local media, support organization of other communication events	1. Community leaders 2. Religious leaders 3. District level government 4. NGOs 5. Media	1. Funding and technical support for the rapid assessments and studies 2. Paid, trained facilitators (MoH, NGOs) to convene and train local stakeholders (TOTs) 3. Identification, salaries and travel of facilitators 4. Training materials 5. Medical care; Health and life insurance for facilitators 6. Media materials, airtime on radio/television 7. Payment toward other communications outreach carried out by leaders

	envisioned aspects – see below) 2. Support efforts and activities for local leaders to communicate their knowledge to members within their community through various means (community Town halls, theatre, radio, role play, local TV etc.)	6. Build coherence between the formal and informal health worker team (ensure there is understanding that community agents are all part of the response effort/system)		
Community Sensitization at household level, provide basic services, and referrals	1. Carry out prevention education of EVD (all aspects, including sanitation and burials) 2. Inform about no touch practices and isolation of patients within the household if any signs of illness (e.g. fever), when to refer the family member to a Ebola care unit	1. Build relationships between community response teams, community and formal sector workers 2. Follow WHO protocols on household engagement 3. Train community health teams (keeping in mind different levels of existing skill sets) 4. Incenitivize multiple household	1. Contracted, locally defined community teams (e.g.: CSOs, Youth leaders, survivors, women's groups) 2. CHW supervisor 3. CHW supervisor supervisor(i.e. ECU or health post/center staff 4. Internationals embedded in groups to provide support: e.g., UN volunteers, Polio mobilizers	1. Transportation for outreach workers (motorbikes etc.) 2. Funding to support Training of community health teams (by supervisor with TA) 3. Training of CHW supervisors and their supervisors 4. Household kits (TBC) 5. C4D materials 6. Salaries/ hardship incentives and appropriate insurance (health teams,

	(ECU) 3. Distribute home kits including bednets, ORS, hygiene kits 4. Refer symptomatic household members to community health workers (e.g., in ECUs) for other suspected illness	visits of community health teams to households 5. Establish, maintain and adhere to supervision of community team by community health worker 6. Enhance or establish mechanisms for supervision of supervisors (ECU, nurse in Health Centers), and links for referral and supply of commodities to/from ECU or health post/center 7. Establish mobile banking opportunities)- for supervisors and local outreach teams		supervisors, supervisors of supervisors) 7. Mobile phones and supportive technology 8. Protective gear (only after the communities have been fully sensitized)
Case identification, Contact tracing and surveillance	1. Contact identification 2. Rigorous assessment and follow up of	1. Carry out training of selected individuals in the community group/team in	Same community group/team/supervision structure as above	1. Same as above (except no kits) 2. Fund development of system and one that

	exposed cases 3. Elicit community feedback 4. Provide basic health surveillance in the community 5. Send data and information of those exposed and with symptoms to ECU 6. Death monitoring	skills related to case identification, contact tracing etc. 2. Follow/adapt guidelines on case identification and contact tracing 3. Incentivizing Visiting households and communities and identifying all who may have been exposed to a person with Ebola and checking for signs of illness every 21 days 4. Use tools, spreadsheets 5. Negotiating with families		feeds information back to community
Establish a community-based monitoring system at district level	1. Track uptake of preventive and care seeking behaviors 2. Identify and address rumors and fears regarding Ebola 3. Enable rapid adjustments to communication	1. Create district level links with contact tracing and surveillance individual supervisor (community health worker) 2. Develop micro plans at chiefdom/sub-	1. UNICEF 2. Local (e.g., district level) researchers/technical persons	1. Agreement with mobile operators 2. Fund SMS platform coordination center 3. Fund Social and behavioral data monitoring teams and activities 4. Training of local research teams 5. Salaries, health and

	and behavior change strategies	district level 3. Establish SMS platforms (u-Report type) 4. Deploy rapid qualitative assessment teams 5. Conduct KAP studies as needed 6. Review and adjust existing plans and communication strategies 7. Carry out relevant training sessions		life insurance for these researchers 6. Research tools 7. Transportation costs 8. Protective gear (only after the communities have been fully sensitized on that)

