Sierra Leone, National Action Plan
for Health Security, 2018 – 2022

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Freetown, Sierra Leone
Telephone: +232 33 31 79 02

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Foreword

Sierra Leone has experienced many health related emergencies spanning human, animal and environmental health for millennia. For example, after a decade of absence, cholera re-emerged in Sierra Leone 1994 – 1995 affecting more than 46,061 people and killing 1,465 people and again in 2012-2013 affecting 12 out of the then 13 districts in Sierra Leone and affecting 23,308 people with 301 documented deaths. Lassa fever is a viral hemorrhagic fever endemic in the country and that has continued to present a significant threat. The incidence of Lassa fever has been rising significantly in the last few years. By mid-2018, 20 cases of Lassa fever had been reported as compared to annual cumulative of 23 in 2017 and 33 in 2016.

The animal sector too has experienced numerous outbreaks that have caused devastation of animal stocks and resulted in losses in agricultural productivity and food security. Human populations continue to suffer health consequences of zoonosis. The death of 12 people from rabies between 1968 and 1972 necessitated a national campaign with vaccination of 4,700 dogs in 1974. More recently, the risk of rabies has once again come to the fore with well over 4,700 animal bites and 50 deaths reported in the last three years.

It is acknowledged that the environment plays an important role in human health. Environmental degradation with increasing population pressure are steadily playing a role in the transmission of diseases and other public health threats to humans.

The 2014 – 2015 Ebola Virus Disease (EVD) outbreak that affected Sierra Leone and the West African Sub Region is likely to have originated from interactions between human populations and the tropical rain forest ecosystems. In Sierra Leone, a total of 14,124 people were affected, including 3,956 that died. The Ebola epidemic took a heavy toll on the already scarce health workforce, a total of 350 health care workers were affected with 221 deaths reported.

Following a review of the response to the West African EVD Epidemic, the World Health Assembly (WHA) in its recommendation WHA 69/21.5, States Parties were to adopt the Joint External Evaluation (JEE) and to develop National Action Plans for Health Security (NAPHS) within one year of the external evaluation. In line with this recommendation, Sierra Leone was the sixth country in the African region to undergo the Voluntary JEE in October 2016. The findings and recommendations from JEE have informed development of this National Action Plan for Health Security (2018-2022) through an all-inclusive multi-sectoral process.

This plan presents costing and resource mapping by technical areas, it is envisaged that the development partners will supplement domestic funding for the implementation to be a success. The plan will facilitate multi-sector engagement using a One Health approach and guide implementation of activities for progress towards attainment of International Health Regulations (IHR) 2005 core capacities required for enhancing Global Health Security.

Dr Alpha T. Wurie
Cabinet Minister
Ministry of Health & Sanitation

Mr. Joseph J. Ndanema
Cabinet Minister
Ministry of Agriculture and Food Security

Dr. Dennis Sandy
Cabinet Minister
Ministry of Lands, Country Planning & the Environment

Acknowledgement

The published Sierra Leone Joint External Evaluation (JEE) report proposes actions that Sierra Leone needs to undertake to improve the country's capacity to prepare for, detect, and respond to adverse public health events. In order to guide the implementation of the actions proposed in the JEE report, the Ministry of Health and Sanitation (MoHS), and Environmental Protection Agency (EPA with support of partners developed this National Action Plan for Public Health Security (NAPHS). The NAPHS outlines what activities will be carried out in the medium term (2018- 2022) in order for Sierra Leone to attain the desired capacities required for IHR & GHSA compliance. Currently, it is the renewed focus of the Ministry of Health and Sanitation in collaboration with other ministries, government agencies and One Health partner organizations as a means of accelerating achievement of national health security.

We wish to acknowledge the invaluable contribution of all actors who were involved in the formulation of this plan. We would like to express our gratitude to the Honorable Ministers of Health and Sanitation and Agriculture Forestry and Food Security Dr. Alpha T. Wurie and Mr. Joseph J. Ndanema respectively and the Minister of Lands, Country Planning & Environment Dr. Dennis Sandy for their high-level support to the process of development of this plan. We would also like to thank the former Chief Medical Officer Dr. Brima Kargbo, the former Chief Agricultural Officer Mr. Ideara Sheriff and the former Chief Environmental Officer Mr. Edward P. Bendu together with the heads of directorates, programs, units and agencies and technical personnel for their contributions to the development of the NAPHS.

This process would not be complete without the participation of other One Health stakeholders that include the Office of National Security (ONS), Njala University, Sierra Leone Civil Aviation Authority (SLCAA), Sierra Leone Agricultural Research Institute (SLARI) and the Republic of Sierra Leona Armed Forces (RSLAF). The involvement of these One Health players from the Government of Sierra Leone (GOSL) side is an assurance of the new approach to health security in the country.

The successful development of this plan was made possible by the unwavering support and leadership of Dr. Amara Jambai, who was then the Deputy Chief Medical Officer (Public Health) and now the Chief Medical Officer. We also appreciate the contribution of the late Dr. Foday Dafae who served as the Director of Disease Prevention and Control at the Ministry of Health & Sanitation.

We are particularly grateful to the WHO for the technical and financial support provided from all three levels (HQ, AFRO and the Country Office). Special thanks to Dr. Charles Njuguna, WHO Health Security and Emergency Coordinator for his technical guidance throughout the process. We are also grateful to the leadership of the following partner organizations for their contribution: FAO, US CDC, USAID, IOM, DFID, Public Health England, China CDC and GIZ.

Their unreserved commitment to the development of this plan is an assurance of the strength of partnership towards its implementation.

Dr. Amara Jambai
Chief Medical Officer,
Ministry of Health & Sanitation

Mr. Amara I. Sheriff
Chief Agricultural Officer,
Ministry of Agriculture & Forestry

Dr. Foday M. Joward
Executive Chairperson,
Environmental Protection Agency

Executive Summary

The Sierra Leone National Action Plan for Health Security (NAPHS) is based on the recommendations of the 2016 Joint External Evaluation (JEE). The JEE is a voluntary, collaborative and multi-sectoral process to evaluate country's capacity to prevent, detect and rapidly respond to public health risks occurring naturally or due to deliberate or accidental events. The JEE process helps countries identify the most critical gaps within their human and animal health systems, to prioritize opportunities for enhanced preparedness and response, and to engage with current and prospective partners and donors to effectively target resources. Sierra Leone was among first African nations to accept to undergo the JEE process which was conducted in between 31st Oct and 4th November 2016.

Some of the key areas for improvement that were identified through the process of JEE included; the need for revision of public health laws and legislation, a budget line for IHR, accelerate the implementation of the One Health approach, development of a comprehensive multi-hazard National Public Health Emergency Preparedness and Response plan, strengthening surveillance at points of entry (PoEs), improve coordination and collaboration between human and animal health laboratory systems, Improve capacity (human resources, laboratory) for the detection and response to chemical and radiation hazards among several other key priorities.

Stakeholders, with broad representation, and using a one-health approach, reviewed the NAPHS so as to generate and prioritize activities planned in the 2018-2022 implementation period.

A resource mapping exercise was carried out, this allowed the country to have an overview on the available or potential resources to support building country capacities for health security. Implementation of this plan will enable the country to: prevent the likelihood and reduce the consequences of outbreaks and other public health hazards; build national capacities for early detection and effective response to public health emergencies and other events of public health concern; foster all-sector partnerships for effective prevention, detection and response to public health emergencies and other events of public health concern; establish a sustainable financing strategy for the attainment of national health security. Overall, this will enable the country to strengthen core capacities required under IHR 2005 leading to enhanced health security of the country and the sub region.

The overall cost of implementation of this plan is about $291 million, the high-prioritized activities for implementation in year one and two will cost about $50 million. It is envisaged that the health sector development partners will be enthusiastic to supplement domestic funding for the implementation to be a success. WHO will continue to coordinate a platform for donors and partners to share, inform, and collaborate in order to strengthen Sierra Leone IHR (2005) capacity and increase our contribution to global health security.

