ECOWAS REGIONAL STRATEGIC PREPAREDNESS AND RESPONSE PLAN FOR PUBLIC HEALTH EMERGENCIES

June 2019

ECOWAS REGIONAL STRATEGIC PRE-PAREDNESS AND RESPONSE PLAN FOR PUBLIC HEALTH EMERGENCIES

Table of Contents

Foreword 5

Acknowledgements 6

Acronyms 7

Background 8

- Rational 10
- Vision 11
- Mission 11
- Process of Development of Strategic Plan 11

Structure of Strategic Plan 14

Section One - Situational Analysis 17

SWOT Analysis 27

- Strengths 27
- Weakness 27
- Opportunities 28
- Threats 28

Section Two: Public Health Emergency Preparedness and Response Frameworks 29

Section Three: Thematic Areas for the Regional Strategic for Epidemic and Health Emergencies 33

Section Four: Monitoring and Evaluation 87

- Steering Committee of strategic Plan 112

Annexes

Figures and Tables

Table 1: Country Specific Analysis for Field Epidemiologists.....22

Figure 1: Map Showing the Gap and Available advanced FELTPs 21

Figure 2: Map showing the Gap and available frontline FELTPs 23

Figure 3: WAHO Public Health Emergency Preparedness Framework 30

Figure 4: WAHO Public Health Emergency Response and Recovery Framework 32

Foreword

West Africa continues to experience recurrent epidemics of infectious diseases and other public health emergencies. These events have devastating social, economic and political consequences that are detrimental to regional stability. The most recent outbreak of Ebola Virus Disease, which hit six ECOWAS Member States (Guinea, Sierra Leone, Liberia, Mali, Nigeria and Senegal) from 2014 to 2016, revealed weak regional response capacities to outbreaks in terms of disease surveillance, early warning, preparedness and response.

To enhance the regional response capacities, the 47th ECOWAS Authority of Heads of State in May 2015 endorsed the establishment of the Regional Centre for Surveillance and Disease Control (ECOWAS/RCSDC) and mandated the West African Health Organisation (WAHO) to support the operationalisation of this specialised agency. The main vision was to accelerate and support ECOWAS Member States in their efforts to comply with International Health Regulations (IHR) which require all States Parties to develop a set of core capacities to be prepared for, responded to and recovered from health emergencies. The article 57 of IHR also provides a framework for collaboration of countries in regional blocs like the African Union (AU) and ECOWAS to facilitate joint application of IHR.

WAHO, as part of its mandate, undertook the development of the ECOWAS regional strategic preparedness and response plan for public health emergencies.

The document is composed of an overview of the context and five sections. The background gives insight into the rationale, the vision, the mission, and describing how it has been developed. Chapter 2 describes the situation analysis, the gaps and needs of member states. Chapter 3 introduces the public Health emergency preparedness and response frameworks. Chapter 4, the core of this manual, presents thematic Areas for the Regional Strategic for Epidemic and Health Emergencies. The last section focus on monitoring Evaluation and the costing of this plan. The plan concludes with the annex.

Users and readers of this document are encouraged to share with WAHO and RCDSC the lessons learned during the implementation of the strategies and guidance for possible incorporation into future revisions and evaluations.

I do hope you find this strategic plan a valuable tool in assisting in developing innovative approach to strengthen resilient health systems in West Africa region.

Each country, each actor and each partner, regardless of their level of intervention, is invited to accompany the effective implementation of this regional plan so that together we can tackle more effectively public health emergencies.

Finally, WAHO is really grateful to the World Bank (WB) through the REDISSE project, for supporting the development of this document. I would like to renew my gratitude and that of all the staff of the institution to all other technical experts and partners for their valuable

Prof Stanley OKOLO

Director General, WAHO

Acknowledgements

We sincerely thank the Heads of State and Government, the Council of Ministers, the Assembly of Health Ministers, and the ECOWAS Commission for their continued support to WAHO and for their leadership throughout the ECOWAS regional preparedness and response plan for public health emergencies 2020-2024 development process.

Many thanks to Population and Health Consult Limited (PHC) for their technical expertise; Partners in ECOWAS region for their insights, contributions, inputs, time and commitment throughout the development process and the World Bank for funding this activity.

We extend our sincere appreciation to the Ministries of Health and their respective agencies and partners from the various Member States for their information, rigorous review and input. We appreciate the support from our stakeholders in the different countries who greatly supported and contributed to this plan through their respective representatives.

We would like to express our sincere gratitude to members of the WAHO team for their tireless efforts, leadership, commitment, technical and managerial support throughout the development of an evidence-informed, results-oriented and costed WAHO regional preparedness and response plan for public health emergencies 2020-2024.

Acronyms

ACoDD	:	AFENET Corp of Disease Detectives
AFENET	:	African Field Epidemiology Network
Africa CDC	:	Africa Centers for Disease Control and Prevention
ECOWAS	:	Economic Community of West African States
ECOWAS/RCDSC	:	ECOWAS Regional Centre for Disease Surveillance and Control
EOC	:	Emergency Operations Centre
EVD	:	Ebola Virus Diseases
FE (L) TP	:	Field Epidemiology (and Laboratory) Training Programme
IDSR	:	Integrated Disease Surveillance and Response
IHR	:	International Health Regulations
IPC	:	Infection Prevention and Control
JEE	:	Joint External Evaluation
NAPHS	:	National Action Plans for Health Security
NCI	:	National Coordinating Institutions
REDISSE	:	Regional Disease Surveillance Systems Enhancement
SLIPTA	:	Stepwise Laboratory Quality Improvement Process towards Accreditation
UNICEF	:	United Nations International Children's Emergency Fund
WAHO	:	West African Health Organization
WHO	:	World Health Organization

Background

The West African Health Organization (WAHO) is the specialized agency charged with the responsibility of safeguarding the health of the peoples in the Economic Community of West Africa States (ECOWAS) region. WAHO executes this mandate through the initiation and harmonization of the policies of member States, pooling of resources, and cooperation with one another and with others for a collective and strategic combat against the health problems of the region [1]. The Economic Community of West African States (ECOWAS) was created on 28th May 1975 and constitutes one of the major African Regional Economic Communities. WAHO is entrusted with a political mandate by the Heads of State and Government to ensure coordination of regional health interventions within the ECOWAS region [2].
The WAHO strategic Plan 2016 - 2020 goal 1 is to promote priority health policies and programs in the region. Priority number 3 is epidemics and health emergencies. The strategic plan states the major challenge as low capacity for the prevention and management of public health emergencies. This challenge accounts for numerous deaths and impedes regional integration. The first step to mitigate this is to have a regional plan to guide the process. The plan sets out to build the capacities for surveillance, disease prevention, response and resilience to epidemics and other complex public health emergencies [3]

There have been several public health emergencies in the region which has resulted in several deaths, disabilities and loss of property due to the weak system including low capacity to respond and a lack of a preparedness plan. Over the years, the region has seen several epidemics/outbreaks of infectious diseases [4–7] including the Ebola Virus Diseases (EVD) epidemic that devastated the region between 2014 and 2016. This epidemic resulted in high morbidity and mortality in Liberia, Sierra Leone, and Guinea with its subsequent adverse impact on the health systems of these countries [8]. Within this year, there have been outbreaks of measles in Liberia and Guinea. In Liberia also, a Lassa fever outbreak occurred and 21 confirmed cases recorded as at November 9, 2018. In Senegal, as at epidemiological week 46 (week ending on 18 November 2018), 48 new cases of dengue fever were confirmed. As of 18 November 2018, a total of 2,567 suspected cases of dengue fever including 292 confirmed cases (11.4%) have been reported from seven regions across the country. In the Nigeria, public health emergencies such as outbreaks of Lassa fever, yellow fever, monkey pox, measles, and cholera continue to pose challenges to the country's health security. Other countries in the region have also experienced other outbreaks of varying intensity such as cholera, meningitis, measles, Lassa fever among others.

In recent times, health emergencies or disasters, particularly related to meteorological and hydrological hazards and climate extremes, are increasing across the West Africa region. These complex emergencies are also exacerbated by unplanned and unregulated land use, weak environmental controls, poor

enforcement of building standards, urbanisation, and other development-linked factors that increase the vulnerability of people and livelihoods [9]. Hydro-meteorological events cause the majority of loss of life and economic losses in West Africa.

In the recent past Sierra Leone has a mudslide in early August, 2017 which resulted in loss of property and over 1,000 lives (dead or missing) [10]. Also, and over 3000 people were displaced and rendered homeless [11]. In June 2015, Ghana also had a concurrent flood and fire disaster due to petrol exploding at the fuel station in the capital city Accra which resulted in loss of property and over 150 lives lost [12]. Other disasters that have happened in the region are, droughts, tropical cyclones and strong winds, storm surges, extreme temperatures, forest fires, sand or dust storms, and landslides [13–17].

A number of humanitarian crisis have also contributed to public health emergencies within the ECOWAS member states. In Nigeria, since the start of the Boko Haram insurgence in 2009, more than 27 000 people have been killed in Borno, Adamawa, and Yobe states while thousands of girls and women abducted and children used as so-called “suicide” bombers. About 1.8 million people are internally displaced in these states. This unrelenting crisis has also contributed to public health emergencies such as cholera and acute malnutrition. It has also stalled progress with the elimination of poliomyelitis from the country. In neighbouring Niger, there continues to be food insecurity, malnutrition, and health crises such as cholera outbreaks mostly resulting water insecurity and population displacements instigated by the Boko Haram group.

Mali has suffered a complex political and security crisis since 2012 with its attendant public health emergencies. The ongoing insecurity has caused continuously rising cases of malaria, meningitis, measles, and acute malnutrition in all affected regions. With the situation deteriorating in northern and central Mali, there is no end in sight for these complex humanitarian and public health emergencies.

The effects of these public health emergencies are not limited to the health systems only; they affect other sectors of the economy such as tourism, trade, agriculture, transport etc. It is therefore important for countries to strengthen their health systems in preparedness in the event of any public health emergency. ECOWAS member States had adopted various approaches such as strengthening of their disease surveillance systems through capacity development and implementing the International Health Regulations, 2005 by developing their core capacities to detect, assess, and report public health events [18].

Over 86% (13/15) of Member States (with the exception of Cabe Verde and Genuine Bissau) have also undergone the Joint External Evaluation (JEE). The JEE is a voluntary, transparent, collaborative process

to assess a country's capacity under the International Health Regulations (2005) (IHR) to prevent, detect, and rapidly respond to public health threats whether occurring naturally or due to deliberate or accidental events. Following these evaluations, more than 50% (7/13) Member States are at various stages of completion of their National Action Plans for Health Security (NAPHS) [19]. Some countries have attempted to develop disaster management plans to help them adequately prepare, respond and recover during natural and man-made disasters. However, these plans are at various stages of completion and implementation.

From the foregoing, there is the need to have a regional strategy on epidemic and health emergency preparedness and response to harmonize various member states' efforts to help guide their implementation.

Rationale

As part of the ECOWAS Member States' responsibilities for ensuring people's protection and guaranteeing their right to a dignified life, the West African Health Organization (WAHO) has, in its 3rd Strategic Plan[1], laid an emphasis on Strengthening epidemic preparedness and response. The key objectives under this priority area were to build capacity for surveillance, disease prevention, and resilience to epidemic shocks and other emergencies. It outlined 5 main interventions namely:

- Establishment of the Regional Centre for Disease Prevention and Control including strengthening of the network of laboratories;
- Strengthening cross-border and inter-sectorial collaboration;
- Establishment of a regional early warning system and rapid intervention unit;
- Building the capacities of Member States for the implementation of International Health Regulations (IHR);
- Establishment of a regional fund for epidemic control.

WAHO's aim, through this initiative, is to (i) contribute to building national and regional capacities for risk reduction and emergency preparedness and (ii) assist Member States' health sector to reduce the adverse consequences of epidemics, disasters and other detrimental situations for communities in terms of mortality, morbidity, disability and damage that are caused by a disruption of the health care system. Through the World Bank's support under the Regional Surveillance Systems Enhancement (REDISSE) 4 Project, WAHO has undertaken to carry out an in-depth analysis of the regional and national context of epidemic and health emergency preparedness and response and to develop a regional Strategic Plan for epidemic and emergency preparedness and response in West Africa.

[1] Component 1 Programme 3 in the WAHO Strategic plan

Vision

An ECOWAS region where the impact of public health emergencies is minimized.

Mission

Achieving an ECOWAS region with ability to prevent detect, respond and recover from impact of public health emergencies through a resilient health system and requisite capacity.

Objectives :

1. To reduce, the morbidity due to epidemics prone diseases in ECOWAS region
2. To establish and sustain the minimum IHR[2] 2005 core capacities in ECOWAS Member States so that they can prevent, detect, assess, investigate and respond to PHEs.
3. To strengthen the capacity of all ECOWAS Member States to promptly[3] respond to public health emergencies, as well as, mitigate disaster risks.
4. To strengthen the capacity of the WAHO to prevent, detect, investigate and respond to regional al health security risks and health emergencies.

Process of Development of Strategic Plan

WAHO embarked on the development of the five-year regional strategic preparedness and response plan for public health emergencies as build up on their Strategic Plan 2016-2020. The development process involved several phases starting with an analysis framework that led to an extensive review of literature on preparedness and response in the region and beyond. All the key stakeholders met in Bobo in July 2018 to agree on the identified gaps in the literature, developed, finalized and approved regional, key partners and Member country specific data collection tools.

[2] Minimum IHR core capacities are: 1) Robust surveillance systems (indicator and event based), 2) Leadership and multisectoral coordination mechanisms (NTF, EOCs and IMS and RRTs), 3) Adequate Human Resource, 4) Apex laboratory network, 5) Infection prevention and control in health facility, community and home settings, 6) Isolation facilities at representative sites and 7) Appropriate ambulance referral capacity at health facilities and Points of Entry (PoEs), 8) Risk communication and community engagement, 9) Antimicrobial resistance (AMR)
[3] Promptly means within 24-48 hours

The approved tools were used to collect data from all the 15 Member States, 9 were visited and the rest were interviewed by teleconference. The information collected was used to finalize the situational analysis in the region regarding preparedness and response and also design two separate frameworks which will address the gaps identified; one on preparedness and the other on response. These presentations were pre-validated by committee in WAHO for improvement. The agreed frameworks and Regional Strategic Plan for Public Health Emergencies and their key indicators were presented to National Coordinating Institutions in December 2018 in Abuja for validation. Validation by the committee of experts of 20th ordinary assembly of health minister of ECOWAS, 2019

Adoption of a resolution of the Assembly of Health Minister to support the implementation of the regional strategic plan

This document is a regional strategy on epidemic and health emergency preparedness and response to harmonize various Member States efforts to help guide their implementation. It is therefore intended to highlight both the internal and external environments in which WAHO operates, in addition to presenting the long-term strategic direction for WAHO and Member States with respect to preparedness and response for the period 2020 – 2024.