5. Current list of Ebola affected Districts

No.	Guinea
1	Beyla
2	Boffa
3	Conakry
4	Coyah
5	Dabola
6	Dalaba
7	Dinguiraye
8	Dubreka
9	Forecariah
10	Gueckedou
11	Kerouane
12	Kindia
13	Kissidougo
14	Kouroussa
15	Macenta
16	N'Zerekore
17	Pita
18	Siguiri
19	Telimele
20	Yomou

No.	Liberia
1	Bomi
2	Bong
3	Gbarpolu
4	Grand Bassa
5	Grand Cape Mount
6	Grand Gedeh
7	Grand Kru
8	Lofa
9	Margibi
10	Maryland
11	Montserrado
12	Nimba
13	River Gee
14	Rivercess
15	Sinoe

No.	Sierra Leone
1	Bo
2	Bombali
3	Bonthe
4	Kailahun
5	Kambia
6	Kenema
7	Kono
8	Moyamba
9	Port Loko
10	Pujehun
11	Tonkolili
12	Western Area

Source: WHO Epidemiological Reports

6. List of Existing Laboratory in Three Countries

Country	Admin Level 1	Admin Level 2	Laboratory Name	Owner of Laboratory	Location (attached ETU or City where no further information is available)	Methodo-logy	Accreditation	Testing capacity # samples per day	WHO/ Bilateral
Guinea	Conakry	Dixinn	L.Pasteur /National Reference Lab	Guinea National public health lab (supported by IP Dakar)	Donka MSF ETU	Real time RT PCR	EDPLN	70	WHO
Guinea	N'zerekore	Gueckedou	EU Mobile lab	EU consortium	MSF ETU in Gueckadou	Real time RT PCR	EDPLN	100	WHO
Guinea	N'zerekore	Macenta	Russian mobile lab	Russia	N/A	Real time RT PCR	Provisional		Bilateral
Liberia	Lofa	Lofa	EU Mobile lab	EU consortium	MSF ETUc in Foya	Real time RT PCR	EDPLN	100	WHO
Liberia	Montserrado	Montserrado	CDC-NIH Team 2	CDC Atlanta, USA	ELW2/ELWA3	Real time RT PCR	EDPLN	100	WHO
Liberia	Montserrado	Margibi	MoH-USAMRID	Liberia National Public Health lab (supported by USAMRID)	Margibi	Real time RT PCR		50-70	WHO
Liberia	Bong	Gbarnga	US-Navy/ NMRC mobile labs team 1	USA	MSF ETU	Real time RT PCR	EDPLN	100	WHO
Liberia	Montserrado	Montserrado	US-Navy/ NMRC mobile labs Team 2	USA	Island Clinic, Monrovia	Real time RT PCR	EDPLN	100	WHO

Sierra Leone	Eastern	Kailahun	PHA Canada	Public Health Agency, Canada	MSF compound	Real time RT PCR	EDPLN	100	WHO
Sierra Leone	Eastern	Kenema	CDC Team 1	CDC Atlanta, USA	MSF compound	Real time RT PCR	EDPLN	100	WHO
Sierra Leone	Western	Freetown	NICD South Africa	National Institute for Communicable Diseases	Lakka Tuberculosis Hospital	Real time RT PCR	EDPLN	70-100	WHO
Sierra Leone	Western	Kerry Town	PHE	PHE Porton Down	Uk hospital/save the children	Real time RT PCR	Bilateral	600	Bilateral
Sierre Leone	Western	Freetown	China Mobile Unit	China	Sina-Sierre Leone Friendship Hospital	Real time RT PCR	Under validation	20	bilateral
Nigeria	Lagos	Lagos	Lagos Univ. Teaching Hospital Virology lab	Lagos University Teaching Hospital Virology lab	Lagos University Teaching Hospital Virology lab	Real time RT PCR	EDPLN	50	WHO
Nigeria	River state	Port Harcourts	Nigeria Mobile Lab	Nigeria Mobile Lab	Port Harcourt	Real time RT PCR	EDPLN	50	WHO
Senegal	Dakar	Dakar Nord	Institute Pasteur Dakar	Institute Pasteur Dakar, Senegal	Dakar, Senegal	Real time RT PCR	EDPLN	50	WHO
DRC	Equator	Boende	INRB Mobile Lab	Institut National de Recherche Biomedicale, DRC	Boende, DRC	Real time RT PCR	EDPLN	50	WHO

Source: WHO

The capacity in Liberia has been enhanced with the start of the operation of the 2 US Navy Mobile Labs--EACH has a testing capacity of 100 samples per day. Currently Liberia has now an established capacity of 500 samples per day.