Table of Contents

List of Tables

List of Figures

List of Abbreviations and Acronyms

AAR	After-Action Review
AEFI	Adverse events following immunization
AFENET	African Field Epidemiology Network
AFP	Acute Flaccid Paralysis
A4P	Agenda for Prosperity
AMR	Antimicrobial Resistance
BPEHS	Basic Package of Essential Health Services
CAHW	Community Animal Health Worker
CBS	Community Based Surveillance
China CDC	Chinese Center for Disease Control and Prevention
US CDC	Centers for Disease Control and Prevention
CHC	Community Health Centre
CHP	Community Health Post
CHWs	Community Health Workers
CMO	Chief Medical Officer
CPHRL	Central Public Health Reference Laboratory
CSOs	Civil Society Organizations
DAO	District Agricultural Officer
DFID	Department for International Development (UK)
DHIS2	District Health Information System2
DHMT	District Health Management Teams
DHSE	Directorate of Health Security and Emergencies
DLVS	Directorate of Livestock and Veterinary Services

DMO	District Medical Officer
ECOWAS	Economic Community of West African States
e-IDSR	electronic Integrated Disease Surveillance and Response
EPA	Environmental Protection Agency
EVD	Ebola Virus Disease
FAO	Food and Agriculture Organization
FELTP	Field Epidemiology and Laboratory Training Programme
FETP	Field Epidemiology and Training Programme
GDP	Gross Domestic Product
GHSA	Global Health Security Agenda
HCAI	Health Care-Associated Infections
IPC	Infection Prevention and Control
JEE	Joint External Evaluation
GEF	Global Environmental Facility
GoSL	Government of Sierra Leone
GIZ	German Agency for International Cooperation
ICAP	International Center for AIDS Care and Treatment Programs
ICT	Information Communication and Technology
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulations

IHR-NFP	International Health Regulations-National Focal Point
IOM	International Organization for Migration
LTWG	Laboratory Technical Working Group
MAF	Ministry of Agriculture and Forestry
MCHP	Maternal and Child Health Post
MDAs	Ministries Departments and Agencies
MTHE	Ministry of Technical and Higher Education
MIA	Ministry of Internal Affairs
MLF	Multilateral Fund
MOFED	Ministry of Finance and Economic Development
MoHS	Ministry of Health and Sanitation
MRU	Mano River Union
NAPHS	National Action Plan for Health Security
NMCC	National Multi-Agency Coordination Committee
NPHA	National Public Health Agency
NPHEMC	National Public Health Emergency Management Committee
OIE World	World Organization of Animal Health
ONS	Office of National Security
NLSP	National Laboratory Strategic Plan
NPHEPR	National Public Health Emergency Preparedness and Response Plan NSRPA Nuclear Safety and Radiation Protection Agency
PHEs	Public Health Emergencies
PHEMC	Public Health Emergency Management Committee
PHE	Public Health England

PHEIC	Public Health Events of International Concern
PHNEOC	Public Health National Emergency Operation Centre
POCT	Point of Care Testing
PoEs	Points of Entry
POPs	Persistent Organic Pollutants
REDISSE	Regional Disease Surveillance Strengthening Enhancement
RSLAF	Republic of Sierra Leone Armed Forces
SDGs	Sustainable Development Goals
SLMTA	Strengthening Laboratory Management towards Accreditation
SLIPTA	Stepwise Laboratory Quality Improvement Process towards Accreditation SOPs Standard Operating Procedures
SPP	Strategic Planning Portal
SWAp	Sector Wide Approach
TBA	Traditional Birth Attendant
UHC	Universal health Coverage
UNEP	United Nations Environment Program
UNICEF	United Nations International Children's Emergency Fund
UNISDR	UN Office for Disaster Risk Reduction
VHF	Viral Hemorrhagic Fever
WB	World Bank
WHA	World Health Assembly
WHO	World Health Organization


World Health
Organization

1 BACKGROUND

1.1 Country Profile - Sierra Leone

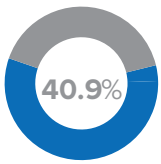
AREA COVERAGE
KILOMETRE SQUARE
78,000

POPULATION
2019

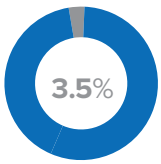
RURAL
POPULATION 59%

URBAN
POPULATION 41%

WOMEN	MEN	WORKING POPULATION	LITERACY RATE P/PERSON
50.8%	49.2%	BETWEEN 15-65YEARS 55.6%	ABOVE 10YEARS 51.4%



PEOPLE BELOW 15 YEARS



PEOPLE ABOVE 65 YEARS

1.2 Situation analysis-burden of public health events in terms or morbidity and mortality

Sierra Leone experiences a high burden of public health diseases/events in terms of morbidity and mortality. Some of the most common diseases include malaria, cholera, Lassa fever and measles. Over time, the country has also experienced an increased burden of non-communicable diseases, such as diabetes and cardiovascular conditions

The overall life expectancy in Sierra Leone is 58.61 years. Infectious diseases are the leading cause of death and disease in Sierra Leone, of which malaria is the single biggest killer, accounting for 38% of all hospital admissions. Tuberculosis is another significant public health problem, with an estimated three new infections per 1,000 each year. The national HIV prevalence rate is at 1.5%.

Sierra Leone was severely hit by the most widespread Ebola virus disease epidemic in history. In total, 8,706 infections were recorded, of which 3,590 died between May 2014 and March 2016. The risk of epidemics and other public health concerns remains high with 4,000 survivors. In 2015, the country was estimated to have the world's highest maternal mortality ratio, at 1,360 maternal deaths per 100,000 live births. Child mortality is also very high, with over 103 of every 1000 children dying before the age of five years. Almost one third of under-five children suffered from stunting in 2014.

LASSA FEVER CASES REPORTED ANNUALLY, SIERRA LEONE, 2007-2017 (N=782)

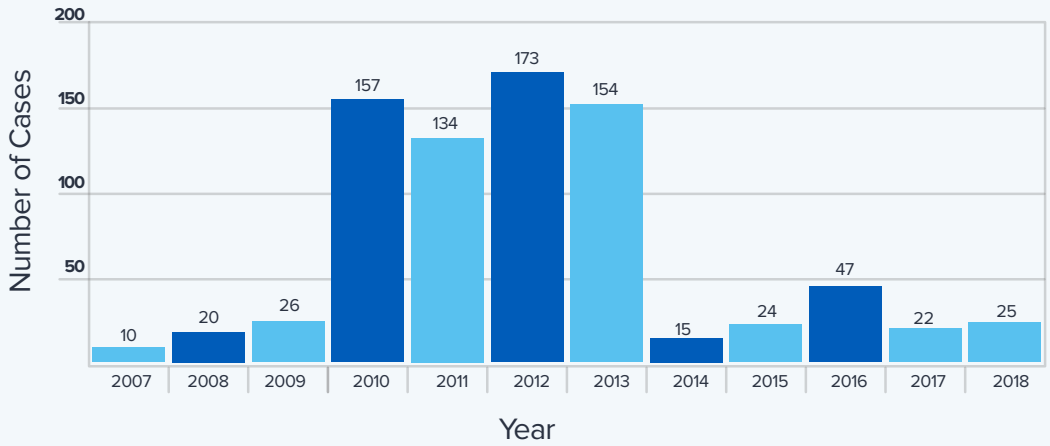


Figure 1: Lassa Fever Laboratory Confirmed Cases in Sierra Leone, 2007- 2018

Table 1: Cholera Epidemics in Sierra Leone, 1998 to 2013

Year	Cases	Deaths	Cfr %	Remarks
1998	2096	57	2.7	Affected 3 districts: Freetown, Port Loko & Kambia
1999	863	5	0.6	Started in September
2004	513	42	8.2	Affected Western Area, Port Loko & Kambia
2006	2560	99	3.8	Affected Western Area (rural) Kambia, Tonkolili, Port Loko & Kailahun
2007	2219	84	3.79	Afected 11 out of 13 districts
2008	62	1	1.6	Affected Western Area, Port Loko & Kambia
2012	22,971	299	1.3	Affected 12 out of 13 districts
2013	369	2	0.54	Affecting 12 out of 13 districts

Table 2: IDSR diseases/conditions/events reported in Sierra Leone, 2016

Year	2016			2017		
Disease/Condition/Event	Cases	Deaths	Case Fatality Rate %	Cases	Deaths	Case Fatality Rate %
Animal Bite (dog, cat)	2,132	27	1.3	1.482	8	0.5
Diarrhoea with severe dehydration in children under 5 years	26,152	106	0.4	9,679	108	1.1
Suspected Measles	8,133	31	0.4	2,744	1	0
Severe Malnutrition in children under 5years	26,652	174	0.7	26,161	168	0.6
Malaria Tested	2,699,157		2,923,401			
Malaria Positive	1,622,948	2,512	0.2	1,649,644	2,257	0.1
Suspected Meningococcal Menengitis	68	10	14.7	44	8	18.2
Maternal Death		618			490	
Severe Pneumonia	88,568	469	0.5	25,559	449	1.8
Suspected Typhoid Fever	75,097	317	0.4	81,598	53	0.1