GUIDING PRINCIPLES

This regional strategic plan is firstly aligned to the guiding principles of the transformation agenda of the West Africa Health Organization which is in charge of the operationalization of the Regional Center for Disease Surveillance and Control. Secondly, it is in line with the road map and lessons learnt from the management of Ebola Virus Disease in ECOWAS region (2014-2016). The approach will be guided by the following principles and social values:

- Rapid response for rapid impact, actions and results oriented, proactive preparedness, prevention and risk mitigation, intelligence and real time information and communication for rapid decision making.
- Collective acceleration of the establishment of the minimum core capacities for IHR, 2005 and robust public health surveillance systems, as well as, performance assessment, monitoring and evaluation.
- Country ownership and leadership and a multisectoral approach.
- Community engagement with full involvement and active participation of communities.
- Evidence-led and forward looking to take into account emerging trends, risks and health innovations.

- Networking and partnerships with other institutions/agencies, civil society and the private sector as the cornerstone for all undertakings, including: joint planning and joint monitoring and evaluation to strengthen accountability, participation and transparency.
- Inter country and regional cross-border cooperation and collaboration.
- Public sector driven research and development (R&D) for innovative tools and implementation approaches.

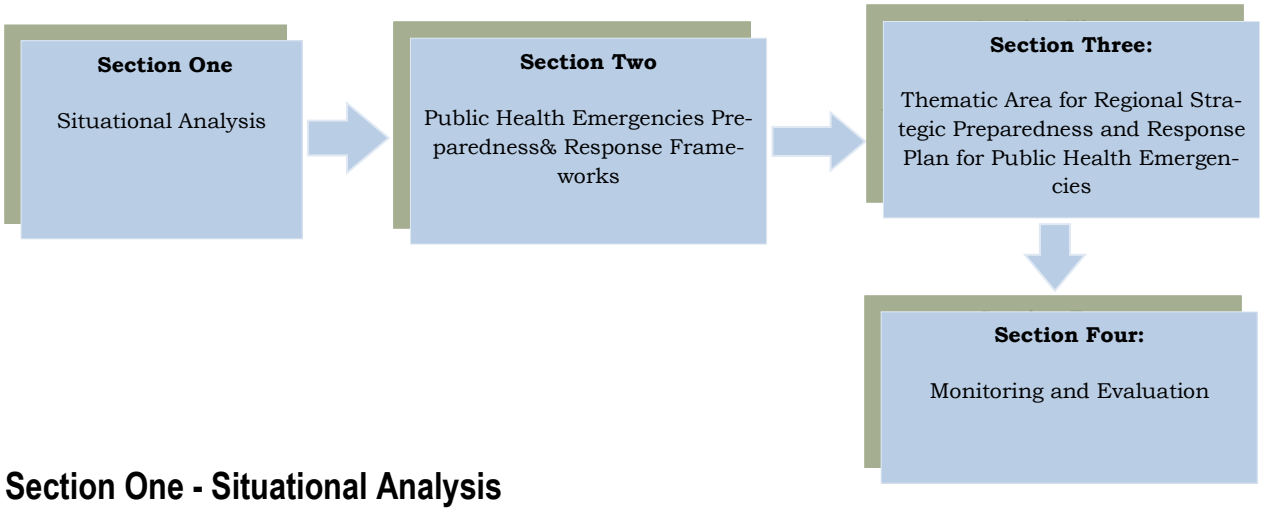
CRITICAL ASSUMPTIONS FOR SUCCESS

The successful implementation of the regional strategic plan is dependent on the following critical assumptions:

1. Reinvigorated and sustained leadership commitment (technical and political) at all levels of ECOWAS, WAHO and ECOWAS Member States;
2. A strong ownership and support by Member States;
3. Development partners' and stakeholders' buy-in;
4. Support and buy-in by the World Health Organization and other UN agencies;
5. Timely availability of appropriately qualified staff with the right attitude and work ethics at all levels of WHO and in the Member States;
6. Availability of the required funding.

Structure of Strategic Plan

The substantive elements of the regional strategic preparedness, response and recovery Plan for Public Health Emergencies are detailed as follows;



Section One - Situational Analysis

This section contains information derived from extensive desk review on Public Health Emergency Preparedness, response and recovery in the Member States, corroborated with the field visit and or teleconference to all 15 Member States. It elaborates the strengths, weaknesses, opportunities and threats identified in Member States for Health Emergency Preparedness, Response and Recovery.

Section Two – Public Health Emergency Preparedness, Response and Recovery Frameworks

Two separate frameworks were drawn, one for public health emergency preparedness and the other for response.

The preparedness framework has six pillars that are:

- surveillance on Epidemic Prone Diseases and risk of health emergencies;
- workforce development;
- stockpiles of medical countermeasures;
- point of entry;
- laboratory system and networks;
- risk communication and community engagement

Response and Recovery framework has four pillars that are:

- Enhance surveillance on Epidemic, case management and IPC

- deployment of personnel and medical countermeasures
- risk communication and community engagement.
- laboratory system and networks;

Both preparedness and response framework pillars have three cross-cutting support functions that anchors the principal structures. These are:

- resource mobilization and financing,
- coordination, legislation and policies
- information systems and health research.

These pillars will intend build the requisite capacity for integrated multidisciplinary/ multi-sectoral public health emergency preparedness, response and recovery with one health approach. Together will lead to a final outcome of effective public health emergency response and recovery.

Section Three – Thematic Areas for Regional Strategic Plan for Epidemic and Health Emergencies

The twelve key thematic areas for the regional strategic preparedness and response plan for public health emergencies were:

- Coordination, Legislation and Policies
- Surveillance on epidemic prone diseases and risk of health emergencies
- Workforce Development and Capacity Public Health Emergencies
- Stockpiles and medical countermeasures
- Risk communication for Public Health Emergencies
- Point of entry
- Strengthening Laboratory systems and networks
- The one health approach
- Information systems and research
- Enhance surveillance during epidemics, case management and infection prevention and control
- Deployment of personnel and medical countermeasures (response operations)
- Resource mobilization for public health emergencies preparedness and response.

Section Four: Monitoring and Evaluation

It describes the importance in tracking the process of the Regional Strategic Plan for Epidemic and Health Emergency Preparedness and Response. With the goal to institutionalize Program Monitoring and Evaluation with Continuous Quality Improvement for all member states.

Section One - Situational Analysis

Regional

The West Africa Health organization (WAHO) is a specialized institution of ECOWAS has clear legal mandate for its existence. WAHO was created in 1987 by Protocol A/P2/7/87 and is responsible for health issues in the sub-region. Following the occurrence of the major epidemics in the mid 90's, the Regional Strategy for Integrated Disease Surveillance and Response (IDSR) which lead to 2011-2014 regional plan for epidemic prone disease control in ECOWAS region was adopted on 2nd September 1998, at the 48th session of the World Health Organisation's Regional Committee, by Resolution AFR/RC 48/ R2. The plan has not yet been evaluated though most of the activities were implemented. The establishment of ECOWAS Regional Centre for Disease Control and Prevention (ECOWAS/RCDC) with headquarters in Nigeria was legally approved at the 47th Session of Authority of Heads of States and Government of ECOWAS held in May 19, 2015 in Accra, Ghana.

The region has developed regional laboratory strategic plan framework with to strengthening technical diagnostic capacities in the ECOWAS region through the joint implementation of adapted, efficient and identified strategies.

WAHO has a current Strategic Plan 2016 – 2020 which was developed post evaluation of the second strategic Plan 2009 – 2013. It proposes to fix the fragile health systems, improve on the very weak mechanisms for sharing health information and for performance monitoring, and the high prevalence of infectious diseases and chronic non-communicable diseases, as well as the continued recurrence of epidemics.

The region has recorded a number of Public Health Emergencies of International Concern (PHEIC) according the International Health Regulations (IHR) 2005 and malaria. Most frequent of these are cholera, the arboviruses, measles and meningitis [20-36]. Some of the major outbreaks that have occurred were, The Ebola Viral disease (EVD) that occurred in West Africa in 2014 affected 6 countries namely: Liberia, Sierra Leone, Guinea, Mali, Nigeria and Senegal with over 28,600 cases and over 11,300 deaths with an estimated case fatality of 40% [37] and. Lassa Fever in Benin, Burkina Faso, Liberia, Niger, Nigeria and Togo. The frequent Public Health Emergencies experienced and the resultant effect in the region are due to the regional vulnerabilities and the low capacity for preparedness and response. Refer to annex for specific Public Health Emergencies within the region.

From the West Africa Risk Mapping Index, by DARA, an independent non-profit organisation committed to improving the quality and effectiveness of humanitarian action for vulnerable populations affected by armed conflict and natural disasters, indicated that, countries in West Africa hold some of the poorest positions in terms of their conditions and capacities for risk reduction. This is largely due to their socio-economic realities and the characteristics of their land use and built environments. The scores of Risk Reduction Index (RRI) ranged from 3.8 (Nigeria) to 5.77 (Cape Verde) on a scale of 0 – 10, where 10 indicates that the country presents the most favourable conditions and capacities for risk reduction and 0 implies that the country's capacities and conditions are the least favourable [38].

Coordination, Legislation and Policies

Coordination is the organization of the different elements/ stakeholders or actors in epidemic and health emergency response so as to enable them to work together effectively. Strong central coordination is essential to the prevention and control of epidemics and health emergencies. The use of Public Emergency Operations Centre (EOC) for coordination is key in epidemic and health emergency response. All countries have some form of Emergency Operating centers with varying functionality including virtual form of EOC. No member State has fully functional NPHI with all the decentralized EOCs.

	National Coordinating Institution	Anchoring Institutional (legal texte)	Active Surveillance System	RRT including EMT	Access to financial resources
Benin	Conseil National de lutte contre le VIH-Sida, les IST, la Tb et les épidémies	Presidency	No	No	Yes
Burkina Faso	Institut National de Santé Publique implemented				
Cabo verde	Instituto Nacional de Saúde Pública	Minister of Health	No	No	No
Cote d'Ivoire	Institut National d'Hygiène Publique	Minister of Health	Yes	Yes	Yes
Gambia	NCI	Ministry of Helath	Yes	No	No
Ghana	Public Health Division; GHS	Director GHS	Yes	Yes	Yes
Guinea	Agence Nationale de Sécurité Sanitaire	Minister of Health	Yes	Yes	No
Guinea Bissau	Instituto Nacional de Saúde Pública	Minister of Health	Yes	Yes	No
Liberia	National Public Health Institute	Ministry of Health	Yes	Yes	Yes

Mali	Institut National de Santé Publique : implemented				
Niger	Centre de Recherches Médicales et Sanitaires (CERMES)	Directeur de la Surveillance	No	No	No
Nigeria	Nigeria CDC	Minister of Health	Yes	Yes	Yes
Senegal	Centre des Opérations d'Urgences Sanitaires	Directeur de la Surveillance	Yes	Yes	Yes
Sierra Leone	Public Health National Emergency Operations Center	Deputy Chief Medical Officer Public Health	Yes	Yes	No
Togo	Institut National de Coordination de Surveillance et de Contrôle des Maladies	Directeur Général de l'Action Sanitaire	Yes	No	No

Source : Assessment of NCI in ECOWAS region

Most Member States have legal framework and legislation that support and enable the implementation epidemic and health emergency preparedness and response. There are no legal or ethical guidelines laid out for handling epidemics and health emergencies before, during and after.

Surveillance on Epidemic Prone Diseases and risk of Health Emergencies

All member states have indicator and event-based surveillance system due to the implementation of the IDSR but reporting sites in all the countries largely excludes private health facilities. Not all member countries have been able to successfully roll out event based surveillance systems in their entire country. IDSR reporting is therefore low in some member countries. Routine surveillance data generated is not regularly analysed at lower levels. No member country has a fully functional interoperable, interconnected electronic real-time reporting system.

Workforce Development

Three-tiered approach of FELTP has been promoted and implemented in the region since 2007. With a population of close to 400 million, the region requires approximately 2,000 field epidemiologists in the 15 Member States. With the global standard of 5 epidemiologists per a million population. This target is achieved through both the intermediate (9 month) and advanced (2years) tiers of training. So far 358 field epidemiologists have been trained, hence a gap of **>1,600**. The estimation for the frontline FETP trained HCWs is based on sub-national units (districts/Local Government Areas) and depending on the country's administrative unit's size the requirement for frontline graduates is 3 – 6 frontline graduates per district/LGA cutting across human health, animal and environment in the all hazard/one health approach. There are over 2000 districts/LGA in the region across the 15 countries, with a population range of 150,000 – 250,000 per district/LGA. Therefore, approximately 11,000 frontline graduates are required. Currently close to 2,500 trainees have gone through the frontline training leaving a gap of **8,500 trainees**.

For all assessed countries, there are inadequate numbers of public health personnel especially field epidemiologist, to implement IHR core capacity requirements. Apart from Nigeria, none of the assessed countries has a full complement of all three FETP (basic, intermediate, and advance). There is poor in-country coordination of activities among the available personnel in the containment of epidemics and health emergencies