In the case of Sierra Leone it was announced that the UK Government will initiate the operation of a Mobile Lab in Freetown on October 27, staffed by Public Health England personnel and with a testing capacity of 600 samples per day. In addition, the UK Government has committed to deploy 2 additional mobile labs staffed by Public Health England by the end of November—again these labs will have a testing capacity of about 600 samples per day each or 1,200. This in total will represent an additional testing capacity of 1,800 samples per day, up from the current level of 150-200 samples per day.

The testing capacity in Guinea now is 170 samples per day.

However, above data includes neither the capacity in the labs for sample preparation, nor the time for transport of the samples. Samples are typically received by laboratory staff; inspected for damage; logged into the laboratory data base; assigned a unique sample number; labelled properly; and stored at the appropriate temperature to await preparation and analysis. All aspects of sample receipt adhere to written Standard Operating Procedures (SOP) and established Quality Assurance protocols. Sample preparation includes all of the steps taken in the laboratory to render a sample into a form that is suitable for chemical analysis. Correct sample preparation results in sub-samples that are representative of the total sample.

7. Current Status of Foreign Health Workers Deployment

- **Cuba** has deployed a 165 person medical brigade to Sierra Leone, and has agreed to deploy a 50 person medical brigade to Liberia (4 of whom have already arrived in-country) and 30 person medical brigade to Guinea, under the coordination of the WHO.
- **South Africa** has deployed a 20 person lab team to Sierra Leone.
- **China** has deployed a 60 person medical team to staff a hospital and a mobile lab in Freetown, Sierra Leone
- **The United States** has deployed 3,000 military personnel to construct 17 ETCs and train health workers, along with a team of Navy lab specialists to run mobile labs; the US CDC has deployed 40 epidemiologists to support the surveillance of the epidemic, and a 20 person team from the US Public Health Services is staffing a ETU for infected health workers.
- **United Kingdom** plans to deploy 60 staff and NHS volunteers.
- **WHO** has also deployed a 20 person medical team from Uganda.
- **African Union (AU)** with the support of WHO is planning to deploy 100-170 health workers from other African countries.

In addition, the following international organizations and NGOs have personnel or plans to deploy personnel.

Table: International Organizations and NGOs Clinical and Support Staff working in ETCs

Organisation	Personnel in place	Personnel planned
MSF	Y	
IOM		Y
UN Volunteers		Y
SCI		Y
IMC	Y	
IFRC	Y	
Emergency	Y	
IRC		Y
MDM		Y
PIH		Y
GOAL		Y
Africare		Y
MTI		Y
Well Body		Y
Samaritans Purse	(on hold)	

Source: WHO

8. Clinical Training Emergency Scale up, for affected countries in West Africa

Effective clinical management and safe clinical practices are central to Ebola outbreak control. WHO will intensify training for health care workers in the affected countries, building on the successful WHO CARD IMAI collaboration. This training will address the HCW need to be competent in triage (to sort suspected Ebola from non-Ebola, severe from non-severe patients), accurate diagnosis/differential diagnosis including safe clinical sampling collection, barrier nursing strictly adhering to appropriate infection prevention and control (IPC) measures and in

managing severely ill patients with shock (from large GI loss, septic shock, hemorrhagic shock) and other complications.

Activities include:

1) Adapt/develop IMAI training materials for each country/context

- further iterative improvement of the participatory WHO Ebola clinical training which addresses both case management and IPC for doctors and nurses, including modules for
    - Ebola overview – biology, outbreak, new treatments
    - Strategies to stop Ebola
    - Infection prevention & control for clinical teams
    - PPE for Ebola
    - Screening & overall organization of Ebola Treatment Center
    - Clinical care in Ebola Treatment Center
    - Collecting blood and other samples from suspect & confirmed Ebola patients
    - Preparing health center, health post, & hospital outpatient for Ebola surveillance
    - Responder preparation for work in an Ebola outbreak
- updating the VHF pocket guide interim guidelines to keep it current with the clinical experience in this large outbreak,
- support rapid country adaptation for at-risk countries of the VHF pocket guide, to provide MOH endorsement and wide distribution.