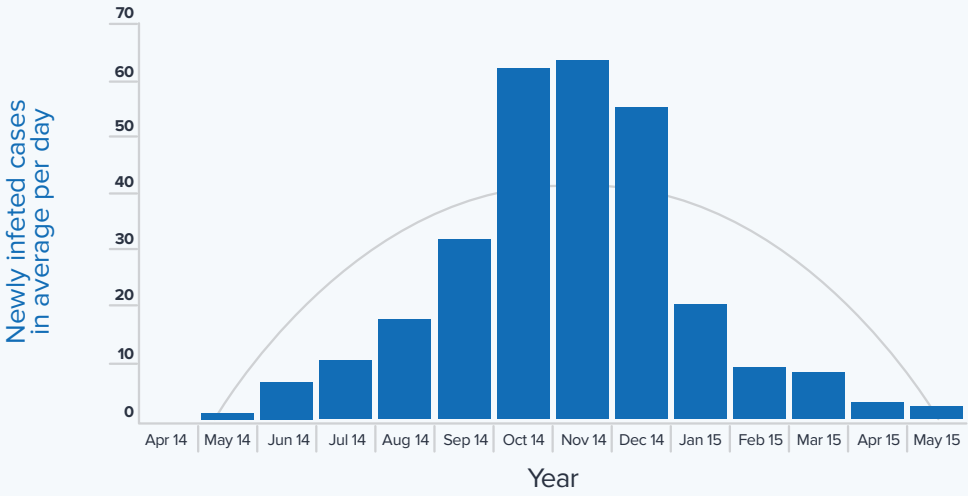


Figure 2:
EVD outbreak
in Sierra Leone,
2014-2016

1.3 Progress towards achievement of international and national targets in health indices

The GHSA was launched in 2014 with the aim to build country capacity to control infectious diseases through a multi-lateral and multi-sectoral approach. In early 2016, Sierra Leone became one of 50 partner countries to endorse the Global Health Security Agenda (GHSA). The Ministry of Health and Sanitation (MoHS) in collaboration with the Office of National Security (ONS), Civil Society Organizations (CSOs) and partners developed a 5-year GHSA roadmap in April 2016 following an assessment of the twelve technical areas.

The 2016 JEE complemented this initiative and revealed challenges in the implementation of 19 IHR core capacities. Progress has been made to address some of these challenges by the launching of the one health platform at national and regional levels which is geared to enhance coordination of multi-sectorial response to health threats.

In 2004, Sierra Leone adopted the Integrated Diseases Surveillance and Response (IDSR) strategy and adapted the technical guideline with the selection of 22 priority diseases. The country successfully rolled out IDSR in all government health facilities and some private and mission facilities also having representatives. The country has also rolled out the electronic integrated diseases surveillance and response (e-IDSR) into the District Health Information System (DHIS2) in all districts in 2016. In 2008, further revision of the IDSR guidelines was conducted to include the International Health Regulations (IHR) 2005.

In 2015, the list of priority diseases was revised and updated from 37 to 47 diseases including Ebola. The majority of these diseases are reported on a weekly or monthly basis. Reporting completeness rate has steadily improved over the years from 74.5% in 2013 to 80% in 2014 and stands at 97% as of September 2017.

1.4 Health Service Organization

Sierra Leone's health service delivery system is diverse; comprising of Government, religious missions, local and international NGOs and the private sector. There are also public, private for profit, private non-profit and traditional medicine practices.

The Ministry of Health and Sanitation is responsible for overall policy direction and is organized into two main divisions at the central level: medical services and management services.

At the district level, the same two-division approach is adopted; district health services and the district health management both under the leadership of District Medical Officer (DMO). Overall, the health service organization is based on the Primary Health Care concept.

The public health delivery system comprises of three levels:

(a) Peripheral health units (Community Health Centre, Community Health Posts, and Maternal and Child Health Posts) for primary health care;

(b) District hospitals for secondary care; and

(c) Regional/national hospitals for tertiary care.

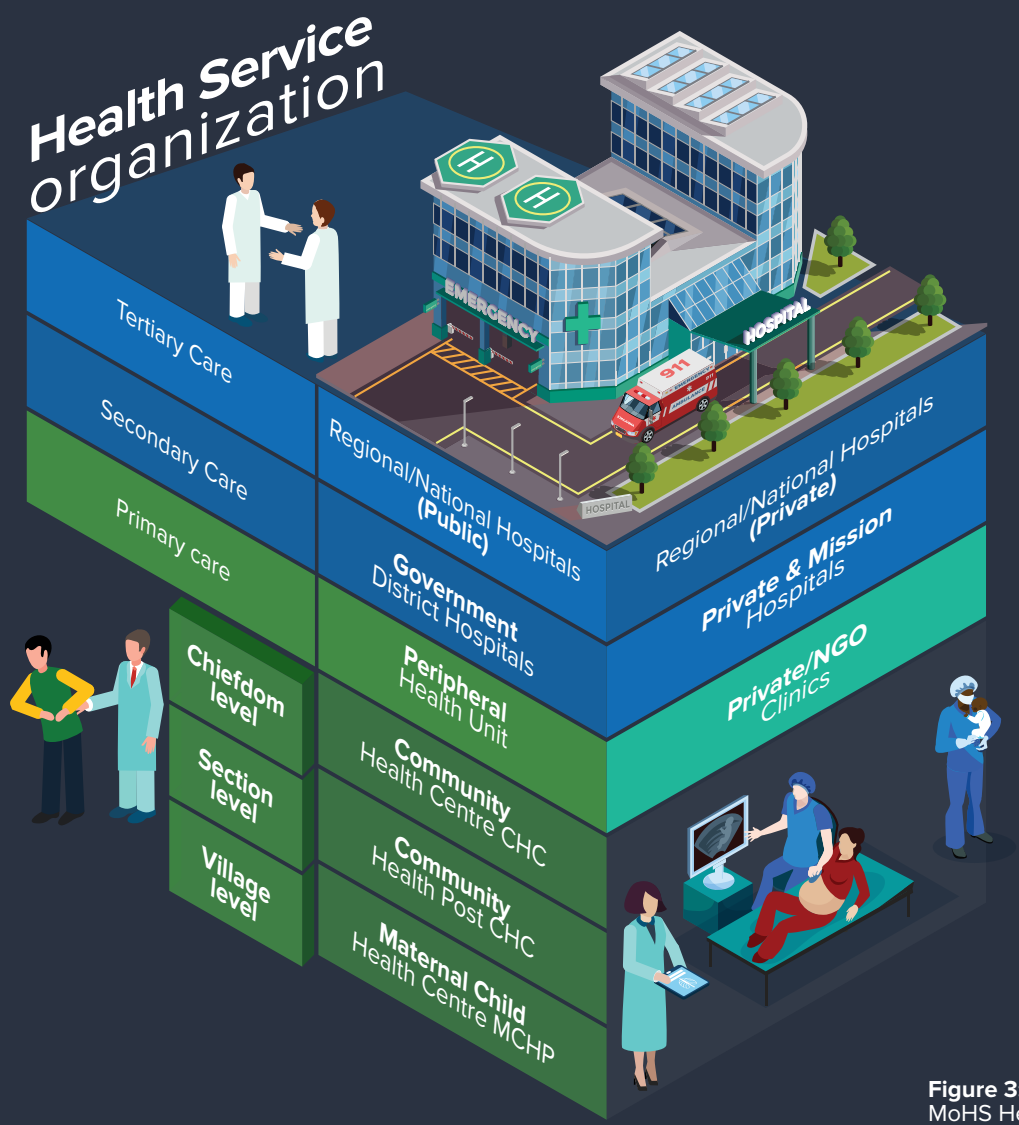


Figure 3: MoHS Health Care Services Organization

1.5 Human Resource for Health

As of 2010, Sierra Leone had only two skilled providers per 10,000, ranking the country the fourth lowest out of 49 priority low and middle income countries for health worker-to-population ratios. A survey of the payroll data and the HRIS database in 2015 found that the country had 275 doctors, 291 midwives, 1,394 nursing officers and state registered nurses and 2,815 state- enrolled community health nurses in the civil service The health workforce suffered with the precipitated deaths of 221 health workers during the EVD outbreak in 2014 and 2015.

Sierra Leone therefore faces a chronic shortage of skilled human health resources. In order to meet the WHO minimum standard of 22.8 skilled health workers per 10,000 population, Sierra Leone requires approximately 14,000 more health workers.

1.6 Health Financing

Health care costs remain very high in Sierra Leone, resulting in poor utilization (on average 0.5 visits per person per year) of health services. reference Since the end of 2008, the 19 local councils (12 district councils, 5 city councils, the Freetown City Council and the Western Area Rural Council) are now responsible for managing health care delivery services in the country. Since 2005, tied grants amounting to about a quarter of the national health budget were transferred to the Local Councils for the District Health Management Team (DHMT). These grants cover activities such as vaccination campaigns, epidemic control, infrastructure improvements and expansion, and the operational expenses of the DHMT.