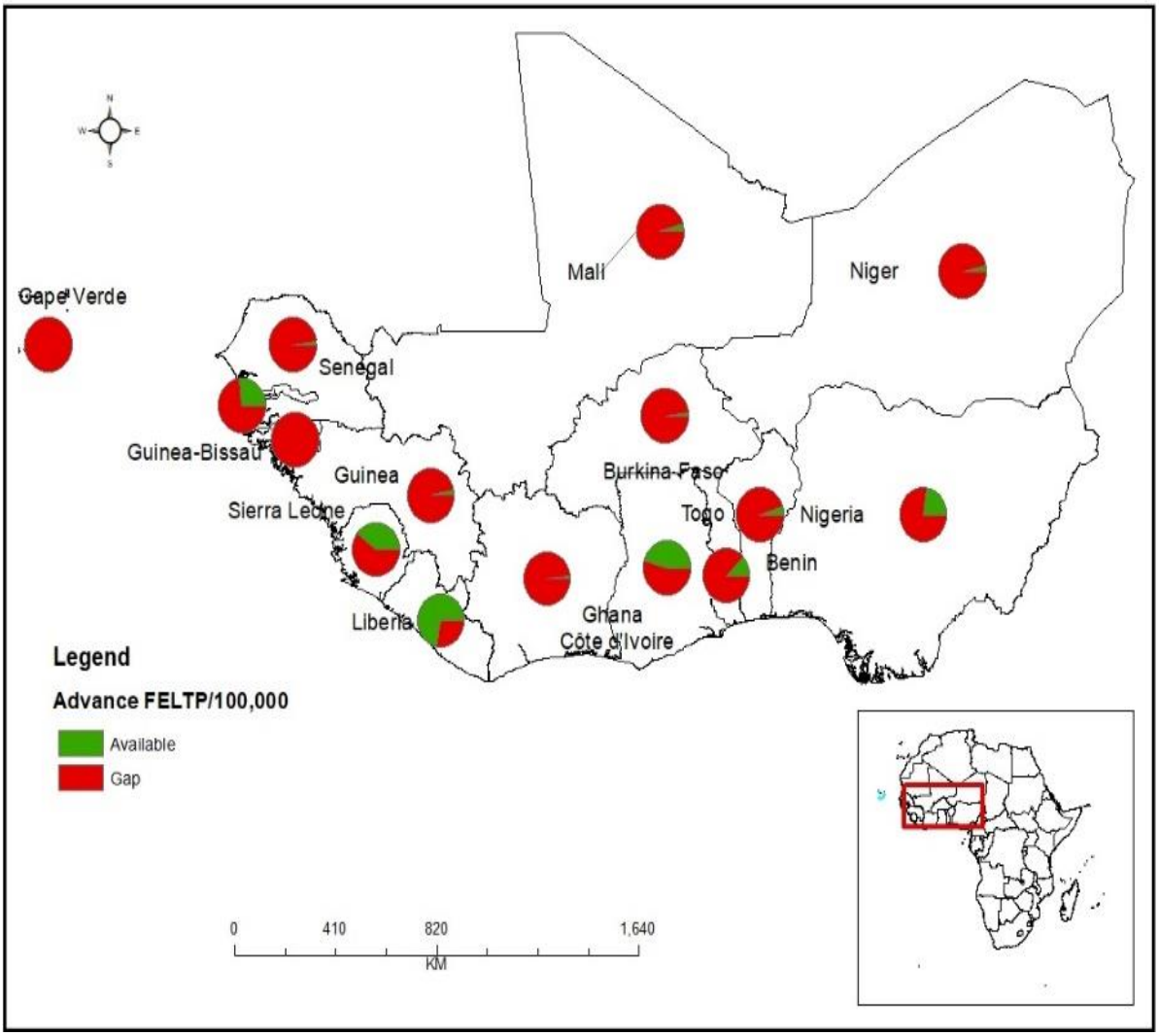


Figure 1: Map Showing the Gap and Available advanced FELTPs

Table 1: Country Specific Analysis for Field Epidemiologists

	Country	Basic information (2018 total population, districts)	Need	Available	Gap
1	Benin	**11,565,238** 12 departments 77 communes	Advance/Inter (60) Frontline (400)	3 100	57 300
2	Burkina Faso	**19,894,482** 13 regions 45 provinces 351 departments	Advance/Inter (100) Frontline (500)	2 80	98 420
3	Cabo Verde	**555,183** **32 freguesias (civil parish)**	Advance/Inter (5) Frontline (100)	0 0	5 100
4	Côte d'Ivoire	**25,063,662** 14 districts 31 regions 108 departments	Advance/Inter (125) Frontline (600)	2 96	123 504
5	The Gambia	**2,179,895** 43 districts	Advance/Inter (15) Frontline (150)	4 99	11 51
6	Ghana	**29,627,630** 216 districts	Advance/inter (150) Frontline (1000)	68 349	82 651
7	Guinea	**13,138,984** 8 regions 33 prefectures	Advance/Inter (70) Frontline (300)	2 50	68 250
8	Guinea-Bissau	**1,919,157** 3 provinces 37 sectors	Advanced /int (15) Frontline (160)	0 101	15 59
9	Liberia	**4,884,882** **15 counties** **90 districts**	Advance/Inter (25) Frontline (450)	(18) 4 adv, 14 intermediate 148	7 302
10	Mali	**19,251,953** 10regions 56 cercles. 703 communes	Advance/inter (100) Frontline (600)	5 50	95 550
11	Niger	**22,519,818** 7regions 36 *départements*, 265 *communes*	Advance/Inter (120) Frontline (600)	4 0	116 600
12	Nigeria	**197,160,651** 36 states+1 774 LGAs	Advanced/Inter (1000) Frontline (5000)	227 1100	773 3900
13	Senegal	**16,408,086** 14 *regions* 110 *communes*	Advance/Inter (85) Frontline (600)	2 112	83 488
14	Sierra Leone	**7,762,065** 16distrcits 149 chiefdoms	Advanced/Inter (40) Frontline (200)	16(4 ad /12I) 81	24 119

15	Togo	**8,040,874** 5regions 30 prefectures	Advance/Inter (40) Frontline (150)	5 71	35 79
TOTAL			**Advance/Intermediated (1,950)** **Frontline (11,000)**	**AD/IT 358(18%)** **Frontline 2,437(22%)**	**1,592** **8,563**

*Population and administrative data based on Worldometers 2018 estimates
*number of trained as of October 2018

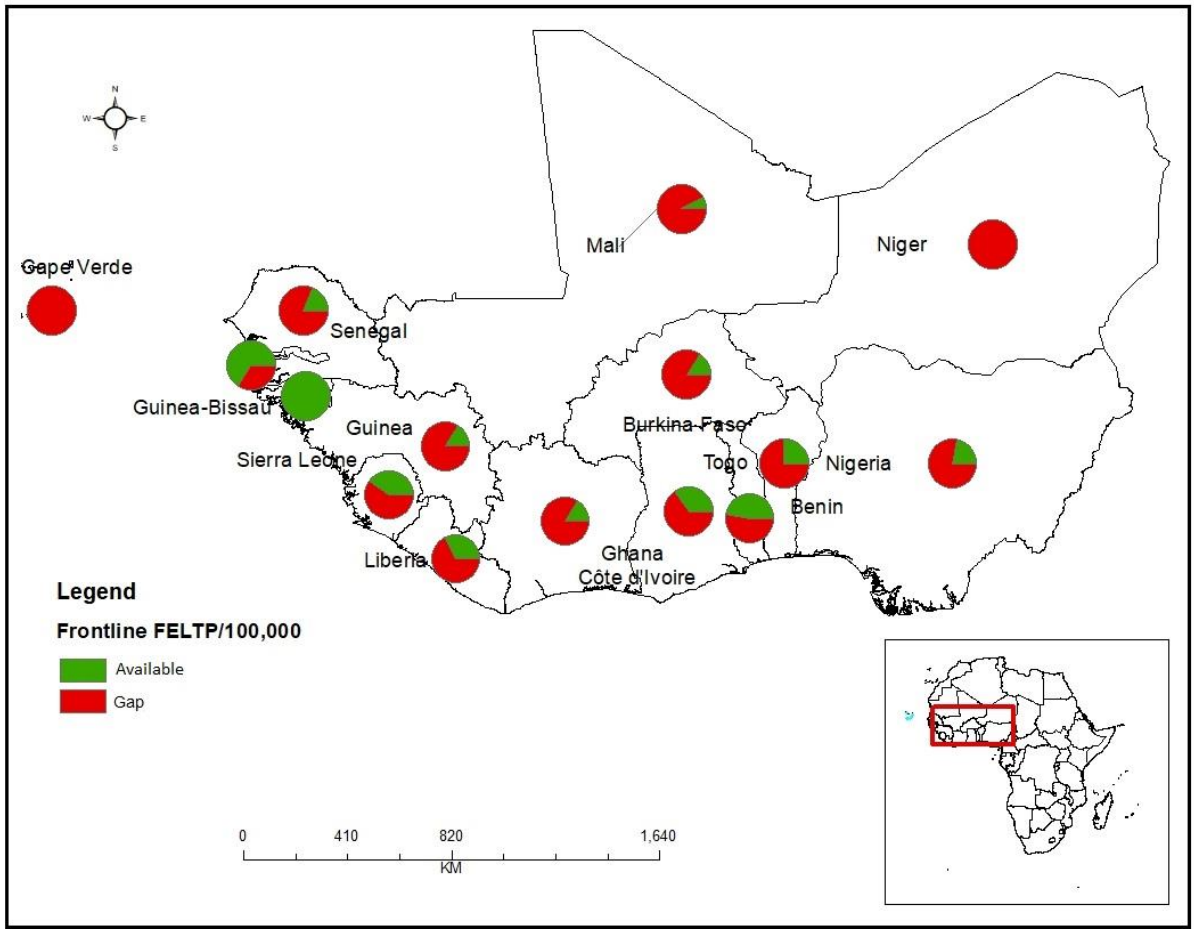


Figure 2: Map showing the Gap and available frontline FELTPs

Risk Communication

WAHO recently developed a risk communication plan for the ECOWAS sub-region however, no Member State have a standalone risk communication plans for risk communication during epidemic. However, they have risk communication as part of their epidemic preparedness and response plan. Combinations of channels ranging from mass media to gong beating are all employed to communicate health risks. Most member countries do not have sufficient technical, financial and human resources for risk communication. Though majority of the countries lack Anthropologists, Liberia has one and has a strong rumor control mechanism.

The region lacks a functional regional platform for inter-sectoral collaboration in risk communication and has limited sustainability of risk communication activities. Budget lines for risk communication at the regional and member states level are weak and non-existent in some member countries. There is the need for harmonization, coordination, definition of SOPs by the regional level in the area of Risk Communication.

Based on the evaluation results of the JEE, most member countries had low scores in the areas of risk communication. There is a need of some capacities building and achievements, especially a better funding of the sector

Diversity of countries RC capacities

Recap of the scores of Member States far evaluated, relating to risk communications Risk Communication Systems

Country (Date of JEE)	Internal coordination and with partners	Communication with the general public	Communication with affected populations	Active listening and rumor management	Average score
Benin (2017)	1	2	3	3	3
Burkina Faso (2018)	1	2	3	3	3
Gambia (2017)	2	3	3	2	2
Ghana (2017)	2	3	3	2	2
Guinea (2017)	1	2	1	2	2
Ivory Coast (2016)	1	3	2	2	2
Liberia (2016)	3	4	4	2	3
Mali (2017)	1	2	2	2	2
Nigeria (2017)	1	3	2	3	3
Senegal (2016)	1	2	3	4	2
Sierra Leone (2016)	3	4	3	2	3

1 = capacities are not in place; 2 = some of the capacities are achieved, others are in progress; 3 = Existence of Capacities, but there is no sustainable support and funding; 4 = Existence of Capacities with many years of supports-backings and can be measured in the PNDS; 5 = Existence of effective and efficient Capacities and the country can support other countries

Laboratory System and Network

Member States have network of laboratories at the various levels such as district hospital facilities, regional hospitals and national level laboratory which are usually specialized referral national laboratories. Shortage/ stock out of laboratory reagents and consumables are often and poor equipment maintenance culture, inadequate equipment are the major gaps. Not all member countries have national level protocols and policies for specimen referral and transportation of biological samples within and outside the country (e.g. sample packaging, transportation options and transmission of results). Not all member country laboratories are implementing quality assurance system such as SLIPTA.

Cross border preparedness and response

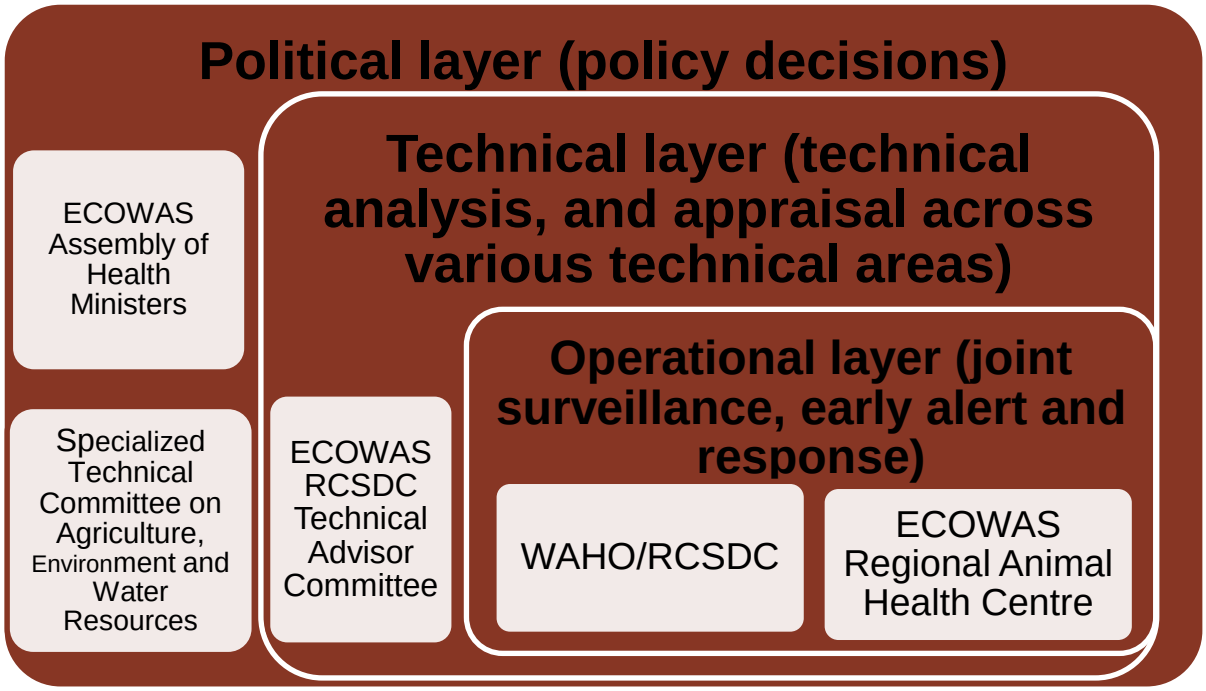
Countries with cross border preparedness and response include Nigeria, Liberia, Cote D'Ivoire, Sierra Leone, Mali, Guinea, Ghana, Benin, Gambia and Senegal. Most member states have worked together on several outbreak especially meningitis between the countries within the meningitis belt and also during the recent EVD outbreak in West Africa. Liberia has ongoing efforts for cross border arrangement along the Mano River union countries. There is no regional cross border policy or strategic plan and no formalize routine cross-border meeting between neighbouring countries to review relevant surveillance data.

One Health Concept

One Health recognizes that the health of people is connected to the health of animals and the environment. It is a collaborative, multisectoral, and trans-disciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment. Almost all member states have One Health structures in place but only few have formal structures in place. Only three countries had One Health formal documents. The Gambia was the only country with a veterinary epidemiology unit and a veterinary epidemiologist working in the unit.