2) Emergency District Training & Mentoring

- In 5 selected districts identified as 'hotspots' (epicenters of EVD outbreak) in each affected country (Guinea, Sierra Leone, and Liberia), a team of 3 trainers, composed of 2 clinicians (with EVD treatment and IMAI training experience) and one IPC expert, will train 30-40 health workers who will work in new treatment centers (4 days); prepare two 'model' health centers for safe Ebola screening then training 30-40 health workers from surrounding health centers at each health center (1 day for health center preparation, each training 2 days). The mission assumes a total of 10-12 days in the district plus 2 days MOH/WCO/partner visits on arrival then 1 day debriefing.

3) Conduct central Train of Trainers (TOT) workshops:

- 3 in West Africa (1 francophone - Guinea, 2 anglophone - Liberia, Sierra Leone)
- 40 HCW including national and international responders trained as trainers

4) Pre-deployment training of expatriate clinicians and Foreign Medical Teams, in the international training Hubs (e.g. Geneva, Accra, Kampala) by experienced health responders/trainers including Ugandan facilitators already training in emergency triage and management of severely ill patients.

9. Division of Labor between UN and Other Agencies under UNMEER Operational Framework

Activity Line	Lead Agency
Case finding and contact tracing	WHO
Case management	WHO
Community care centers, community engagement and social mobilization	UNICEF
Safe and dignified burials	IFRC
Enabling Activities	
Operations/Logistics	WFP
Crisis management	UNMEER
Staffing/ Human resources	UNMEER
Training	WHO with the CDC
Information management	UNMEER

Source: UN System Commitments arising from the Operational Conference for Scaling-up System Approach to the Ebola Response, Accra, 15-18 October 2014

10. Commitment by Development Partners

(As of October 29, 2014, US$1,000)

Country/Region/ Donor	DFID	IMF	WB	USG	AUSTRALIA	CANADA	CHINA	INDIA	IRISH AID	JAPAN & JICA	KOREA	KUWAIT	AfDB	COTE D'IVOIRE	NAMIBIA
Guinea	0	41,000	25,000	0	0	738	0	0	0	0	0	0	0	0	0
Liberia	1,180	49,000	58,000	0	0	64	0	0	109	0	0	0	0	0	0
Sierra Leone	324,000	40,000	34,000	0	0	51	0	0	369	0	0	0	0	0	0
Total (3 Countries: Guinea + Liberia + SLeone)	325,180	130,000	117,000	0	0	852	0	0	478	0	0	0	3,000	0	0
Other countries	0	0	0	0	0	0	0	0	0	0	0	0	1,000	0	0
Supranational (regional/subregional allocations)	0	0	283,000	344,558	0	30,256	0	0	865	0	0	0	56,000	0	0
Non Country Specific Pledges	4,911	0	0	0	17,594	21,892	49,000	12,000	0	46,274	5,000	6,973	0	1,000	1,000
Cumulative Pledges noted as of 10/27/2014	**330,091**	**130,000**	**400,000**	**344,558**	**17,594**	**53,000**	**49,000**	**12,000**	**1,343**	**46,274**	**5,000**	**6,973**	**60,000**	**1,000**	**1,000**