The per capita total expenditure on health services is approximately $95 USD. The biggest contribution (76%) to this expenditure is from individual service seekers who pay for the user fees (out of pocket expenditure) while 16% is from the government and 13% comes from donors. Expenditure on health as a percentage of total government expenditure is 10%, which is still significantly below the 15% target of the Abuja Declaration. The government is heavily reliant on donors and partner organizations for support of its health programs with funds flowing through budget support or directly to the Ministry and implementing partners.

1.7 The International Health Regulations-IHR

The revised International Health Regulations (IHR) were adopted in 2005 and entered into force in 2007. Under the IHR, States Parties are obliged to develop and maintain minimum core capacities for surveillance and response; including at points of entry, in order to detect, assess, notify, and respond to any potential public health event of international concern.

These capacities were to be developed by June 2012, with provision for two extensions up to June of 2016. In accordance with paragraph 1 of Article 54 of the IHR, countries must report on IHR implementation to the World Health Assembly (WHA) and the World Health Organization (WHO) Executive Board.

At the Sixty-eighth WHA in 2015, the IHR Review Committee on Second Extensions for Establishing National Public Health Capacities and on IHR (2005) Implementation recommended "options to move from exclusive self-evaluation, to approaches that combine self-evaluation, peer review and voluntary external evaluations involving a combination of domestic and independent experts".

The WHO IHR Monitoring and Evaluation Framework was developed to address this recommendation. The Framework consists of four components; one mandatory, Annual Reporting; and three voluntary, exercises (SimEx), after-action reviews (AAR) and joint external evaluations (JEE).

1.8 IHR JEE and other complementary assessments

1.8.1 Joint External Evaluations-JEE

The International Health Regulations, or IHR (2005), represent an agreement between 196 countries including all WHO Member States to work together for global health security. Through IHR, countries have agreed to build their capacities to detect, assess and report public health events. WHO plays the coordinating role in IHR and, together with its partners, helps countries to build capacities. IHR also includes specific measures at ports, airports and ground crossings to limit the spread of health risks to neighbouring countries, and to prevent unwarranted travel and trade restrictions so that traffic and trade disruption is kept to a minimum.

The JEE is a voluntary, collaborative, multi-sectoral process to assess country capacity to prevent, detect and rapidly respond to public health risks occurring naturally or due to deliberate or accidental events. The purpose of the external evaluation is to assess country-specific status, progress in achieving the targets under the IHR, and recommend priority actions to be taken across the technical areas being evaluated. External evaluations are regarded as an integral part of a continuous process of strengthening capacities for the implementation of the IHR. The JEE mission reports are the result of these evaluations.

In 2016, Sierra Leone conducted an internal self-assessment and later a full scale JEE the findings of which were the basis for the development of this NAPHS

1.8.2 The Global Health Security Agenda(GHSA)

The Global Health Security Agenda (GHSA) was launched in February 2014 to advance a world safe and secure from infectious disease threats, to bring together nations from all over the world to make new, concrete

commitments, and to elevate global health security as a national leaders- level priority. The G7 endorsed the GHSA in June 2014. GHSA acknowledges the essential need for a multilateral and multi-sectoral approach to strengthen both the global capacity and nations' capacity to prevent, detect, and respond to infectious diseases threats whether naturally occurring, deliberate, or accidental.

In partnership with U.S. government sister agencies, other nations, international organizations, and public and private stakeholders, CDC seeks to accelerate progress toward a world safe and secure from infectious disease threats and to promote global health security as an international security priority.

Through a partnership of nearly 50 nations, international organizations, and non-governmental stakeholders, GHSA facilitates collaborative, capacity-building efforts to achieve specific and measurable targets, while accelerating achievement of the core capacities required by the World Health Organization's (WHO's) International Health Regulations (IHR), the World Organization of Animal Health's (OIE) Performance of Veterinary Services Pathway, and other relevant global health security frameworks.

The GHSA partnership has aided several countries to move faster towards attainment of capacities spelt out under IHR (2005) and has in addition to individual countries, advisory partners that include the WHO, FAO, OIE, Interpol, ECOWAS, the UN Office for Disaster Risk Reduction (UNISDR), and the European Union.

1.9 The journey from IHR JEE to Country Planning

The development of the Sierra Leone National Action Plan for Health Security (NAPHS) began with the voluntary enrolment of Sierra Leone among the countries to undertake the JEE. Sierra Leone was among the very first nations in Africa to accept to undergo the JEE.

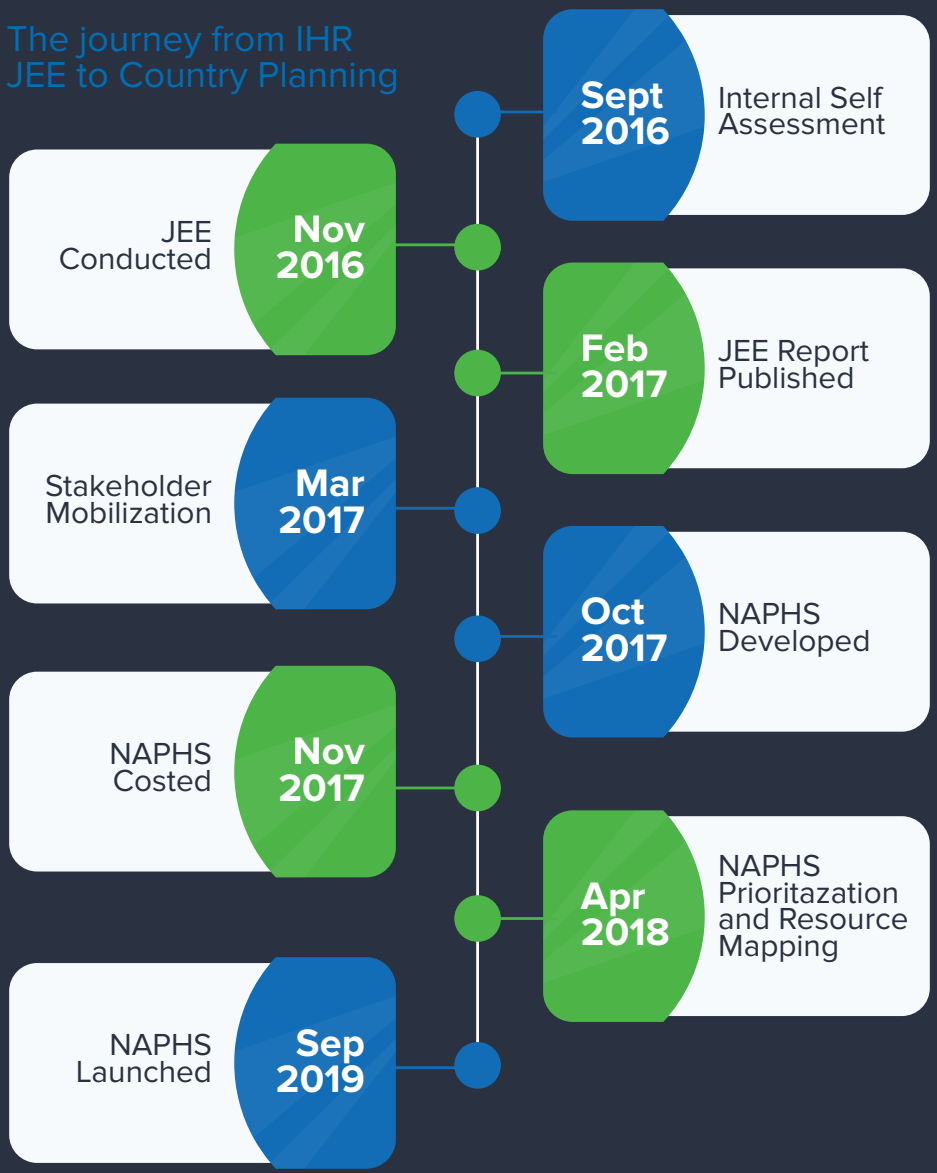


Figure 4: Journey from IHR JEE to Country Planning

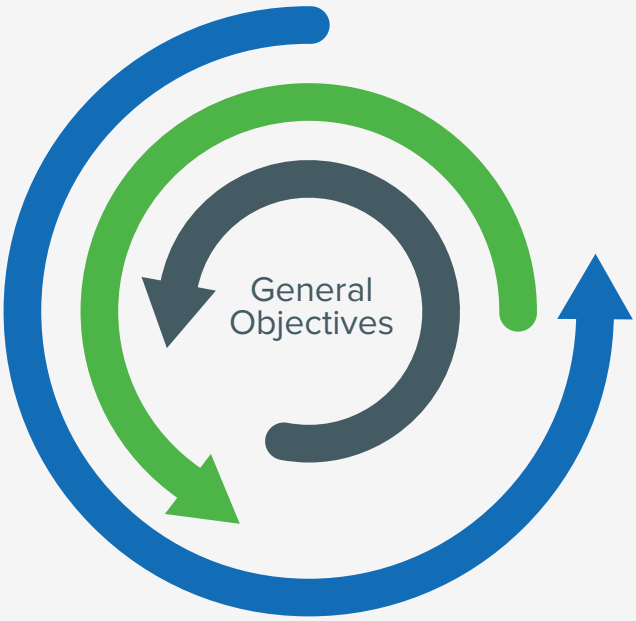
2 VISION, MISSION, OBJECTIVES, GUIDING PRINCIPLES AND CORE VALUES OF THE ACTION PLAN

VISION

A country safe and secure from health and economic consequences of public health".