The region has a One Health platform

Existence of regional one health platform



Countries with NOHP

National bridging workshop in 6 countries (Senegal, Guinea, Liberia, Niger) to define priorities in One-Health

Research

Lessons learnt post Ebola requires the need for regular research and sharing of new knowledge. There are a number of collaborations including sub-region research on meningitis, Lassa fever, measles and other zoonotic related research. The Ebola crisis exposed our limited capacity in research, laboratory infrastructure, laboratory equipment, human resources and inadequate capacity to conduct clinical trials. Four countries (Mali, Guinee, Liberia, and Sierra Leone) formed a consortium and are working on research on drugs and vaccines against Ebola. The objective of this consortium is to enhance human resources capacity in managing epidemics, avail drugs and vaccines against Ebola to better prepare for any coming outbreak or public health emergencies

Establishment of regional health observatory

SWOT Analysis

Strengths

1. Regional coordinating body for health with political will
2. Member States commitments and readiness to respond to epidemics and disasters
3. Availability of rapid response teams and committees at national, regional and district levels
4. Regional integration and ease of movement of goods and services
5. Development partners' readiness to supports national Governments to respond to epidemics and disasters
6. Eighty-six percent (13/15) of members states have conducted Joint external evaluation
7. Existence of Integrated Disease Surveillance and Response Plans
8. Availability of WHO Regional accredited reference lab in Dakar
9. Member states have network of laboratory at National, Regional and district levels
10. Trained field epidemiologists, Veterinarians and laboratory scientists across the region
11. All countries have an institution in charge of health which plays a role in public health emergencies
12. All countries have some policies or frameworks on public health and a dedicated institution that is responsible for leading and coordinating emergency preparedness and response in the country.
13. All countries have some dedicated human resource in charge of public health

Weakness

1. Few countries have well outlines epidemic preparedness plans
2. Thirty-three percent (5/15) member states have Public Health Institutes with some level of functionality including the emergency operation centre (EOC)
3. No formal cross-border procedures or policies between member states for disease outbreak or disaster response
4. Few member states have risk communication plans
5. No well outlined deployment mechanism of experts to respond to epidemics and disasters within countries and across member countries
6. Weak co-ordination between agencies in member states to respond to epidemics and disasters
7. Lack of detailed operational mechanism for regional coordination of epidemics and disasters
8. Lack of adequately trained human resources, i.e., trained or skilled personnel needed for PH emergency planning and response activities.
9. Funding is heavily dependent on donor agencies
10. Poor coordination and communication structures among sectors
11. Little or no funds and allocated budget lines dedicated to emergencies preparedness and response
12. Limited conceptualization and operation of one health

Opportunities

1. Availability of field epidemiology training Programme and other Public health related training programme in the region
2. Technical assistance from development partners
3. Establishment of Africa CDC and its regional co-ordination centres
4. Establishment of AFENET Corp of Disease Detectives (ACoDD)
5. There is strong collaboration with other regional structures and international organizations such as the ECOWAS, WAHO, WHO, UNICEF etc
6. Support from international donors

Threats

1. Insufficient stockpiles (vaccines, medicines, medical consumables, tents, food, mattresses, clothing etc)
2. Potential political instability in member countries
3. Unplanned and unregulated land use leads to landslide, mudslides and floods
4. Weak environmental controls
5. Poor enforcements of building standards
6. Unplanned urbanization
7. No budget for public health emergency preparedness and over reliance on donor part-

Section Two: Public Health Emergency Preparedness and Response Frameworks

Introductive session on the WAHO Public Health Emergency Preparedness Framework

A. Preparedness Framework

The Public Health Emergency Preparedness Framework is structured around 6 principal pillars namely: (1) Surveillance on Epidemic Prone Diseases and risk of Health Emergencies (2) Workforce Development (3) Stockpiles of medical countermeasures (4) Point of Entry and (5) laboratory System and Networks (6) Community engagement and risk communication. These principal pillars are supported by cross-cutting support functions namely: (1) Coordination, Legislation and Policies (2) Information Systems and Health Research and (3) Resource Mobilization and financing

These 6 principal pillars will result in building the requisite capacity for integrated multi-disciplinary/ multi-sectoral public health emergency preparedness with the one health approach.

The plan outlines clear roles and responsibilities for regional and member states all geared towards a robust and resilient health system.

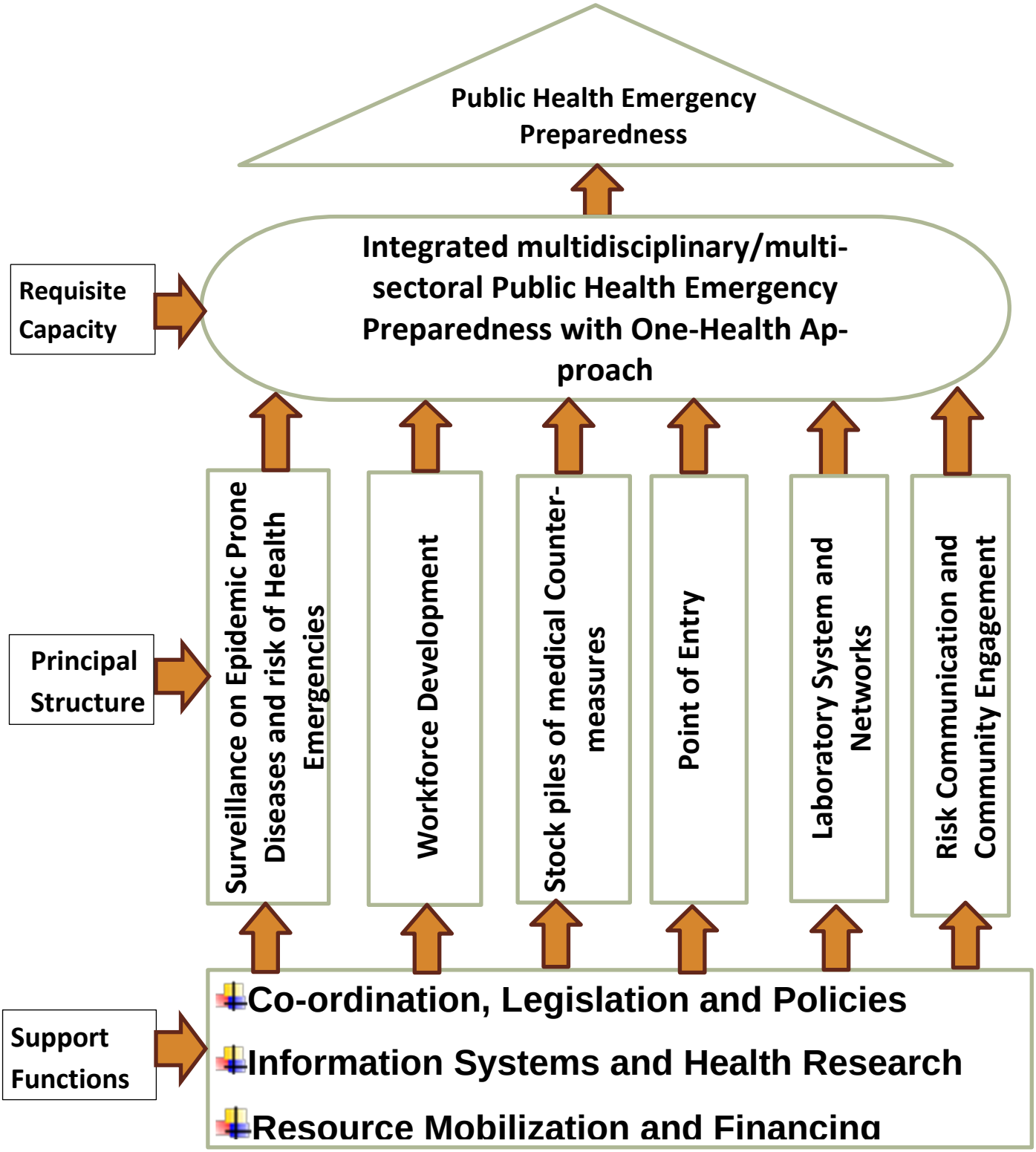


Figure 3: WAHO Public Health Emergency Preparedness Framework

A. Response and Recovery Framework

The Public Health Emergency Response and Recovery Framework in figure 2 is structured around 4 principal pillars namely: (1) Enhanced Surveillance during Epidemics, Case management and Infection Prevention and Control (IPC) (2) Deployment of personnel and medical countermeasures (3) Risk Communication and community engagement (4) Laboratory System and Networks.

These principal pillars are supported by cross-cutting support functions namely: (1) Coordination, Legislation and Policies (2) Information Systems and Health Research and (3) Resource Mobilization and financing

These 4 principal pillars will result in building the requisite capacity for integrated multi-disciplinary/ multi-sectoral public health emergency response and recovery with the one health approach.

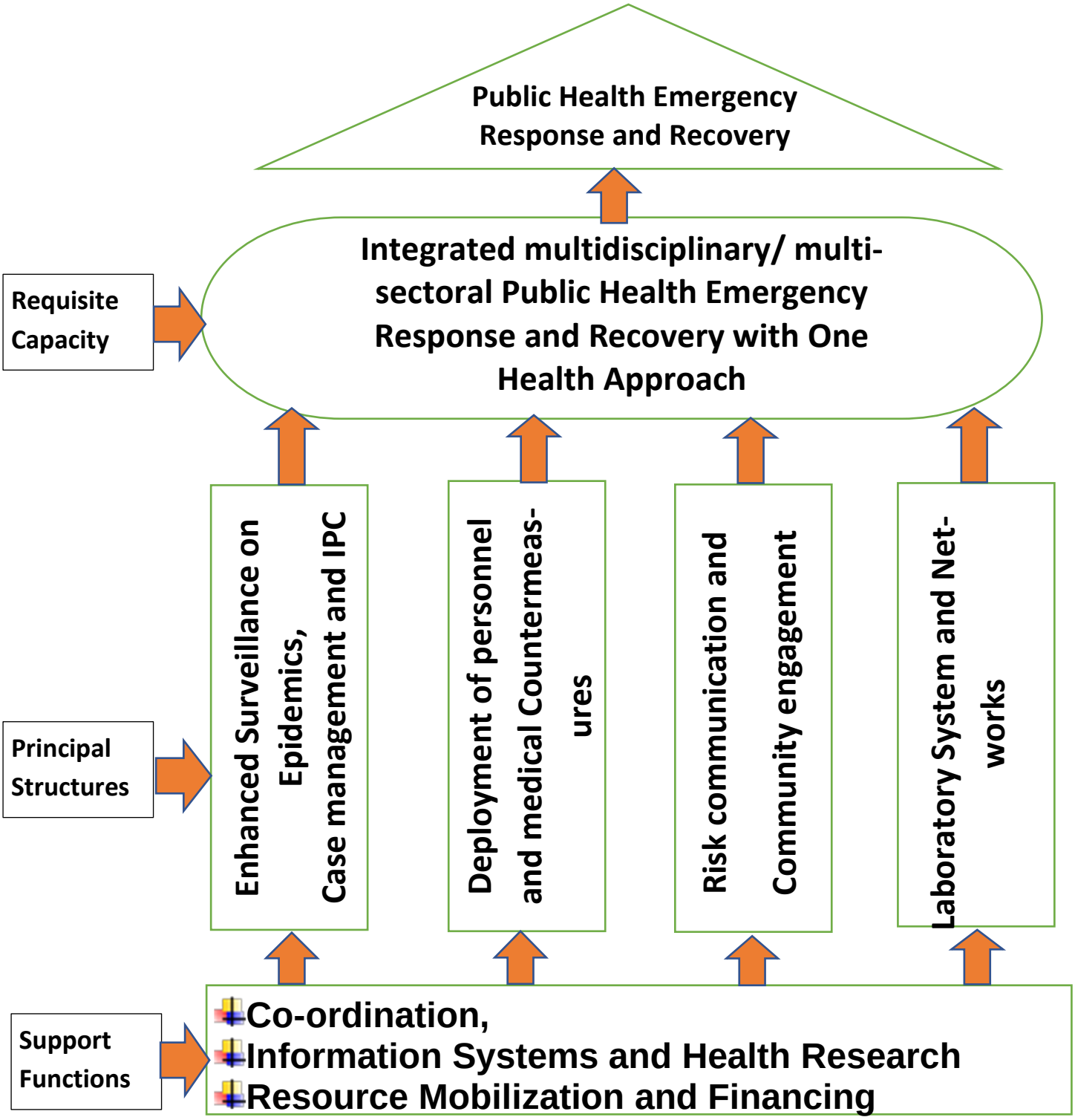


Figure 4: WAHO Public Health Emergency Response and Recovery Framework

Section Three: Thematic Areas for the Regional Strategic for Epidemic and Health Emergencies

Thematic Area 1: Coordination, Legislation and Policies

Goal: Improve coordination mechanism by adopting legislation and policies of member states to guide epidemic and health emergency response

Strategic Objectives:

- To support the development legislations, policies and plans to guide public health emergencies in all ECOWAS member states
- Operationalize National Coordination Institute and public health Emergency Operating Centers (EOCs)

Thematic Area 2: Surveillance on epidemic prone diseases and risk of health emergencies

Goal: Strengthen surveillance capacity of member states to prepare and respond to epidemics and health emergencies

Strategic Objectives:

- To establish an indicator and event-based surveillance system/ enhanced surveillance
- To establish interoperable, interconnected electronic real-time reporting system
- To strengthen routine surveillance data analysis
- To establishment or strengthen syndromic surveillance system
- To establish or strengthen early warning system

Thematic Area 3: Workforce Development and Capacity to contain Public Health Emergencies

Goal: Strengthen Public Health and Disaster preparedness workforce of member states to improve their capacity to respond to epidemics and health emergencies

Strategic Objectives

- To develop Public health/ epidemiology and Health emergency workforce strategy
- To develop and implement Public health and epidemiology training programs
- Establish a field epidemiology and laboratory training program (FELTP) to build technical, leadership and managerial skills for national and sub-national surveillance and health leaders (basic, intermediate and advanced FELTP courses).
- Exchange visits to established centres for mentoring attachment of critical staff from least established countries to known centres of excellence in the region or at the global level.
- Support Partnerships with schools of medicine and school of public health to design, develop and deliver specialist short courses in surveillance, epidemiology and outbreak investigation and response for national and sub-national level managers.

- To strengthen the capacity for Clinical management (Case management and infection prevention and Control)
- To improve the capacity to maintain essential services (health service facility, personnel and supplies) to respond to Epidemics and Health Emergencies
- To develop trained staff retention strategy

Thematic Area 4: Stockpiles and Medical countermeasures

Goal: Goal: To increase the capacity of stockpile and medical countermeasures and supplies

Strategic objective

- To ensure availability of stockpiles and requisite medical supplies
- Establish regional stockpiles center
- To develop manual of procedures for the regional stockpiles
- To ensure existence of facilities of importation of drugs and consumables for epidemics management

Thematic Area 5: Risk Communication and Community Engagement

Goal: Strengthen risk communication for effective risk management decision making to achieve desired outcomes.

Strategic objectives:

- To Establish Risk communication systems: plans and mechanisms as outlined in the ECOWAS Regional Risk Communication Plan[4]
- To improve internal and partners' communication and coordination
- To strengthen public communication systems and mechanisms
- To Establish communication systems/ mechanisms to engage with affected communities
- To establish Dynamic listening and rumor management system

Thematic Area 6: Point of Entry

Goal: Strengthen cross border surveillance for an effective epidemic and health emergency response

[4] To Establish a forum for continuous sharing of information relevant for risk communication on health events in the ECOWAS Region. To Support regional networks for risk communication. To Provide guidance for risk communication relating to risks potentially affecting more than one country, esp. in cross-border public health events. To Integrate the human health approach with specific regard to vulnerable populations and gender aspects as well as the One Health approach into the development and the practice of risk communication in the region. To Identify and challenge regional and international health partners to advocate for and strengthen risk communication in West Africa. To Serve as a reference framework for the elaboration of a specific national strategy taking into account the different contextual particularities of the countries.

Strategic objectives:

- To develop a regional cross border strategy in ECOWAS region
- To operationalize cross-border surveillance and data sharing
- To establish a coordination mechanism for cross-border investigations and response

Thematic Area 7: Strengthening Laboratory Systems and Networks

Goal: Strengthen laboratory systems and networks to improve access to services for effective disease surveillance and response

Strategic Objectives:

- To strengthen local laboratory capacity for testing priority diseases according to the WAHO capacity building plan for Regional Reference laboratories Network 2018-2022[5]
- To strengthen the specimen referral and transport system for transport to a reference laboratory
- To promote tools for effective diagnosis at modern point-of-care and laboratory services
- To improve laboratory quality system

Thematic Area 8: The One Health Approach

Goal: To strengthen the One-Health concept among member states for effective preparedness and response

Strategic objectives:

- Support the operationalization of One Health regional platform in ECOWAS region;
- Provide technical assistance to the National One Health Platforms in the ECOWAS region to ensure their effective operationalization for coordination of national One Health strategies, policy, and advocacy efforts (emphasis on non GHSA countries: Benin, Cabo Verde, The Gambia, Guinea Bissau, Niger, Nigeria, Togo);
- Strengthen Private sector involvement in the operationalization of One Health Platforms (PPP);
- Promote best practices in One Health within the ECOWAS region.
- Generate information to facilitate implementation and M&E of OH Agenda in ECOWAS region progress.