Country/Region/ Donor	NIGERIA	TIMOR LESTE	EUROPEAN COMMISSION	DENMARK	FINLAND	FRANCE	GERMANY	ITALY	NETHERLANDS	NORWAY	SWEDEN	SWITZERLAND	GATES FOUNDATION	TOTAL
Guinea	0	0	0	0	0	88,407	346	0	0	0	0	0	0	155,491
Liberia	0	0	0	0	0	0	0	0	0	0	0	0	0	108,353
Sierra Leone	0	0	0	0	0	0	986	0	0	0	0	0	0	155,491
Total (3 Countries: Guinea + Liberia + Sleone)	0	0	0	0	0	88,407	1,332	0	3,000	0	0	0	0	669,249
Other countries	0	0	0	0	0	0	0	0	0	0	0	0	0	1,000
Supranational (regional/subregional allocations)	0	0	0	0	0	0	1,889	0	0	132,000	0	0	45,000	893,568
Non Country Specific Pledges	5,000	1,000	192,000	6,000	1,200	0	124,125	2,179	0	0	4,345	3,094	0	504,587
Cumulative Pledges noted as of 10/27/2014	**5,000**	**1,000**	**192,000**	**6,000**	**1,200**	**88,407**	**127,346**	**2,179**	**3,000**	**132,000**	**4,345**	**3,094**	**45,000**	**2,068,404**

11. Background Information on Component 5

Convalescent plasma in the context of Ebola infection control (Source: Wood, D. and WHO Blood and Plasma Group, 2014)

Arguments in Favor of Convalescent Plasma for Management of Ebola:

- Serum therapies have an extensive history of successful use in certain settings (e.g. diphtheria, pneumococcal pneumonia, anthrax, etc.) and remain important treatments for some conditions (e.g. CMV, parvovirus B19, Argentine Hemorrhagic Fever, etc.).
- Anecdotal evidence (Muppa, et al. J Inf Dis 1999) and some animal studies (Dye, et al. PNAS 2012) suggest possible efficacy of convalescent plasma in Ebola.
- MoAbs are effective in animal models, but may be less available and more costly than transfusion therapy.

Arguments Against Convalescent Plasma in Management of Ebola

- Efforts to establish infrastructures for safe blood collection and use could divert resources from supportive care or other therapies.
- Plasma separation and storage are not always possible based on infrastructures in outbreak areas and might not be sustainable.
- May only have the potential to help those with less advanced disease.
- MoAb might be more effective.
- Nevertheless, infrastructures for collection of blood do exist, and transfusion already is an adjunctive therapy for hypovolemic, coagulopathic and hemorrhagic conditions in affected regions. Whole blood could provide single unit equivalent plasma if found effective.

Overview of major WHO actions: September 2014 Consultation

- WHO Consultation on potential Ebola vaccines and therapies
- Use of whole blood therapies and convalescent plasma considered as a matter of priority
- Safety studies of two candidate vaccines – vesicular stomatitis virus (rVSVZEBOV) and chimpanzee adenovirus (ChAD3-ZEBOV) – are underway. If proven safe, a vaccine could be available in November 2014.
- Use of novel therapeutic drugs is being studied. Additional safety and efficacy data are needed. Existing supplies of all experimental medicines are limited.
- Investigation of these interventions should NOT detract attention from implementation of effective clinical care, rigorous infection prevention and control, careful contact tracing and follow-up, effective risk communication, and social mobilization.

WHO guidance on donor selection, screening, donation and handling of blood and plasma units

- Patients who have recovered from EVD and who have been discharged from Ebola treatment centres or units could be potential donors for CWB/CP, from 28 days after their day of discharge.

- Only those EVD patients who have been discharged according to the WHO criteria as: 1) clinically asymptomatic and 2) twice tested negative for EBOV RNA by molecular techniques, should be considered as potential donors.
- Ebola neutralizing antibodies are expected to be most effective when CWB/CP is sourced from the areas of on-going active Ebola virus (EBOV) transmission.

Blood collection and donor care

- Whole blood donation should be collected in a single blood collection bag or if feasible, in a double blood collection bag for the separation of plasma from the red cells by sedimentation or centrifugation.
- Where possible CP could also be collected by apheresis procedure from suitable donors. – Plasmapheresis will enable collection and storage of large volumes of CP that may be used for more than one patient.
- A minimum period of 12 weeks for males and 16 weeks for females should occur before a further whole blood donation is collected. The inter-donation interval for collection of plasma by apheresis should be two weeks.

Selection of EVD patients

- Only patients with confirmed EVD, preferably in its early stages, should be considered for CWB/CP transfusion as an empirical treatment for EVD.
- If feasible, informed consent for transfusion of CWB/CP should be obtained from the EVD patient or the family members.
- Blood samples for viral load should be taken prior to transfusion, on the data after transfusion and on two days before discharge.