MISSION

"A health system able to prevent, detect and respond to public health threats through all – sector collaboration.



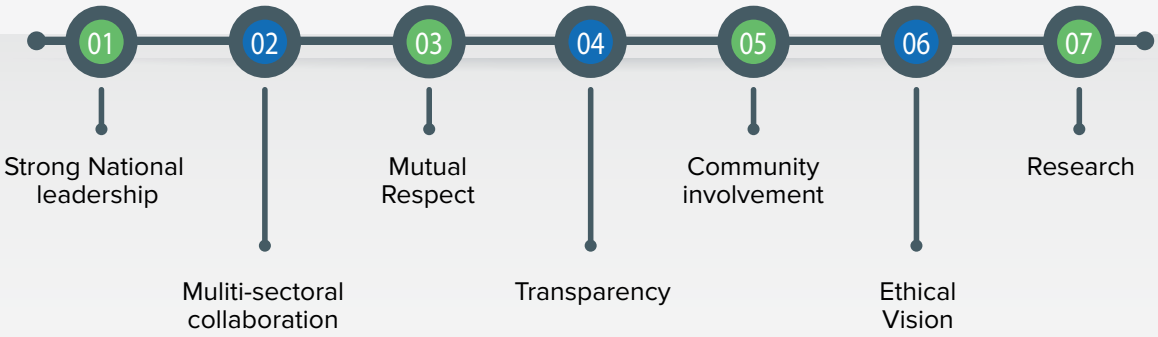
Prevent the likelihood and reduce the consequences of outbreaks and other public health hazards.

Build national capacities for early detection and effective response to public health emergencies and other events of public health concern.

Foster all-sector partnerships for effective prevention, detection and response to public health emergencies and other events of public health concern.

Core Values 2016

A minimum set of principles have been identified to guide behaviour and establish the right environment for inter-sectoral engagement during the implementation of this plan.



3 METHODOLOGY PROCESS FORTHE DEVELOPMENT OF THE ACTION PLAN

3.1 Review of JEE and other Assessments Recommendations

In accordance with the WHA recommendation WHA69/5.231 for States Parties to develop National Action Plans within one year of the JEE, the MoHS started mobilizing other government agencies and partner organizations in March 2017 to set in motion plans for the development of the country's National Action Plan for Health Security (NAPHS). The JEE report, which was published in February 2017, identified gaps in capacity and a series of coordination meetings were held under the national One Health coordination platform to move forward in the process

In October 2017, over 75 participants attended a multi-disciplinary and multi-sectoral workshop organized by the Sierra Leone MoHS to develop the country's NAPHS. These in-country experts were drawn from MoHS directorates and disease control programs, other government departments and agencies and partner organizations (WHO, IOM, FAO, US CDC, China CDC, Public Health England, DFID and GIZ).

A situation analysis of the country's IHR status was conducted to take stock of the current level of capacities for health security. A review of the JEE report, draft 2016 IHR 2-year work plan and the CDC-supported GHSA 5-year country roadmap was conducted in a participatory and inclusive process. This was complimented by discussion and review by the national experts in working groups drawing representation from IHR-relevant sectors. The JEE report recommendations were reviewed for relevance and to ensure existing weaknesses and gaps are addressed per thematic area.

3.2 Prioritisation of Activities by Technical Area

Based on the result of the situation analysis, thematic working groups developed objectives and strategic actions that address the weaknesses and gaps in the country's health security across the 19 thematic areas. Responsible directorates, programs, agencies or authorities for implementation per strategic action were identified and relationships to existing plans, project or activities spelled out.

This prioritization process with cross-sector consensus ensured making the best use of resources, ensuring that the greatest needs are addressed and that both the planning and resource allocation are rational and transparent.

Each strategic action was operationalised through development of low level activities with coherence to fully address the priority strategic actions, objectives and situation analysis recommendations. A logical framework for coordination and accountability among stakeholders was developed per activity with identification of level of responsibility, output indicators, implementation assumptions

and implementation schedule. This will be essential for the monitoring and periodic review of implementation of the plan and inform necessary adjustments to the plan. The prioritization process will ensure that stakeholders are working towards common goals and expected outcomes.

3.3 Linkage with other Programmes/ Initiatives

In the process of developing the plan, a comprehensive review of the strategic actions was conducted to identify overlap with existing plans, programs and activities. While taking note of this overlap for synergy and integration, necessary adjustments in the plan were made for efficiency and to eliminate duplication.

The MoHS has ensured that proposed activities are linked with the draft National Health Sector Strategic Plan. This NAPHS is also linked with other on-going national strategies, programs and projects including the Health Sector All Hazard Emergency Preparedness and Response Plan, the REDISSE project, the One Health coordination framework, the 5-year GHSA roadmap, the Environment Protection Agency Strategic Plan 2017-2021 and the Sierra Leone Agenda for Prosperity. These linkages will enhance adequate and sustainable resource allocation, advocacy, monitoring, accountability and efficiency during implementation.

3.4 Sector Wide Approach

Preparedness for and management of health security threats requires a coordinated multisectoral approach as capacities for surveillance, identification of threats, laboratory confirmation, risk assessment, response and coordination of efforts may involve many sectors outside human health. The process of developing the NAPHS adopted a Sector Wide Approach (SWAp) with the government agencies working together with development partners.

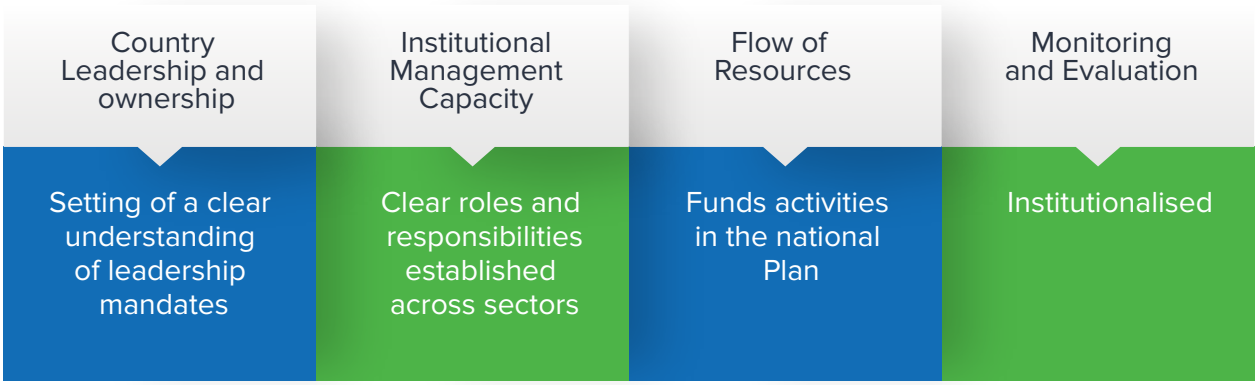


Figure 5: Benefits of the SWAp

During the preparatory period leading to the JEE and to the development of the NAPHS, the MoHS took leadership and mapped all government agencies and partner organizations who play a role in implementing health security activities. This widened the scope of participation in conducting the JEE and in action planning.

3.5 Strategic Partnership Planning Workshop Scope Objectives

In line with the WHO Strategic Planning Portal (SPP) framework, Sierra Leone fully kept national and international partner organizations including UN agencies (WHO, FAO, OIE) informed of the preparations and progress during the development of the national action plan. This enabled international partners to support the preparatory activities and the planning workshop.

The MoHS also mobilised strategic partnership with other government ministries and agencies and in-country health partners whose cross-disciplinary expertise was critical to the successful preparation and action planning.

This further embeds the One Health approach and integrated health security development in the planning process. The MoHS will take forward this partnership with all relevant stakeholders and existing frameworks (FAO, OIE, Global Health Security Agenda, World Bank and other development agencies) to support the plan for expedited IHR implementation with transparency and accountability in external investment, progress, and the delivery of action plan. Information from the monitoring and evaluation benchmarks will be openly shared including on the WHO SPP platform.