Thematic Area 9: Information systems and research

Goal: Strengthen health information management system and research to enhance evidence-based decision making

[5] Laboratory Workforce Development, Surveillance (AMR, One Health and Outbreak Response), Information Management and Network, Quality System Management, Laboratory Services, Bio-risk management and Public Health Related Research

Strategic objectives:

- To strengthen health information systems at all levels
- To support epidemiological research and development

Thematic Area 10: Enhanced surveillance during Epidemics, Case management and infection Prevention and Control (IPC)

Goal: To strengthen disease surveillance during epidemic and health emergencies; prompt treatment with infection prevention and control.

Strategic Objectives:

- To strengthen case surveillance during epidemics and health emergencies
- To improve case management during epidemic and health emergencies including the development of Emergency medical teams
- To support Member States to update national infection prevention and control policies and plans, including: hand washing protocols for health care settings, in communities and at home, SOPs
- To Establish and promote regional safety quality systems (SQS) programme to train health workers about IPC
- To strengthen IPC during epidemics and health emergencies through continuous assessments and capacity strengthening.

Thematic Area 11: Deployment of personnel and medical countermeasures (Response Operations)

Goal: To improve resources for epidemic and health emergency preparedness and management to ensure sustainable response.

Strategic Objectives:

- To provide a prompt response for personnel deployment
- To provide prompt medical countermeasures
- To support the development of ECOWAS Regional Rapid Response Team (ERRRT)
-

Thematic Area 12: Financial resources mobilization for epidemic and health emergencies preparedness and response

Goal: To improve resources for epidemic and health emergency preparedness and management to ensure sustainable response.

Strategic Objectives:

- To support advocacy efforts to increase domestic funding for the public health emergencies preparedness and response
- To support regional epidemics funds
- To support Public Health Emergencies Insurance Programme

ECOWAS Regional Preparedness and Response Plan for Public Health Emergencies:
Activities, Indicators and target for monitoring:

Thematic Area 1: Coordination, Legislation and Policies

Goal: Improve coordination mechanism, develop legislation and policies of member states to guide epidemic and health emergency response

Results	Major Interventions	Indicators	Baseline values	Target				
				2020	2021	2022	2023	2024
WAHO Indicators								
Output	Assist member states in the development of guidance, tools, training and advocacy materials in order to improve multi-sectoral implementation of the IHR (2005) and the role and functioning of the NCI	Number of member states assisted in the development of guidance, tools, training and advocacy materials.	0	3	5	7	-	-
	Advocate for the establishment of NCI for member states	Number of member states WAHO has advocated for the establishment of NCI	0	2	3	4	6	-

	Support member countries to align/ harmonize all relevant existing legislations on IHR (2005)	Number of member states supported to align/ harmonize their existing relevant legislations on IHR (2005)	-	2	4	4	-	
	Support Member States in the development of national policies and costed NAPHS	Number of member states supported in the development of national policies and costed NAPHS	1	2	4	4	5	-
	Support Member States to develop national risk communication plans	Number of member states Supported to develop national risk communication plans	0	2	4	4	5	-
	Support Member states to develop national Multi-sectoral AMR action plan	Number of Member States supported to develop the national multi-sectoral AMR action plan	0	3	4	4	4	-
	Provide regional platforms to strengthen NCI networking and the exchange of best practices, including through annual regional and sub-regional meetings	Number of member states linked to the established regional platform for NCI networking	0	3	5	7		
	Promote examples of good practices of development and strengthening of multisectoral platforms for coordinated decision-making for IHR implementation	Number of member countries provided with examples of good practices of development and strengthening of multisectoral platforms	0	5	15	15	15	15

		for coordinated decision-making for IHR implementation						
	Support member states in the establishment of a functional National Coordinating Institute (NCI)	Number of member states supported to establish a functional National Coordinating Institute (NCI)	0	2	3	4	4	2
	Establish Regional networks of PHEOC to improve regional coordination of public health emergencies	A Regional network of PHEOC established	0	0	1	1*	1*	1*
	Support member states, in the development and revision of relevant national legislative and regulatory frameworks, and SOPs	Number of member states supported in the development and revision of relevant national legislative and regulatory frameworks, and SOPs	0	2	5	5	3	-
	support member states in the implementation of national policies and costed action NAPHS	Number of member states supported in the implementation of national policies and costed NAPHS	0	0	3	4	4	4

	Support member states in the establishment of a functional National PHEOC to coordinate health emergency response	Number of member states supported in the establishment of a functional National PHEOC to coordinate health emergency response	0	2	3	3	3	3
	Support member state to strengthen communication and coordination mechanism between regional and national level	Number of member states supported to strengthen communication and coordination mechanism between regional and national level	0	3	4	8		
Member states indicators								
Strategic Objective 1: To develop legislations, policies and plans to guide epidemics and health emergencies in all ECOWAS member states								
Outcome	Develop country level legislation, policies and plans for public health emergencies response	Proportion of member states with legislation, policy and plans						
Output	Establishment of legal framework and legislation for epidemic and health emergency response	Number of states with a legal framework and legislation on epidemic and health emergency preparedness and response						
	Development of NAPHS	Number of Member States with NAPHS Validated						

Strategic Objective 2: To establish and Strengthen National Coordinating Institutes (NCI) and Emergency Operating Centers (EOCs)								
Outcome	Establishment of functional NCI	Proportion of member states with an functional NCI						
	Establishment of functional PHEOCs	Number of member states with functional National PHEOCs						

Thematic Area 2: Surveillance on epidemic prone diseases and risk of health emergencies Goal: Strengthen surveillance capacity of member states to prepare and respond to epidemics and health emergencies								
Results	**Major Interventions**	**Indicators**	**Baseline values**	**Target**				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO indicators								
Output	Support member states to establish an interoperable, interconnected electronic real-time reporting system	Number of member states supported to establish an interoperable, interconnected electronic real-time reporting system	-	2	3	3	4	3
	Support member states, , with analysis and strategic utilization of information collected through national surveillance systems to inform evidence-based policymaking;	Number of member states supported with analysis and strategic utilization of information collected through national surveillance systems to inform evidence-based policymaking	-	2	4	4	5	0
	Support implementation of early warning systems for priority health hazards and improve the regular and timely analysis and dissemination of epidemiological data, including laboratory results	Number of member states supported to implement and evaluate early warning systems for priority health hazards and improve the regular and timely analysis and dissemination of epidemiological data, including laboratory results	-	2	4	4	5	0

	Facilitate training and capacity-building on all-hazard risk assessment including biological, chemical, radiological, nuclear and natural hazards	Number of member states WAHO has facilitated training and capacity-building on all-hazard risk assessment including biological, chemical, radiological, nuclear and natural hazards	-	2	4	4	5	0
	Support the Promotion of IDSR strategy in ECOWAS region	Number of member states WAHO has promoted IDSR strategy through advocacy and training workshops	-	5	15	15	15	15
	Promote the adaptation of DHIS2 platform to enhance interoperability for real time reporting	Number of member states who have adapted the DHIS2 platforms for interoperability	-	3	10	15	15	15
	Support member states to establish AMR surveillance	Number of member states WAHO has supported to establish AMR surveillance		3	10	15	15	15
Member states indicators								
Strategic Objective 1: To establish an indicator and event-based surveillance system/ enhanced surveillance								
Outcome	Early detection and response to public health emergencies	Proportion of member states that detected and responded to at least 90% of health events early.						
	Establish community-based surveillance mechanism	Number of member states that have established community based surveillance mechanism						

	Establish national surveillance system for AMR	Number of member states that have established AMR surveillance mechanism						
	To conduct annual reviews of national surveillance system	Number of member states that have conducted an annual review of the national surveillance system						
Strategic Objective 2: To establish interoperable, interconnected electronic real-time reporting system								
Outcome	Support countries to establish interoperable, interconnected real-time reporting system	Proportion of Member states who have a functioning interoperable and interconnected electronic real-time reporting system						
	Web-based electronic reporting system available at all levels	Number of member states with web-based reporting system at all levels						
	Implementation of DHIS2 at all levels in the health system and a corresponding system available for animal health	Number of member states implementing at least DHIS2 at all levels within the country						
	Integration of IDSR with other web-based platforms such as DHIS2	Number of member states who have integrated IDSR with other existing web-based platforms						
	Enhanced linkages between public health systems and other sectors (animal health and environmental)	Number of member states with an enhanced linkages in the surveillance system						
	Real-time data accessibility and sharing with all relevant stakeholders for decision making	Number of member states with real-time data accessible to all relevant stakeholders						

Strategic Objective 3: To conduct routine analysis of surveillance data								
Outcome	Enhanced capacity on data analysis at the national level	Proportion of member states that produce weekly epidemiological report and share with member countries and relevant stakeholders						
	Enhanced capacity on data analysis at the district level	Proportion of member states that have at least 90% of the districts analysing data and producing monthly reports						
Output	Development of regional weekly epidemiological report	Number of member states that produce weekly epidemiological bulletin at least 90% of the time						
	Routine data analysis at the district level	Number of member states that has staff with skills in data analysis in at least 90% of the districts						
	Analyze and provide monthly district epidemiological report	Number of member states with at least 90% of the district analysing the district data and producing report						
	Training on surveillance data utilization and M&E developed and implemented	Number of member states who have trained their staff in surveillance data utilization and M&E						
Strategic Objective 4: To establishment syndromic surveillance system								
Outcome	Enhance syndromic surveillance system	Proportion of member states with functional syndromic surveillance system						

Output	Availability of hand book of case-definitions at all levels and facilities	Number of member states with a hand book on case-definitions in at least 90% of all facilities						
	Training of community health workers and volunteers on case-definition for recognition of cases	Number of member states who had trained at least 90% of the community health workers and volunteers on recognition of suspected cases						
Strategic Objective 5: To establish early warning system								
Outcome	Implement an electronic-based early warning system	Proportion of member states with an electronic based-early warning system						
Output	that is integrated with the regional network	Number of member states that have established the early warning system integrated with the regional network and its functional						
	Training on the operations and response to the early warning system	Number of member states that has trained the staff on the operations and response action to the early warning system						

Thematic Area 3: Workforce Development and Capacity to contain Epidemics and Health Emergencies								
Goal: Strengthen Public Health, Emergencies workforce of member states to improve their capacity to respond to epidemics and health emergencies								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO preparedness indicators								
	Support regional centres to train and develop the require workforce capacities in ECOWAS Member states through various teaching methods	Number of member states supported to train and develop the require workforce capacities in ECOWAS Member states through various teaching methods	-	10	12	12	15	15
	Support Curriculum Development to meet specific needs of Member states	Number of member states supported to develop their Curriculum to meet specific needs of Member states	-	2	5	5	3	0
	Support Harmonization of existing Training curriculum in ECOWAS region	Existing Training curriculum in ECOWAS region harmonized	-	2	5	5	3	0
	Support Quality Assurance of training programs through defines evaluation and accreditation standards for training institutions	Number of member states supported to conduct Quality Assurance of training programme	-	2	5	5	3	0

	Develop regional workforce strategy for emergency preparedness and response	Regional workforce strategy developed	-	0	1	0	1	0
	Promote sharing of best practices and good outcomes between countries	Best practices and good outcomes between countries shared	-	0	15	0	15	0
	Promote training on one health approach	One health training promoted in the sub-region	-	0	15	0	15	0
	Develop regional training guidelines	Regional guidelines developed and annual simulations conducted	-	0	1	0	0	1
	Accelerate the establishment of regional training centers	Regional training centers established	-	0	1	0	1	0
	Develop and maintain regional Rapid Response Team database for effective deployment	Regional Rapid Response Team database developed and maintained	-	1	1	1	1	1
Member states indicators								
Strategic Objective 1: To develop Public health/ epidemiology and Health emergency workforce strategy								
Outcome	Public health and Health Emergency/ Disaster preparedness training plans and guidelines	Proportion of member states with a public health and disaster preparedness training plans and guidelines.						

Output	Development and dissemination of a public health workforce strategy	Number of member states with a public health workforce strategy						
	Development and dissemination of a disaster preparedness workforce strategy	Number of member states with a disaster preparedness and response workforce strategy						
Strategic Objective 2: To develop and implement Public health and epidemiology training programs such as FELTP								
Outcome	Availability of Field Epidemiology Training program with at least 2 of the 3 tiers (Frontline, Intermediate and Advance training)	Proportion of member states running at least 2 tiers FELTP or related programs						
Output	Conduct 3- month Frontline FELTP training	Number of frontline FELTPs trained						
	Conduct 6-9 month Intermediate FELTP training	Number of intermediate FELTPS trained						
	Conduct 2- year Advanced FELTP training	Number of advanced FELTPS trained						
	Integrate emergency preparedness and response in curriculum for institution's pre-service training	Number of member states that have integrated emergency preparedness and response in curriculum for institution's pre-service training						

	Implement other relevant training programs such as FETP-V	Number of member states have implemented other relevant training programs such as FETP-V						
Strategic Objective 3: To improve the capacity for epidemiological and related skills to respond to Epidemics and Health Emergencies								
Outcome	Capacity to respond to epidemics and public health emergencies	Proportion of member states with at least 90% of the capacity (expertise) to respond to epidemics and health emergencies						
Output	Recruit field epidemiologist	Number of field epidemiologist recruited and at post						
	Recruit veterinary epidemiologists	Number of veterinary epidemiologists recruited and at post						
	Recruit laboratory scientist/ technologist	Number of laboratory scientist / technologist recruited and at post						
	Recruit environmental health practitioners	Number of environmental health practitioners recruited and at post						
	Recruit experts in disaster risk reduction, preparedness and response	Number of people with expertise in disaster risk reduction, preparedness and response recruited and at post						
Strategic Objective 4: To strengthen the capacity for clinical management (case management and infection prevention and control)								

Outcome	Establish specialized centres for infectious diseases and health emergency management	Proportion of member states with specialized centres for infectious diseases and health emergency management						
Output	Strengthen the capacity for clinical management (case management and infection prevention and control) for epidemic and health emergencies	Number of member states Strengthened the national capacity for clinical management (case management and infection prevention and control) for epidemic and health emergencies						
Strategic Objective 5: To strengthen the capacity to prevent spread of diseases and the impact of Health Emergencies								
Outcome	Establish isolation and infection prevention centres	Proportion of member states with a dedicated isolation/ infection prevention centres						
Output	Increase the accessibility of isolation/ infection prevention centres	Number of member states with at least 1 per/ 2 million population dedicated isolation/ infection prevention centre						
	Develop a data-base for a pool of public health practitioner including their expertise	Number of public health practitioners in-country available for emergency response						
Strategic Objective 6: To improve the capacity to maintain essential services (health service facility, personnel and supplies) to respond to Epidemics and Health Emergencies								
Outcome	Routine procurement of medical counter measures	Proportion of member states with at least 90% of the required medical counter measures in stock at all times						