Administration of convalescent whole blood or plasma

- One unit of CWB (collected in a 350/450 mL blood collection bag) should be transfused for adult patients.
- In the absence of evidence, 400-500 mL of CP in two doses of 200-250 mL each, separated from two different WB donations, should be considered for adult patients.
- For pediatric CWB/CP transfusion, a dose of 10 mL/kg could be used based on the considerations of blood volume.

Current status

- Convalescent whole blood transfusions are being used in the current Ebola epidemic as part of a package of interventions provided for expatriated health-care staff.
- So far, interpretable data are not available on the impact of the intervention.
- So far, convalescent whole blood transfusions or convalescent plasma are not being used in the affected countries.

Current status to accelerate access

- Donors are interested: Wellcome Trust; EU; BMGF; WB.
- Consortia of investigators have been/are being formed– Belgium/UK/France/Guinea– US/Liberia– Canada/Sierra Leone; Norway/Sierra Leone; US/Sierra Leone.
- Clinical trial designs are being developed.
- Open information exchange in WHO convened teleconferences.
- Site selection to deliver treatment beginning; country plans being developed; training plans being developed.

On Rapid diagnostic tests for EVD:

- The preferred specimen for diagnostic testing is whole blood from live patients and oral swabs from deceased patients. Oral swabs are not recommended due to the lower sensitivity in RT PCR and antigen detection testing.
- A rapid test for Ebola is under development under a grant from the US National Institutes of Health (NIH). The outbreak of the deadly Ebola virus in West Africa has prompted Corgenix Medical Corporation (OTCBB:CONX) to extend its existing viral hemorrhagic fever (VHF) rapid test development to include the Ebola virus. Corgenix has already developed and CE marked a rapid test for the Lassa fever virus, another member of the VHF group of viruses. In collaboration with its research partners from the Viral Hemorrhagic Fever Consortium (VHFC), Corgenix recently completed a multi-year study conducted at the Kenema Government Hospital (KGH) in Kenema, Sierra Leone. The clinical trial investigated the clinical utility of several VHFC diagnostic products, including Corgenix' recently CE marked ReLASV(R) Antigen Rapid Test for Lassa virus. The VHFC is a collaboration of academic and industry members headed by Tulane University and partially funded with support from the NIH. It is expected to be available in 3 months.

On EVD Vaccine Development:

- Thousands of doses of experimental Ebola vaccines could be available in the coming months and could eventually be given to health care workers and other people who have had contact with the sick (WHO, October 2014). No vaccine has yet been proven safe or effective in humans. Testing must first be done to ensure they are not harmful to people, some of which has already begun. The Canadian government has already donated 800 vials of one vaccine, which it developed before licensing to NewLink Genetics Corp. The company is expected to produce several thousand more doses in the coming months. It is unclear how many doses the 800 vials hold because testing needs to be done to determine how large an effective dose is, but it probably will be about 1,500.
- By the beginning of next year, there should be about 10,000 doses of another vaccine, developed by the U.S. National Institutes of Health and GlaxoSmithKline.

Vaccine Trials for Ebola Are Planned in West Africa (Source: Pollack, A, NYT October 23, 2014)

At a recent meeting of international partners held at W.H.O Geneva, it was announced that trials of two vaccines furthest along in development would start in West Africa as early as January 2015. One trial will test the two vaccines against each other and against a control. One-third of participants will receive a vaccine being developed by GlaxoSmithKline. Another third will receive a Canadian vaccine licensed to NewLink Genetics. The rest will get a vaccine for a disease other than Ebola, such as flu — essentially a placebo in terms of preventing Ebola infection. That trial will probably involve about 9,000 people in each segment, the official said. It will take place in Liberia under the auspices of the US National Institutes of Health and Liberia's Health Ministry. For the other trial, everyone at a particular site, such as a treatment center, will be offered a vaccine. Different centers will offer vaccines at different times. In that design, no one gets a placebo. That study will take place in Sierra Leone and is being planned by the US Centers for Disease Control and Prevention.