Figure 6: Strategic partnerships for health security – Sierra Leone

4 JEE FINDINGS AND COMPONENTS OF THE NATIONAL ACTION PLAN FOR HEALTH SECURITY

4.1 Findings of Joint External Evaluation

The Joint External Evaluation team evaluated all the 19 core capacities as per the International Health Regulations (2005). Each core capacity has one or more indicators that were scored between 1 (lowest capacity) and 5 (maximum capacity). The figure below summarizes the scores for the various core capacities.

4.2 Components of NAPHS

The NAPHS was developed based on all the 19 core capacities/technical areas as shown below. For each core capacity, objectives and appropriate activities to address the objectives were developed with more focus on areas that had a poor score. The objectives were formulated based on the JEE indicators.

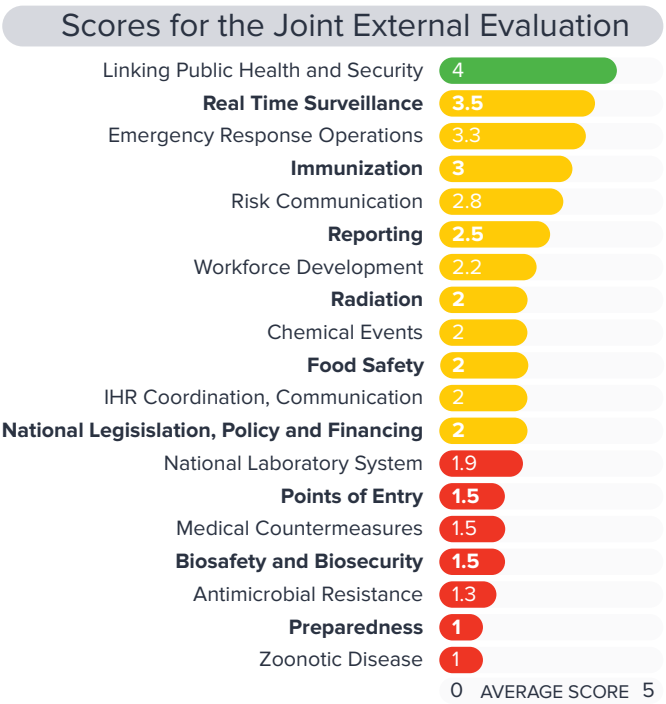


Figure 7: JEE Average Score (Maximum 5)

Figure 8: JEE Technical Areas

4.3 Costing of Activities and Summary of Cost Categorisation by JEE Thematic Areas

The Government of Sierra Leone with the support of partners involved in the JEE process convened a workshop to review and cost the draft NAPHS. This workshop that was held on 7th – 10th November 2017 brought together key government agencies and stakeholders as well as IHR and costing experts from WHO Regional Office and the Headquarters. The NAPHS contained the realistic activities required to attain the desired objectives as outlined in the recommendations of the JEE process. Further work was then done to identify quantities of goods/services that would be required, estimate the prices and adjust the proposed activities based on costing results.

The 5-year cost estimate developed during the planning exercise for implementing the Sierra Leone NAPHS is approximately US$ 291million. The costs of implementation are heavier on the 1st year of the implementation period with the costs almost evenly distributed over the rest of the 4 years. The costs are slightly skewed towards the earlier portion of the implementation period.

Thematic Area	2018	2019	2020	2021	2022	Total	Usd
Prevent	56,256,776,138	56,182,444,338	46,879,879,138	46,816,280,138	56,597,865,138	262,733,244,890	35,266,207
Detect	348,633,434,465	301,937,855,965	310,286,208,040	282,604,417,040	305,869,215,040	1,548,586,130,550	207,863,910
Respond	31,247,654,500	14,041,873,000	18,275,492,667	13,616,199,667	15,611,744,667	92,792,964,501	12,455,431
Other IHR Hazard and POEs	115,594,595,077	100,238,243,077	31,362,706,877	10,318,833,950	7,294,208,950	264,808,587,930	35,544,777
Total (Leones)	551,732,460,179	472,400,416,379	406,804,286,721	353,355,730,795	385,373,033,795	2,168,920,927,870	
Total (Usd)	74,058,048	63,409,452	54,604,602	47,430,299	51,727,924	291,130,326	291,130,326

Table 3: Costs of NAPHS activities by year of implementation

4.4 Cost breakdown by technical area over years

Virtually all the technical areas have their costs of implementation of the NAPHS spread over the whole 5 years. The costs are skewed towards the earlier portion of the implementation period. This is subject to change after the broad based stakeholders meeting to prioritize the activities has been held.

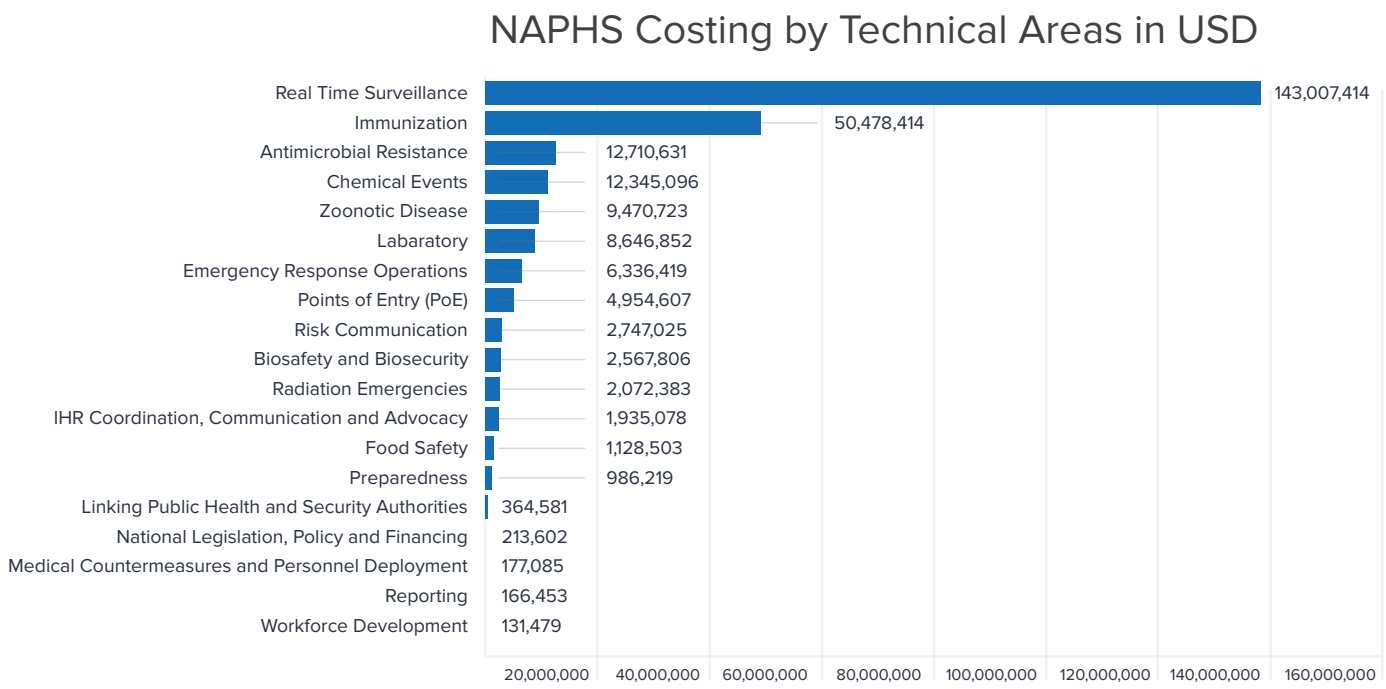


Figure 9: NAPHS Costing by Technical Areas in USD

4.5. High Prioritized Activities

Item	Amount (LE)	Amount (USD)
Medical Counter-measures and Personnel	132,630,000	17,270
National Legislation, policy and Financing	538,875,510	70,166
Reporting	560,129,000	72,933
Linking Public Health and Security	712,630,000	92,790
Preparedness	895,300,000	116,576
Radiation Emergencies	2,557,398,000	332,995
Food Safety	3,383,571,000	440,569
Emergency Response Operations	5,166,051,500	672,663
Bio safety and Bio security	6,124,939,000	797,518
Workforce development	6,265,592,000	815,832
Risk Communication	7,132,482,480	928,709
IHR Coordination	7,140,000,000	929,688
Laboratory	11,041,238,000	1,437,661
Zoonotic Diseases	11 525,646,690	1,500,735
Chemical Events	11,925,743,000	1,552,831
JEE Indicator PoE.1	12,177,678,166	1,585,635
Antimicrobial Resistance	19,083,684,592	2,484 855
Immunization	93,410,747,000	12,162,858
Real Time Surveillance	189,463,254 ,000	24,669,695
Total (USD)	389,237,589,938	50,681,978

Table 4: High Priorited Activities

4.6 Sierra Leone Health Security Naphs Financial Sustainability

- Value-based investment may take time to realise and careful financial management is needed year to year
- Estimating the certainty that domestic or donor resources are sustainable each investment year will allow the country to manage and mitigate the risk
- Long-term progress against the IHR requirements are more likely to be met using long- term financial planning methods
- The resource mapping exercise should be reiterated on a smaller scale and with a degree of regularity to ensure appropriate adjustments are made.