Output	procurement of required medication as emergency counter-measures	Number of member states with no stock-out of required medication as emergency counter-measures						
	Procurement of required vaccines as emergency counter-measures	Number of member states with no stock out of required vaccines as emergency counter-measures						
	Procurement of required relief items as emergency counter-measures	Number of member states with no stock-out of required relief items as emergency counter-measures						

Thematic Area 4: Stockpiles and Medical Countermeasures								
Goal: To increase the capacity of stockpile and medical countermeasures and supplies								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO preparedness indicators								

	Support member states to ensure guaranteed availability of medical countermeasures (essential supplies and pharmaceuticals) on the basis of the countries risk profile	Number of member states supported to ensure guaranteed availability of medical countermeasures (essential supplies and pharmaceuticals) on the basis of the countries risk profile	-	3	3	3	3	03
	Support member states in coordination, harmonization and the development of relevant protocols such as clinical management of identified high risk pathogen and other emerging pathogens based on the risk profile of the sub-region.	Number of member states supported in the development of relevant protocols such as clinical management of identified high risk pathogen and other emerging pathogens based on the risk profile of the sub-region.	-	3	4	4	4	0
	Establishment of regional security stock for public health emergencies	Regional security stock for public health emergencies established	-	15	15	15	15	15
	Support the Establishments of Emergency medical teams' initiative	Emergency medical teams' initiative established	-	15	15	15	15	15
	Support the development of SOP and other guidelines in case management	SOP and other guidelines in case management developed and implemented	-	0	15	0	15	0
	Support the establishment of National Case Management and Infection Prevention Center with IPC systems in place	National Case Management and Infection Prevention Center with IPC systems in place established	-	2	4	4	5	0
	Support countries develop health emergency and logistic plan	Number of member states supported to develop health emergency and logistic plan	-	2	4	4	5	0

	Ensure quality of medicines/drugs for health emergencies	Number of member states with good quality medicines/ drugs for health emergencies	-	2	4	4	5	0
	Support countries control quality of drugs and supplies	Number of member states supported to control the quality of drugs and supplies	-	2	4	4	5	0
	Promote drugs and supplies sharing between countries during health emergencies	Number of member states having drugs and supply sharing between countries during health emergencies	-	15	15	15	15	15
	Develop standardized regional Medical Counter Measures plan on the basis of regional risk profile	Number of member states supported to develop standardized regional Medical Counter Measures plans on the basis of regional risk profile	-	0	1	0	0	0
	Develop a regional database for case management centers (isolation/holding centers) for GIS mapping during epidemics	Regional database developed for case management centers (isolation/ holding centers) for GIS mapping during epidemics	-	10	15	15	15	15
	Define procedures around the management of the regional emergency stockpile	Procedures on the management of the regional emergency stockpile defined and developed	-	1	0	1	0	1
	Support the strengthening of Member States capacities to conduct and regularly update national risk mapping and national preparedness, response and contingency plans	Number of Member states supported to strengthen the capacity to conduct and regularly update national risk mapping and national preparedness, response and contingency plans	-	15	15	15	15	15
	Establish and operationalize the ECOWAS regional rapid response team	ECOWAS regional rapid response team established and operationalized	-	1	1	1	1	1

	Provide specific protocols for the clinical management of identified high-threat pathogens and other hazards	Specific protocols for the clinical management of identifies high-risk pathogens and other hazards provided to member states	-	1	0	1	0	1
Member states indicators								
Strategic Objective 1: To ensure availability of stockpile and medical supplies								
Outcome	Ensure availability of requisite stockpiles and countermeasures	Proportion of member states with a requisite stockpiles and counter measures						
	Develop relevant SOPs for epidemic preparedness and response based on the countries risk profile and other emerging and re-emerging diseases.	Number of member states who have developed relevant SOPs for epidemic preparedness and response based on the countries risk profile and other emerging and re-emerging diseases.						
	Develop the legal and regulatory processes to establish a system for activating and coordinating medical countermeasures during public health emergencies, including mechanism for sending and receiving medical countermeasures and supplies.	Number of member states who have develop the legal and regulatory processes to establish a system for activating and coordinating medical countermeasures during public health emergencies, including mechanism for sending and receiving medical countermeasures and supplies.						
	Establish and maintain the guaranteed availability of essential supplies and pharmaceutical on the basis of the countries risk profile	Number of member states who have established and maintained the guaranteed availability of essential supplies and pharmaceutical on the basis of the countries risk profile						

Strategic Objective 2: To establish internal and partners communication and coordination								
Outcome	Develop a platform for national and partner organization on risk communication	Proportion of member states that have an established internal and partners communication platform						
Output	Establish a national risk communication committee	Number of member states with Risk coordination committee with relevant stakeholders						
	Convene quarterly risk communication committee meeting	Number of member states that meets at least every quarter in a year						
	Establish bilateral agreements for supplies sharing	Number of member states that have established bilateral agreements for supplies sharing						
	Develop country specific Medical Counter Measures	Number of member states that have develop country specific Medical Counter Measures						
	Conduct and regularly update all-hazard risk mapping that will serve as the basis for national preparing planning for stock piling.	Number of member states that conduct and regularly update all-hazard risk mapping that will serve as the basis for national preparing planning for stock piling.						

Thematic Area 5: Risk Communication and Community Engagement								
Goal: Strengthen risk communication for effective risk management decision making to achieve desired outcomes								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**20210**	**2022**	**2023**	**2024**
WAHO response indicators								
	Facilitate linkages to regional risk communication networks and platforms	Number of member states provided with facilitated linkages to regional risk communication networks and platforms	-	5	10	15	15	15
	Provide to Member States in collaboration with partners the necessary guidance, training, tools and on-site and remote support as part of the emergency risk communication five-step capacity-building package	Number of Member States provided with the necessary guidance, training, tools and on-site and remote support as part of the emergency risk communication five-step capacity-building package	-	5	5	5	0	0
	Support Member States to develop national risk communication strategy for epidemic preparedness and response	Number of member states supported to develop national risk communication strategy for epidemic preparedness and response	-	3	4	4	4	0

	Support integration of the package into national action plans for health emergency preparedness	Number of member states supported to integrate the package into national action plans for health emergency preparedness	-	3	5	5	2	0
	Support member states to strengthen community based surveillance	Support member states to strengthen community based surveillance	-	3	5	5	2	0
	Support member states in the development of risk communication systems and mechanisms	Number of member states supported in the development of risk communication systems and mechanisms	-	3	5	5	2	0
	Provide to member states in collaboration with partners guidance and training tools on-site as well as remote support	Number of member states provided support to collaborate with partners guidance and training tools on-site as well as remote support	-	3	5	5	2	0
	Advocate to member states to dedicate budget for risk communication activities	Number of member states provided advocacy to dedicate budget for risk communication activities	-	3	5	5	2	0
Member states indicators								
Strategic Objective 1: To develop Risk communication systems								
Outcome	Development of National Risk Communication Plans	Proportion of member states with a risk communication plan						
Output	Development of National Risk Communication Strategy for epidemics	Number of member states with risk communication strategy for epidemics						

	Development of National Risk Communication strategy for disasters	Number of member states with risk communication strategy for disasters						
	Ensure capacity building for risk communication	Number of member states that has built capacity for risk communication						
	Ensure staff with the knowledge and skills in risk communication experts are used in each country	Number of member states with staff having the knowledge and skills in risk communication						
Strategic Objective 2: To establish internal and partners communication and coordination								
Outcome	Develop a platform for national and partner organization on risk communication	Proportion of member states that have an established internal and partners communication platform						
Strategic Objective 3: To establish public communication systems and mechanisms								
Outcome	Establish a mechanism for public communication system	Proportion of member states that have an established mechanism for public communication						
Output	Develop a functional mechanism for communicating with the public	Number of member states with an established public communication mechanism						
	Routine engagement of the general public on general epidemic and health emergencies issues	Number of member states that engaged the general public on general epidemic and health emergencies issues at least every quarter						

Strategic Objective 4: To Establish communication mechanisms to engage with affected communities								
Outcome	Develop community engagement plans for risk communication during epidemics or disasters	Proportion of member states that have community engagement plans for epidemics and disasters						
Strategic Objective 5: To establish Dynamic listening and rumour management system								
Outcome	Set up rumor management centres and a national strategy	Proportion of member states with dedicated center or unit with a strategy for rumour management						
Output	Establish a toll free rumor management for epidemics and disasters	Number of member states with a 24 hour toll free hot-line for epidemics emergencies						
	Recruit key staff to manage the centre	Number of member states with dedicated staff to man the toll free hot-line for epidemics emergencies						

Thematic Area 6: Point of Entry								
Goal: Strengthen cross border surveillance for an effective epidemic and health emergency response								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO preparedness indicators								
	Develop a protocol of collaboration aimed at strengthening interactions of member states and also for information sharing	regional platform aimed at strengthening interactions of member states and also for information sharing developed	-	0	1	0	0	0
	Develop and implement a regional cross-border surveillance strategy	A regional cross-border surveillance strategy developed and implemented	-	1	0.5	0.2	0.2	0.2
	Support Coordination of activities aimed at strengthening interaction of member states at the point of entry through formal and informal platforms and networks	Number of member countries supported to strengthen interaction of member states at the point of entry through formal and informal regional platforms and networks	-	10	15	15	15	15

	Support Member States in strengthening and maintaining routine and emergency capacities at points of entry	Number of member countries strengthened and maintained routine and emergency capacities at points of entry	-	10	15	15	15	15
	Develop and maintain a database for designated Point of Entry and regularly update a list of IHR (2005) designated points of entry in the ECOWAS Region.	Number of member states that maintains a database for designated Point of Entry and regularly updates a list of IHR (2005) designated point of entry in the ECOWAS region	-	1	1	1	1	1
	Develop Standardized SOPs for Point of Entry	Number of member states with standardize SOPs for Point of Entry	-	1	1	1	1	1
	Collaborate with uniformed service (e.g. military or immigration) in coordination of activities	Number of member states who co-collaborate with uniformed service (e.g. military or immigration) in coordination of activities	-	10	15	15	15	15
Member states indicators								
Strategic Objective 1: To operationalize cross-border surveillance and data sharing								
Outcome	Develop a cross border surveillance strategy	Proportion of member states with a cross-border surveillance strategy						
Output	To comply with the regional protocol for cross-border surveillance including data sharing	Number of member states that comply with the regional cross-border protocol including data sharing with neighbouring						

		countries for cross-border surveillance and response						
	Develop and maintain routine and emergency capacities at designated points of entry and ensure regular evaluation;	Number of member states maintain routine and emergency capacities at designated points of entry and ensure regular evaluation						
	Establish, maintain and to ensure routine and emergency capacities at points of entry;	Number of member states established, maintained and ensured routine and emergency capacities at points of entry						
	Ensure compliance with IHR regularly on border closure	Number of member states who are compliant with IHR regularly on border closure						
	Develop map of informal Points of Entry	Number of member states with developed map of informal Points of Entry						
Strategic Objective 2: To establish a coordination mechanism for cross-border investigations								
Outcome	Established coordination mechanism or protocol for cross border investigation	Proportion of member states with an established coordination mechanism or protocol for cross border investigation						
Output	Conduct cross-border coordination meeting	Number of member states that attended at least 2 cross-border coordination meetings per year						

	Conduct joint cross-border training conducted with neighboring member states	Number of joint cross-border training conducted with neighboring member states						
	ensure compliance with maritime provisions in the IHR (2005).	Number of member states with a compliance of with maritime provisions in the IHR (2005)						
	Ensure compliance of routine vector and reservoir controls regulations at all PoEs	Number of member states with a compliance of routine vector and reservoir controls regulations at all PoEs						
	Develop a functional system to facilitate conveyance of ill travellers from PoEs to appropriate medical facilities.	Number of member states with a functional system to facilitate conveyance of ill travelers from PoEs to appropriate medical facilities						

Thematic Area 7: Strengthening Laboratory Systems and Networks								
Goal: Strengthen laboratory systems and networks to improve access to services for effective disease surveillance and response[6]								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO preparedness indicators								
	Support member states to establish a National Public Health Laboratory (NPHL) network including animal health, food safety and environment laboratories within each Member State and the Regional Centre for Disease Control	Number of member states supported to establish a National Public Health Laboratory (NPHL) network including animal health, food safety and environment laboratories within each Member State and the Regional Centre for Disease Control	-	3	4	4	4	0
	Support member states in strengthening and maintaining quality-assured regional laboratory networks for emergency preparedness building on the ex-	Number of member states supported in strengthening and maintaining quality-assured regional laboratory networks for emergency preparedness, building on the existing WHO and	-	3	4	4	4	0

[6] WAHO Capacity Building Plan for Regional Reference Laboratories Network: 2018 -2022

	isting WHO and other international laboratory networks and promote regional information exchange between the laboratories	other international laboratory networks and promote regional information exchange between the laboratories						
	Establish a national Laboratory Technical Working Group, LTWG (semi-autonomous) in each Member State	Number of member states supported to establish a national Laboratory Technical Working Group, LTWG (semi-autonomous) in each Member State	-	5	10	15	15	15
	Set standards for public health laboratories across the region	Standards for public health laboratories across the region developed	-	1	0	1	0	1
	Support Member states to Establish a laboratory regulatory body for monitoring and certification of laboratory professionals and their working environment in both public and private settings	Number of Member states to supported to establish a laboratory regulatory body for monitoring and certification of laboratory professionals and their working environment in both public and private settings	-	5	5	5	0	0
	Support the establishment of a regional integrated, efficient and effective laboratory management information system, with supporting infrastructure, supplies and capacity building	Number of member states supported to establishment of a regional integrated, efficient and effective laboratory management information system, with supporting infrastructure, supplies and capacity building	-	0	1	1	0.2	0.2

	Develop regional policy guideline on bio-risk management in line with international standards and establish a regional bio-surveillance network linked to member states laboratory networks	Regional policy guideline on bio-risk management in line with international standards and establish a regional bio-surveillance network linked to member states laboratory networks developed	-	0	1	0	0	0
	Support Member States, upon request, in establishing and improving national and international referral systems for clinical and environmental samples through the development of national sample referral guidelines and export permits, the WHO Infectious Substances Shipping Training, and training in bio-risk management;	Number of Member States, supported upon request, in establishing and improving national and international referral systems for clinical and environmental samples through the development of national sample referral guidelines and export permits, the WHO Infectious Substances Shipping Training, and training in bio-risk management;	-	2	3	4	4	2
	Ensure dissemination of, or develop where needed, examples of national good practices of public health laboratory systems that can serve as models for countries undergoing laboratory restructuring and laboratory quality training;	National good practices of public health laboratory systems that can serve as models for countries undergoing laboratory restructuring and laboratory quality training developed and or disseminated	-	2	3	4	4	2

	Support the development of laboratory human resources capacity through the implementation of WAHO's harmonized training curricula in all member states	Number of member states supported to develop laboratory human resources capacity through the implementation of WAHO's harmonized training curricula in all member states	-	2	4	5	4	0
	Support member states in establishing and improving national and international referral system	Number of member states supported to establish and improve national and international referral system	-	2	4	5	4	0
WAHO response indicators								
	Support member states in strengthening and maintaining quality-assured regional laboratory networks for emergency response, building on the existing WHO and other international laboratory networks and promote international information between the laboratories	Number of member states supported in strengthening and maintaining quality-assured regional laboratory networks for emergency response, building on the existing WHO and other international laboratory networks and promote international information between the laboratories	-	3	4	4	4	0
	Strengthen the capacity of NPHLs and NRLs to respond to outbreaks and emerging diseases	Number of member states supported to strengthen the capacity of NPHLs and NRLs to respond to outbreaks and emerging diseases	-	10	15	15	15	15
Member states indicators								