4.7 Financing of National Action Plan (Domestic, SPP and Further Donor Engagements)

MoHS and MAF will use the NAPHS as an advocacy tool to mobilize resources for both domestic and external sources. The Government of Sierra Leone, through the Ministry of Finance and economic development, will play a lead role of improving domestic revenues. An increase in government revenue will indirectly impact the capacity of the government to finance health services. It is anticipated that a new Health Financing strategy is able to collate and develop a rigorous sector-wide budget, resource map, and processes to better manage the flow of funds. For additional funding resources, MoHS and MAFS will advocacy for more budget allocations to their respective ministries. MoHS and MAFS will approach donors and development partners for additional funding for this plan.

4.8 Platform For National Action Plan

4.8.1 Linkage with existing plans

Sierra Leone already has a One Health platform that involves collaborative efforts of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, plants and our environment. This platform was developed based on the following global strategies and policy frameworks: WHO International Health Regulations (IHR-2005), Global Health Security Agenda (GHSA), OIE (World Organization for Animal Health), National Public Health Emergency Management Committee (NPHEMC).

Implementation of the NAPHS will utilize the existing coordination mechanisms with multi sectoral collaboration with the different stakeholders to avoid duplication of resources, while enhancing synergisms with the existing plans, programs and ongoing activities to maximize health gains. The ongoing World Bank Regional Disease Surveillance Strengthening Enhancement (REDISSE) is one of the projects that will have synergic effects to the implementation of NAPHS. Others include: Sierra Leone

National health sector strategic plan 2017 to 2021 and the National Health Sector Recovery Plan (2015 – 2020),

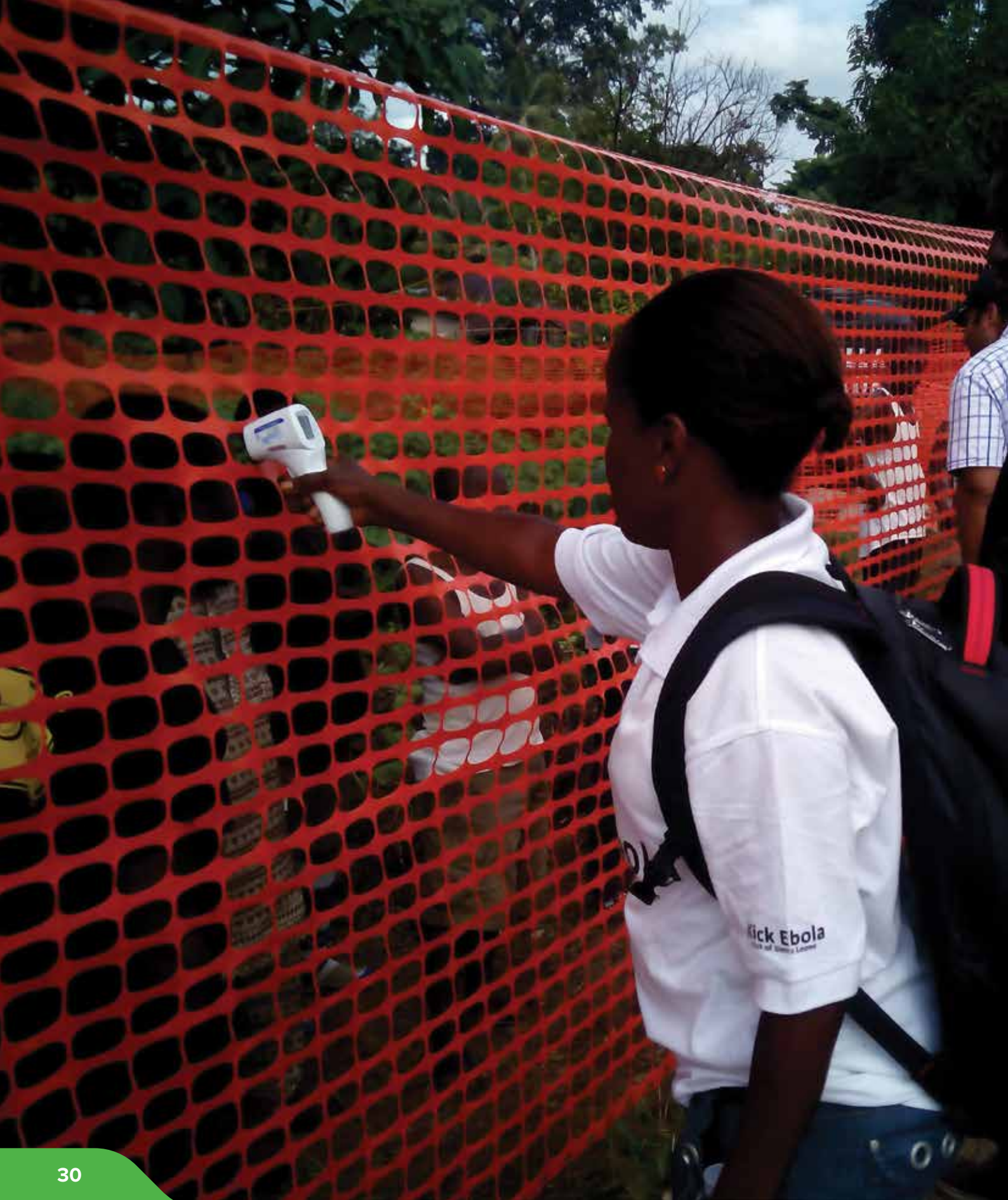
4.8.2 Interplay between Relevant Sectors

The Government of Sierra Leone will make deliberate efforts to collaborate with various stakeholder groups: government sectors, UN agencies, international organizations, partners, civil society, and private sector (e.g., health, environment, economy) to jointly achieve the desired purpose of the NAPHS implementation.

By engaging multiple sectors, partners can leverage knowledge, expertise, reach, and resources, benefiting from their combined and varied strengths as they work toward the shared goal of securing Sierra Leone's Public Health security health capacity.

The public health problems of the NAPHS are complex, and in many cases, a single health issue may be influenced by interrelated social, environmental, and economic factors that can best be addressed with a holistic, multi-sectoral approach.

Figure 10: National Action Plan Other Enablers


Kick Ebola

4.9 Contribution to Health System Strengthening and UHC 2030

Implementation of the NAPHS will make significant investments in the different health systems blocks; Leadership and governance, Service delivery, Human resources for health, Health financing, Medical products and health technologies, Health information systems and research, Health security and emergencies, Community engagement and health promotion there by contributing to building a robust, resilient and responsive health system for Sierra Leone. These plans form the foundation for better health security, preventing deaths, tackling diseases, strengthening the health system and improving the health and well-being of the population.

An effective health care system will contribute to attainment of Universal Health Coverage (UHC) by ensuring that people have access to the health care they need without suffering financial hardship. It also helps drive better health and development outcomes.

This approach is key to ending extreme poverty and increasing equity and shared prosperity. It is also an essential part of the Sustainable Development Goals (SDGs): SDG 3 includes a target to “achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.” SDG 1, with the goal to end poverty in all its forms everywhere, is also in peril without UHC, as hundreds of millions of people are impoverished by healthcare costs every year.

5 DELIVERY OF THE ACTION PLAN

5.1 Roles and Responsibilities of Key Stakeholders

Various stakeholders will be active for the duration of the implementation of the NAPHS. The roles will vary from providing leadership to carrying out the activities themselves. Some stakeholders will be depended upon to provide support either technical, financial or the intangibles such as community support. Overall, the NAPHS requires all the actors to work concurrently so that the targets are met across the board while monitoring progress towards the achievement of goals set.

The roles and responsibilities of the various entities that will be involved in the implementation include the following:

OFFICE OF THE PRESIDENT	
PARLIAMENT	
LINE MINISTRIES	**OTHER**
Ministry of Health and Sanitation	Office of National Security - ONS
Ministry of Agriculture and Forestry	Military and Ministry of Defence
Ministry of Finance	Paramount chiefs & Councillors
Ministry of Internal Affairs	Pharmacy Regulatory Board
Ministry of Local Government and Rural Development	Sierra Leone Standards bureau
Ministry of Technical and Higher Education	Environment Protection Agency – EPA
Ministry of Information and Communication	Medical & Dental Council and Nurses Board
Ministry of Marine Resources	Ministry of Transport and Aviation
Ministry of Social Welfare, Gender and Children's Affairs	WHO, OIE, FAO, other UN Agencies, CDC,
Ministry of Foreign Affairs	National and International Agencies
	Academic Institutions
	Civil Society
	The Media

Table 5: Roles and Responsibilities of Key Stakeholders

5.2 Coordination Mechanisms and Framework for Delivery of Action Plan

The implementation of the NAPHS will be delivered through the various fora with a strong country ownership, commitment and political will. In addition, a continuous engagement of stakeholders, collaboration and support from partners will further ensure the actualization of NAPHS. The coordination mechanisms and framework for delivery of the national action plan for health security 2018-2022 is designed to further strengthen existing coordinating structures such as inter-ministerial council and one-health coordinating committees. The figure 11 highlights the inter-relationships in coordinating structures at the national level.

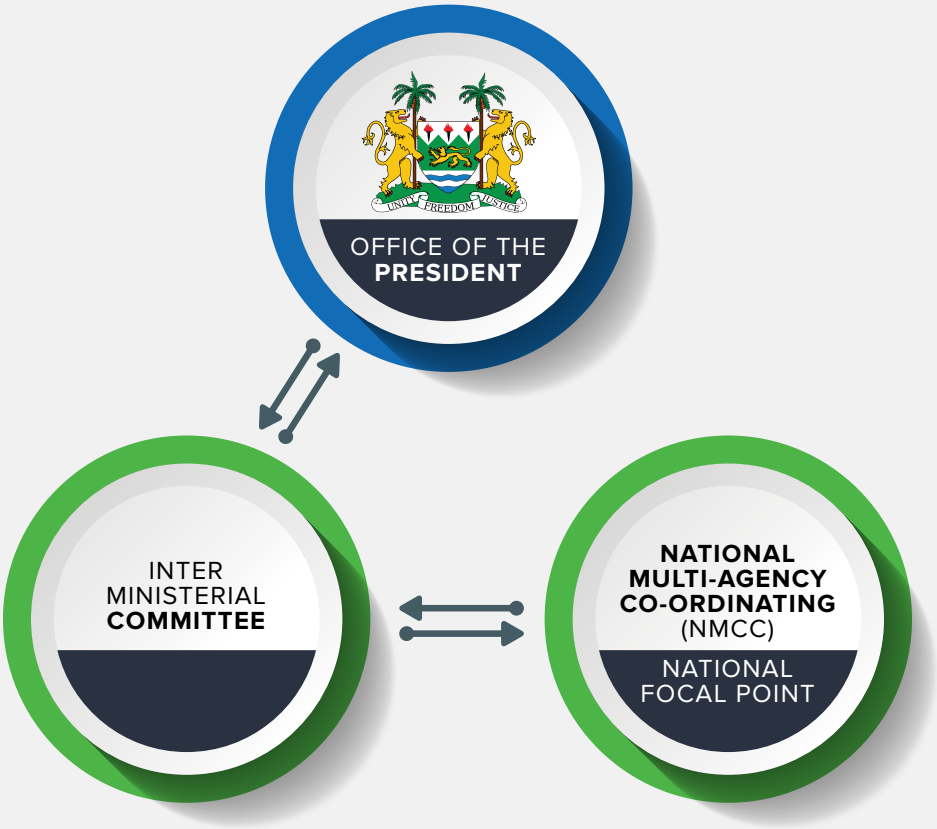


Figure 11: National Inter-ministerial Coordinating Committees structure

5.3 Inter-Ministerial Committee for implementation of NAPHS

The Inter-Ministerial Committee is the highest decision-making body responsible for policy formulation and coordination oversight and decision-making. The Committee will present to cabinet and the Presidency and secure high- level strategic decisions as and when necessary - on issues of NAPHS, IHR, including emergencies and public health threats.

5.4 District level implementation of NAPHS

The district health management teams (DHMT) are pivotal in implementation of various national health policies and strategies, and the implementation of NAPHS will leverage on the existing coordinating structures at the district level including: the Public Health Emergency Management Committee (PHEMC) which is under the leadership of the DMO; the District Disaster Management Committee which requires strong participation of the DMO as a member; and the District One- Health Coordination Committee which DMO chairs and DAO co-chairs.

The DMO will oversee, and be responsible for coordinating and updating relevant MDAs and other stakeholders through existing fora. The DMO will ensure strong collaboration, effective information sharing and coordination with relevant MDAS in the districts. In addition, the district structures will share information regularly and report on the implementation of NAPHS with national structures.

5.5 Monitoring and Evaluation of the Plan

Monitoring and evaluation is an essential component for the successful implementation of any program. The NAPHS will be monitored and evaluated through a comprehensive Monitoring and Evaluation plan that will cover all thematic areas of the health security. The plan also includes a comprehensive framework that addresses indicator selection, related data sources, and analysis and synthesis practices, including quality assessment, performance reviews, communication, and utilization. The plan will also serve as the mechanism for districts and national reporting, and aligning partners at districts and national levels around a common approach to country support, and reporting requirements.

List of Contributors

The Government and People of Sierra Leone acknowledge the contributions made by the following individuals during the preparation of this publication.

Government of Sierra Leone	
Amara Jambai	MoHS
Sorie Kamara	MAF
Thomas T Samba	MoHS
Amadu Tejan Jalloh	MAF
Gack Jalloh	MAF
Amara Leno	MAF
Abdul Rahman Conteh	MAF
Alie D. Jalloh	EPA
Hamidu D. Mansaray	EPA
Lovetta Joanah	EPA
Ansumana Sillah	MoHS
Alfredo J Moösa	MoHS
Alie H. Wurie	MoHS
James Squire	MoHS
Anthony Foday	MoHS
Charles Ngombu	MoHS
Dauda Kamara	MoHS
Edward Kamara	MoHS
Festus.U. Amara	MoHS
Florence Max-Mcarthy	MoHS
Harold Thomas	MoHS
Christiana Fortune	MoHS
James Akpablie	MoHS
Manso S. Kargbo	MoHS

Government of Sierra Leone	
Mohammed B. Jalloh	MoHS
Musa Bockarie	MoHS
Roland Conteh	MoHS
Samba Kamara	MoHS
Zein Sama	MoHS
P Daniel	NPHA
Wilshire Johnson	PBSL/MoHS
Agnes k. Dumbuya	LABS./MoHS
Fay Chaloba	LABS./MoHS
Fatmata R.D. Jalloh	LABS./MoHS
Doris Harding	LABS./MoHS
Ahmed J. Samba	LABS./MoHS
Dorcas Wanjohi	LABS./MoHS
Rebecca B. Neale	NDSP/MoHS
Kumba M. Kamara	SLCAA
Doris K. Sonda	SLCAA
Patrick K. Lansana	PHNEOC-MoHS
Rubiatu Nicol	SLRCS
Mohamed Boie Jalloh	RSLAF/Medical
Mohamed P. Jalloh	ONS
John K. Sesay	ONS
Sabiatu Bakar	ONS
Roland Suluku	Njala University

Partners & Stakeholders	
Alex Chimbaru	WHO
Charles Njuguna	WHO
Shikanga O-Tipo	WHO
Anderson Latt	WHO
Anna Maruta	WHO
Claudette Amuzu	WHO
Jonathan Green	WHO
Robert Musoke	WHO
Stanley Muoghalu	WHO
Steve Sesay	WHO
Tobin Ekaete	WHO
Victor Caulker	WHO
Wilson Gachari	WHO
Immaculate Nabukenya	WHO
Victor Tugumizemu	WHO
Ludy Suryantoro	WHO HQ
Glenn Lolong	WHO HQ
Bismarck Adusei	WHO Consultant
Paul Verboom	WHO Consultant
Tushar Singh	US-CDC
Regan Hartman	US-CDC
Gladys Anyo	US-CDC
David H. Jimmy	US-CDC

Partners & Stakeholders	
Michael Mahar	US-CDC
Ansu Kamara	US-CDC
Nyabengi Tito Tipo	FAO
Tesfai Tseggai	FAO
Momoh .F.Lavahun	FAO
Garba Maina Ahmed	FAO
Dorothy Peprah	USAID
Marcus Eder	PHE
Ian Rufus	PHE
Duraman Conteh	GIZ
Sandy Jasama	AfDB
Tao Shen	China CDC
Jinsong Li	China CDC
Isata Wurie	APHL
Joseph M. Sembo	IOM
Sanusi Savage	IOM
Dayo	
S. Walters	e-Health
James Bangura	PREDICT
Mukeh Fahnbulleh	P&R
Tina Dickenson	Breakthrough Action
James S. Fofanah	Breakthrough Action


MAMI IN PIKIN