Strategic Objective 1: To strengthen local laboratory capacity for testing priority diseases								
Outcome	Improve the capacity to test for all national priority diseases	Proportion of member states with capacity to test all the national priority diseases						
Output	Basic equipment for core laboratory testing are in place	Number of member states with basic laboratory equipment for core laboratory testing						
	People with expertise in basic laboratory testing (bacteriology, virology, parasitology and mycology)	Number of member states with expertise in basic laboratory testing (bacteriology, virology, parasitology and mycology)						
	National Standard operating procedures (SOPs) for collection, packaging and transportation of samples are available for all priority diseases	Number of member states with National SOPs for collection, packaging and transportation of samples are available for all priority diseases						
	Integrated laboratory-based electronic information system linked to the disease surveillance system	Number of member states in interoperable integrated laboratory-based electronic information system linked to diseases surveillance system						
	Establish AMR surveillance	Number of member states with AMR Surveillance established						
	To conduct PCR, sequencing and other advanced laboratory techniques of all priority public health conditions	Number of member states with at least one national laboratory to conduct PCR, sequencing and other advanced laboratory techniques of all priority public health conditions						

Strategic Objective 2: To strengthen the specimen referral and transport system for transport to a reference laboratory								
Outcome	Establish mechanism for timely and prompt specimen referral and transport network system	Proportion of member states with a mechanism for timely and prompt specimen referral and transport network system						
Output	Secure dedicated funding for specimen referral and transport	Number of member states with dedicated funding for specimen referral and transport						
	Develop MOUs with Courier services for transport of samples	Number of member states with an MOUs with Courier services for transport of samples						
	Develop MOUs with supra-national reference laboratories for testing	Number of member states with an MOUs with supra-national reference laboratories for testing						
	Training of staff on specimen referral, packaging and transport	Number of staff trained on specimen referral, packaging and transport						
Strategic Objective 3: To improve effective modern point-of-care and laboratory-based diagnostic services								
Outcome								
Output	Availability of laboratory media, reagents and test kits	Number of member states without stock-out of laboratory media, reagent and test kits						

	Community approach using point of care (rapid test) for testing priority diseases at the community level	Number of member states that have incorporated point of care service in their national laboratory systems						
Strategic Objective 4: To improve laboratory quality system								
Outcome	Member states should support their laboratories to enrol in the laboratory accreditation (SLIPTA) process	Proportion of member states that have their laboratories enrolled in the SLIPTA accreditation						
Output	Laboratories participating in at least one of EQA and scoring >80% in NEQAS	Number of laboratories participating in at least one of EQA and scoring >80% in NEQAS						
	Participates in WHO Stepwise Accreditation within 5years	Number of Member states with increase in the number of laboratories participating in WHO Stepwise Accreditation within 5years						
	Establish Technical Working Groups and regulatory bodies at country level.	Number of member countries who have established Technical Working Groups and regulatory bodies at country level						

Thematic Area 8: The One Health Approach								
Goal: To strengthen the One-Health concept among member states for effective preparedness and response								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO indicators								
	Provide technical guidance, tools and best practices for implementing a One Health approach, including those contained in the revised tripartite zoonosis guide and toolkit In collaboration with key partners;	Number of member states WAHO has provided technical guidance, tools and best practices for implementing a One Health approach, including those contained in the revised tripartite zoonosis guide and toolkit In collaboration with key partners;	-	10	15	15	15	15
	Support Member States with IHR (2005)/performance of veterinary services bridging workshops to enhance the linkages between human and animal health sectors;	Number of member states supported with IHR (2005)/performance of veterinary services bridging workshops to enhance the linkages between human and animal health sectors;	-	3	4	4	4	0
	Support Member States in strengthening their capacity to address zoonoses under the IHR (2005);	Number of member states supported in strengthening their capacity to address zoonoses under the IHR (2005);	-	3	3	4	4	1

	Implementation of the regional One-Health platform	Regional One-Health platform implemented	-	3	3	4	4	1
	Support member states to develop and integrate environmental and vector management plans	Number of member states supported to develop and integrate environmental and vector management plans	-	3	3	4	4	1
	Support the development of the One-Health strategic plan in ECOWAs region	One-Health Strategic Plan in ECOWAS region developed	-	3	3	4	4	1
	Support members states to operationalize "One Health platforms	Number of member states with functional OH platform	-	3	3	4	4	1
Member states indicators								
Strategic Objective 1: To strengthen the one health approach (human, animal health and environment) at all levels								
Outcome	Development a national one health strategic plan	Percentage of member states with a one-health strategy						
Output	Development a national one-health platform for coordination	Number of member states with an established one health platform for coordinating one-health related activities						
	Conduct a joint one health investigation and response by all relevant stakeholders (human, animal and environment)	Number of member states that have conducted joint one health investigation and response conducted by all relevant stakeholders (human, animal and environment)						

Thematic Area 9: Information systems and research								
Goal: Strengthen health information management system and research to enhance evidence-based decision making								
Results	**Major Interventions**	**Indicators**	**Baseline values**	**Target**				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO preparedness indicators								
	Support the development and implementation of a regional interoperable HIMS with linkages to all member states	A regional interoperable HIMS with linkages to all member states developed and implemented	-	1	1	1	1	1
	Support member states to develop a functional computerized and efficient LIMS, with linkages to the regional reference laboratories	Number of member states supported to develop a functional computerized and efficient LIMS, with linkages to the regional reference laboratories	-	2	3	4	4	2
	Support the establishment of a regional research consortium in public health emergencies	Regional research consortium in public health emergencies established	-	1	1	1	1	1

	Identify regional Centers for excellence for research and support capacity building of the centres to conduct research on priority epidemic prone diseases including zoonotic diseases	Regional Centers for excellence for research and support capacity building of the centres identified to conduct research on priority epidemic prone diseases including zoonotic diseases	-	2	3	4	5	6
	Support member states to develop operational research technical capacity to enhance epidemiological and public health emergency research	Number of member states supported to develop operational research technical capacity to enhance epidemiological and public health emergency research	-	2	3	4	4	2
	Support the development of regional research platform aimed at providing interaction with research and academic intuitions	A regional research platform aimed at providing interaction with research and academic intuitions developed	-	1	1	1	1	1
	Secure funding for a call as grant announcement on research of epidemic prone diseases to promote research in ECOWAS region	Funding for a call as grant announcement on research of epidemic prone diseases to promote research in our sub-region secured	-	0.5	1	1	1	1
WAHO response indicators								
	Support member states to develop a robust electronic HIMS for responding to outbreaks which can generate line-list, relevant charts such as epi-curve and situational reports	Number of member states supported to develop a robust electronic HMIS-for responding to outbreaks which can generate line-list, relevant charts such as epi-curve and situational reports	-	2	3	4	4	2

	Facilitate linkages to the regional laboratory and research centers to collaborate with member countries during public health emergencies to provided solutions to unanswered questions	Number of member states provided with facilitated linkages to the regional laboratory and research centers to collaborate with member countries during public health emergencies to provide solutions to unanswered questions	-	5	10	15	15	15
	Ensure that member states use the existing e-platform during outbreaks linked to the DHIS2	Number of member states using the existing e-platform during outbreaks linked to the DHIS2	-	5	10	15	15	15
	Facilitate linkages to regional risk communication networks and platforms	Number of member states provided with facilitated linkages to regional risk communication networks and platforms	-	5	10	15	15	15
Member state indicators								
Strategic Objective 1: To strengthen health information systems at all levels								
Outcome	Improve health information for decision-making and program planning	Proportion of member states with health information system that collects, stored and provides early warning signs for prompt decision-making and program planning						
	Functional HIMS with linkages to the regional centre	Number of Member states with a functional LMIS with linkages to the regional centre						

Output	Functional computerised and efficient LIMS, with linkages to the regional reference laboratories	Number of Member States having a functional computerised and efficient LIMS, with linkages to the regional reference laboratories						
	Strengthen regulatory framework in research and data sharing	Number of member states that have strengthened their regulatory framework in research and data sharing						

Results	Major Interventions	Indicators	Baseline values	Target				
				2020	2021	2022	2023	2024
Strategic Objective 2: To support epidemiological research and development								
Outcome	Support member countries develop epidemiological research priorities	Proportion of member states with a epidemiology research agenda						
Output	Conduct priority epidemic and health emergency investigation	Number of member states that use data from investigations for decision making						
	National Research Priority list developed and updated	Number of member states with a national Research Priority list developed and updated						
	Conduct priority public health research	Number of member states conducting priority public health research based on the priority list						

Thematic Area 10: Enhanced surveillance during Epidemics, Case management and infection Prevention and Control (IPC)

Goal: To strengthen disease surveillance during epidemic and health emergencies; prompt treatment with infection prevention and control.

Results	Major Interventions	Indicators	Baseline values	Target				
				2020	2021	2022	2023	2024
WAHO response indicators								
	Support member states to establish specialized centres for infectious diseases	Number of member states supported to establish specialized centres for infectious diseases t	-	2	4	6	3	0
	Support National Emergency medical teams to respond to public health emergencies	Number of members provided with support to the National Emergency medical teams to respond to public health emergencies	-	10	15	15	15	15
	Provide technical support at the country level for emergency response during public health emergencies	Number of member states provided with technical support at the country level for emergency response during public health emergencies	-	10	10	10	10	10
	Support member states to establish community-based surveillance	Number of member states supported to establish community-based surveillance	-	2	4	6	3	0

	Strengthen WANIDS (West Africa Network for Infectious Disease Surveillance)	Number of member states working with and strengthening WANIDS (West Africa Network for Infectious Disease Surveillance)	-	5	10	15	15	15
Member state indicators								
Strategic Objective 1: To improve surveillance, case management and IPC during epidemic and health emergencies								
Output	Ensure that the NCI has sufficient capacity to comply with obligations for notification, consultation, verification and information exchange with WAHO and RCDSC	Number of member states with NCI having sufficient capacity to comply with obligations for notification, consultation, verification and information exchange with WAHO and RCDSC						
	Implement continuous surveillance including case-search and real-time data management to provide real-time data for decision making	Number of member states Implementing continuous surveillance including case-search and real-time data management to provide real-time data for decision making						

Thematic Area 11: Deployment of personnel and medical countermeasures (Response Operations)								
Goal: To improve resources for epidemic and health emergency preparedness and management to ensure sustainable response.								
Results	**Major Interventions**	**Indicators**	**Baseline values**	Target				
				2020	**2021**	**2022**	**2023**	**2024**
WAHO response indicators								
	Support operationalization of Deployment of ECOWAS regional rapid response team	Number of deployment of ECOWAS regional rapid response team	-	3	5	10	10	10
	Support the coordination of the collective response by operational health partners and agencies of the United Nations in order to ensure equitable access to essential health -services during emergencies;	Number of member states supported to coordinate the collective response by operational health partners and agencies of the United Nations in order to ensure equitable access to essential health services during emergencies;	-	1	1	1	1	1

	Provide specific protocols for the clinical management of identified high-threat pathogens and other hazards	Number of member states provided with specific protocols for the clinical management of identified high-threat pathogens and other hazards	-	1	1	1	1	1
	Establish a stockpile of Medical Counter Measures at the regional level	Stockpile of Medical Counter Measures at the regional level established	-	1	1	1	1	1
Member state indicators								
Strategic Objective 1: To provide a prompt response for personnel deployment and medical counter measures								
Outcome	Conduct and regularly update all-hazard risk mapping that will serve as the basis of national preparedness planning	Number of member states that conduct and regularly update all-hazard risk mapping that will serve as the basis of national preparedness planning						
	Develop and regularly update national multisectoral, all-hazard emergency preparedness and response activities and supporting policies and procedures with dedicated financial and human resources;	Number of member states that develop and regularly update national multisectoral, all-hazard emergency preparedness and response activities and supporting policies and procedures with dedicated financial and human resources;						

	Establish, maintain or strengthen emergency response coordination mechanisms, including incident management systems and health emergency operations centres;	Number of member states that have established, maintained or strengthened emergency response coordination mechanisms, including incident management systems and health emergency operations centres;						
	Develop a mechanism that can be activated rapidly to deploy national pool of experts and medical counter measures during a health emergency both in-country and within other member states	Number of member states that have develop a mechanism that can be activated rapidly to deploy national pool of experts and medical counter measures during a health emergency both in-country and within other member states						
	establish, maintain or strengthen the guaranteed availability of essential supplies and pharmaceuticals on the basis of national risk profiles;	Number of member states that have established, maintained or strengthen the guaranteed availability of essential supplies and pharmaceuticals on the basis of national risk profiles;						
	Establish, maintain or strengthen a special procurement and supply chain management system for emergency response for logistics	Number of member states that have established, maintained or strengthen a special procurement and supply chain management system for emergency response for logistics						

	Implement appropriate policies and standard operating procedures to ensure the continuous delivery of essential health services packages during health emergencies.	Number of member states that have implemented appropriate policies and standard operating procedures to ensure the continuous delivery of essential health services packages during health emergencies.						

Thematic Area 12: Resource mobilization for epidemic and health emergencies preparedness and response

Goal: To improve resources for epidemic and health emergency preparedness and management to ensure sustainable response.

Results	Major Interventions	Indicators	Baseline values	Target				
				2020	2021	2022	2023	2024
WAHO indicators								
	Advocate national governments to provide funding for epidemic and health emergency preparedness and response	Number of member countries WAHO has engaged in advocacy for funding	-	5	10	15	15	15
	In collaboration with key partners, will work with donors to mobilize additional resources for epidemic and health emergency preparedness	Number of partners engaged with in resource mobilization for epidemic and health emergency preparedness	-	5	10	15	15	15
Member state indicators								

Strategic Objective 1: To increase funding for epidemic and health emergencies preparedness and response

Outcome	Increase budgetary allocation for epidemic preparedness and disaster risk reduction	Proportion of member states that received increase in funds allocation for epidemic preparedness and disaster risk reduction						
Output	Develop a budget-line for epidemics and health emergencies response as part of the health sector annual budget	Number of member states with a budget-line for epidemics and health emergencies response as part of the health sector annual budget						
	Identify domestic and private sources of funding	Number of member states who have identified domestic and private sources of funding						
	Provide transparent financial accountability	Number of member states which Provided transparent financial accountability						

Section Four: Monitoring and Evaluation

Monitoring and Evaluation (M&E) is key in tracking the process of the Regional Strategic Preparedness and Response Plan for Public Health Emergencies. The goal is to institutionalize Programme Monitoring and Evaluation with Continuous Quality Improvement for all member states.

The various indicators outline in the matrix will be monitored and evaluated to help improve performance and achieve results.

Member states would be expected to keep track of the progress they make towards achieving each indicator yearly and report to WAHO by the second month of each year. As a regional body, WAHO would track its progress made on achieving the set targets for each indicator annually. WAHO would track the entire progress of both the regional body and the member countries and share progress status reports with member countries to enable know what needs to be improved upon and what is required of them.

To ensure that this strategic plan is well monitored and evaluated, a mid-term evaluation of this document would be conducted. This would provide recommendations on how to achieve the set targets by 2024.

The goal of the monitoring and evaluation is to improve current and future management of outputs, outcomes and impact as outlined in the regional Strategic Preparedness and Response Plan for Public Health Emergencies. It will be used to assess the performance of member countries as set up by the West Africa Health Organization (WAHO)

Budget for ECOWAS Regional Preparedness and Response Plan for Public Health Emergencies

Thematic Areas and Key Activities for Implementation	Unit Cost	2020	2021	2022	2023	2024	Total Budget (USD)
1. Coordination, Legislation and Policies							
Assist member states in the development of guidance, tools, training and advocacy materials in order to improve multi-sectoral implementation of the IHR (2005) and the role and functioning of the NCI	7500	22500	37500	52500	0	0	**112500**
Advocate for the establishment of NCI for member states	5000	15000	20000	20000	20000	-	**75000**
Support member countries to align/ harmonize all relevant existing legislations on IHR (2005)	25000	50000	100000	100000	0	0	**250000**
Support Member States in the development of national policies and costed NAPHS	25000	50000	100000	100000	125000	0	**375000**
Support Member States to develop national risk communication plans	20000	40000	80000	80000	100000	0	**300000**
Support member states to develop multi-sectorial AMR action plan	25000	50000	100000	100000	0	0	**250000**
Provide regional platforms to strengthen NCI networking and the exchange of best practices, including through annual regional and sub-regional meetings	30000	90000	150000	210000	0	0	**450000**
Disseminate examples of good practices of development and strengthening of multisectoral platforms for coordinated decision-making for IHR implementation	0	0	0	0	0	0	**0**

Support member states in the establishment of a functional National Coordinating Institute (NCI)	20000	40000	60000	80000	80000	40000	**300000**
Establish Regional PHEOC in The RCDSC to improve regional coordination of public health emergencies	100000	0	100000	20000	20000	20000	**160000**
Support member states, upon request, in the development and revision of relevant national legislative and regulatory frameworks, and standard operating procedures	5000	10000	25000	25000	15000	0	**75000**
Support member states in the implementation of national policies and costed NAPHS	12000	0	36000	48000	48000	48000	**180000**
Support member states in the establishment of a functional National EOC to coordinate health emergency response	10000	20000	30000	30000	30000	30000	**140000**
Support members states to strengthen communication and coordination mechanism between regional and national level	0	0	0	0	0	0	**0**
TOTAL		**387500**	**838500**	**865500**	**438000**	**138000**	**2667500**

Total budget for Thematic Area 1: Coordination, Legislation and Policies = USD 2,667,500

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
2. Surveillance on epidemic prone diseases and risk of health emergencies							
Support member states to establish an interoperable, interconnected electronic real-time reporting system	17500	35000	70000	70000	87500	0	**262500**
Support member states, upon request, with analysis and strategic utilization of information collected through national surveillance systems to inform evidence-based policymaking;	12500	25000	50000	50000	62500	0	**187500**

Support implementation and evaluation of early warning systems for priority health hazards and improve the regular and timely analysis and dissemination of epidemiological data, including laboratory results	10000	20000	40000	40000	50000	0	**150000**
Facilitate training and capacity-building on all-hazard risk assessment including biological, chemical, radiological, nuclear and natural hazards	25000	50000	100000	100000	125000	0	**375000**
Promotion of IDSR strategy	7500	37500	112500	112500	112500	112500	**487500**
Promote the adaptation of DHIS2 platform to enhance interoperability for real time reporting	10000	30000	100000	150000	150000	150000	**580000**
Support member states to establish AMR surveillance	20000	60000	200000	300000	300000	300000	**1160000**
TOTAL		**257500**	**672500**	**822500**	**887500**	**562500**	**3202500**

Total budget for Thematic Area 2: Surveillance on epidemic prone diseases and risk of health emergencies = USD 3,202,500

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
3. Workforce Development and Capacity to contain Epidemics and Health Emergencies							
In collaboration with partners will support regional centres to train and develop the require workforce capacities in ECOWAS Member states through various teaching methods	245000	2450000	2940000	2940000	3675000	3675000	**15680000**
Support Curriculum Development to meet specific needs of Member states	12000	24000	60000	60000	36000	0	**180000**
Support Harmonization of existing Training curriculum in ECOWAS region	8000	16000	40000	40000	24000	0	**120000**
Support Quality Assurance of training programs through defines evaluation and accreditation standards for training institutions	5000	10000	25000	25000	15000	0	**75000**

Develop regional workforce plan for emergency preparedness and response	180000	0	180000	0	0	0	**180000**
Promote sharing of best practices and good outcomes between countries	10000	0	150000	0	150000	0	**300000**
Promote training on one health	10000	0	150000	0	150000	0	**300000**
Develop regional training guidelines	75000	0	75000	0	0	75000	**150000**
Accelerate the establishment of regional training centers	75000	0	75000	0	75000	0	**150000**
Develop and maintain regional Rapid Response Team database for effective deployment	25000	25000	25000	25000	25000	25000	**125000**
TOTAL		**2525000**	3720000	**3090000**	**4150000**	**3775000**	**17260000**
Total budget for Thematic Area 3: Workforce Development and Capacity to contain Epidemics and Health Emergencies = USD 17,260,000							

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
4. Stockpiles and Medical Countermeasures							
Support member states to ensure guaranteed availability of medical countermeasures (essential supplies and pharmaceuticals) on the basis of the countries risk profile	5000	15000	25000	35000	0	0	**75000**
Support member states in coordination, harmonization and the development of relevant protocols such as clinical management of identified high risk pathogen and other emerging pathogens based on the risk profile of the sub-region.	25000	75000	100000	100000	100000	0	**375000**
Establishment of regional security stock for public health emergencies	50000	750000	750000	750000	750000	750000	**3750000**
Support the Establishments of Emergency medical teams' initiative	7000	105000	105000	105000	105000	105000	**525000**

Support the development of SOPs and other guidelines in case management	20000	0	300000	0	300000	0	**600000**
Support the establishment of National Case Management and Infection Prevention Center with IPC systems in place	65000	130000	260000	260000	325000	0	**975000**
Support countries develop health emergency and logistic plan	50000	100000	200000	200000	250000	0	**750000**
Ensure quality of medicines/drugs for health emergencies	35000	70000	140000	140000	175000	0	**525000**
Support countries control quality of drugs and supplies	35000	70000	140000	140000	175000	0	**525000**
Promote drugs and supplies sharing between countries during health emergencies	10,000	150000	150000	150000	150000	150000	**750000**
Develop standardized regional Medical Counter Measures plan on the basis of regional risk profile	165000	0	165000	0	0	0	**165000**
Develop a regional database for case management centers (isolation/holding centers) for GIS mapping during epidemics	8000	80000	120000	120000	120000	120000	**560000**
Define procedures around the management of the regional emergency stockpile	50000	50000	0	50000	0	50000	**150000**
Support the strengthening of Member States capacities to conduct and regularly update national risk mapping and national preparedness, response and contingency plans	15000	225000	225000	225000	225000	225000	**1125000**
Establish and operationalize the ECOWAS regional rapid response team	100000	100000	100000	100000	100000	100000	**500000**
Provide specific protocols for the clinical management of identified high-threat pathogens and other hazards	150000	150000	0	150000	0	150000	**450000**
TOTAL		**2070000**	**2780000**	**2525000**	**2775000**	**1650000**	**11800000**
Total budget for Thematic Area 4: Stockpiles and Medical Countermeasures = USD 11,800,000							

Thematic Areas and Key Activities for Implementation	Unit Cost	2020	2021	2022	2023	2024	Total Budget (USD)
5. Risk Communication and Community Engagement							
Facilitate linkages to regional risk communication networks and platforms	5000	50000	75000	75000	75000	75000	**350000**
Provide to Member States in collaboration with partners the necessary guidance, training, tools and on-site and remote support as part of the emergency risk communication five-step capacity-building package	10000	50000	50000	50000	0	0	**150000**
Support Member States to develop national risk communication strategy for epidemic preparedness and response	35000	105000	140000	140000	140000	0	**525000**
Support integration of the package into national action plans for health emergency preparedness	7500	22500	37500	37500	15000	0	**112500**
Support member states to strengthen community based surveillance	12000	36000	60000	60000	24000	0	**180000**
Support member states in the development of risk communication systems and mechanisms	15000	45000	75000	75000	30000	0	**225000**
Provide to member states in collaboration with partners guidance and training tools on-site as well as remote support	20000	60000	100000	100000	40000	0	**300000**
Advocate to member states to dedicate budget for risk communication activities	0	0	0	0	0	0	**0**
TOTAL		**368500**	**537500**	**537500**	**324000**	**75000**	**1842500**
Total budget for Thematic Area 5: Risk Communication and Community Engagement = USD 1,842,500							
Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
6. Point of Entry							

Develop a regional platform aimed at strengthening interactions of member states and also for information sharing	85000	0	85000	0	0	0	**85000**
Develop and implement a regional cross-border surveillance strategy	165000	165000	82500	33000	33000	33000	**346500**
Support Coordination of activities aimed at strengthening interaction of member states at the point of entry through formal and informal platforms and networks	7500	75000	112500	112500	112500	112500	**525000**
support Member States in strengthening and maintaining routine and emergency capacities at points of entry	25000	250000	375000	375000	375000	375000	**1750000**
Develop and maintain a database for designated Point of Entry and regularly update a list of IHR (2005) designated points of entry in the ECOWAS Region.	22500	22500	22500	22500	22500	22500	**112500**
Standardize SOPs for Point of Entry	22500	22500	22500	22500	22500	22500	**112500**
Collaborate with uniformed service (e.g. military or immigration) in coordination of activities	10000	100000	150000	150000	150000	150000	**700000**
TOTAL		**635000**	**850000**	**715500**	**715500**	**715500**	**3631500**
Total budget for Thematic Area 6: Point of Entry = USD 3,631,500							

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
7. Strengthening Laboratory Systems and Networks							
Support member states to establish a National Public Health Laboratory (NPHL) network including animal health, food safety and environment laboratories within each Member State and the Regional Centre for Disease Control	35000	105000	140000	140000	140000	0	**525000**

Support member states in strengthening and maintaining quality-assured regional laboratory networks for emergency preparedness building on the existing WHO and other international laboratory networks and promote regional information exchange between the laboratories	15000	45000	60000	60000	60000	0	**225000**
Establish a national Laboratory Technical Working Group, LTWG (semi-autonomous) in each Member State	20000	100000	200000	300000	300000	300000	**1200000**
Set standards for public health laboratories across the region	120000	120000	0	120000	0	120000	**360000**
Support Member states to Establish a laboratory regulatory body for monitoring and certification of laboratory professionals and their working environment in both public and private settings	25000	125000	125000	125000	0	0	**375000**
Support the establishment of a regional integrated, efficient and effective laboratory management information system, with supporting infrastructure, supplies and capacity building	175000	0	175000	175000	35000	35000	**420000**
Develop regional policy guideline on bio-risk management in line with international standards and establish a regional bio-surveillance network linked to member states laboratory networks	80000	0	80000	0	0	0	**80000**
Support Member States, upon request, in establishing and improving national and international referral systems for clinical and environmental samples through the development of national sample referral guidelines and export permits, the WHO Infectious Substances Shipping Training, and training in bio-risk management	20000	40000	60000	80000	80000	40000	**300000**

Ensure dissemination of, or develop where needed, examples of national good practices of public health laboratory systems that can serve as models for countries undergoing laboratory restructuring and laboratory quality training	10000	20000	30000	40000	40000	20000	**150000**
Support the development of laboratory human resources capacity through the implementation of WAHO's harmonized training curricula in all member states	35000	70000	140000	175000	140000	0	**525000**
Support member states in establishing and improving national and international referral system	20000	40000	80000	100000	80000	0	**300000**
Support member states in strengthening and maintaining quality-assured regional laboratory networks for emergency response, building on the existing WHO and other international laboratory networks and promote international information between the laboratories	15000	45000	60000	60000	60000	0	**225000**
Strengthen the capacity of NPHLs and NRLs to respond to outbreaks and emerging diseases	25000	250000	375000	375000	375000	375000	**1750000**
TOTAL		**960000**	**1525000**	**1750000**	**1310000**	**890000**	**6435000**
Total budget for Thematic Area 7: Strengthening Laboratory Systems and Networks = USD 6,435,000							

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
8. The One Health Approach							
Provide technical guidance, tools and best practices for implementing a One Health approach, including those contained in the revised tripartite zoonosis guide and toolkit In collaboration with key partners;	5000	50000	75000	75000	75000	75000	**350000**
Support Member States with IHR (2005)/performance of veterinary services bridging workshops to enhance the linkages between human and animal health sectors;	50000	150000	200000	200000	200000	0	**750000**

Support Member States in strengthening their capacity to address zoonosis under the IHR (2005);	25000	75000	75000	100000	100000	25000	**375000**
Implementation of the regional One-Health platform	10000	30000	30000	40000	40000	10000	**150000**
Support member states to develop and integrate environmental and vector management plans	75000	225000	225000	300000	300000	75000	**1125000**
Support the development of the One-Health strategic plan in ECOWAs region	35000	105000	105000	140000	140000	35000	**525000**
Support members states to institutionalize "One Health Approach"	50000	150000	150000	200000	200000	50000	**750000**
		785000	**860000**	**1055000**	**1055000**	**270000**	**4025000**
Total budget for Thematic Area 8: The One-Health Approach = USD 4,025,000							

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
9. Information systems and research							
Support the development and implementation of a regional interoperable HIMS with linkages to all member states	175000	175000	175000	175000	175000	175000	**875000**
Support member states to develop a functional computerized and efficient LIMS, with linkages to the regional reference laboratories	45000	90000	135000	180000	180000	90000	**675000**
Support the establishment of a regional research consortium in public health emergencies (emergency and re-emerging diseases; disaster risk reduction)	150000	150000	150000	150000	150000	150000	**750000**
Identify regional Centers for excellence for research and support capacity building of the centres to conduct research on priority epidemic prone diseases including zoonotic diseases	120000	240000	360000	480000	600000	720000	**2400000**

Support member states to develop operational research technical capacity to enhance epidemiological and public health emergency research	45000	90000	135000	180000	180000	90000	**675000**
Support the development of regional research platform aimed at providing interaction with research and academic intuitions	85000	85000	85000	85000	85000	85000	**425000**
Secure funding for a call as grant announcement on research of epidemic prone diseases to promote research in our sub-region	2500000	1250000	2500000	2500000	2500000	2500000	**11250000**
Support member states to develop a robust electronic HIMS for responding to outbreaks which can generate line-list, relevant charts such as epi-curve and situational reports	85000	170000	255000	340000	340000	170000	**1275000**
Facilitate linkages to the regional laboratory and research centers to collaborate with member countries during public health emergencies to provided solutions to unanswered questions	5000	25000	50000	75000	75000	75000	**300000**
Ensure that member states use the existing e-platform during outbreaks linked to the DHIS2	5000	25000	50000	75000	75000	75000	**300000**
TOTAL		**2300000**	**3895000**	**4240000**	**4360000**	**4130000**	**18925000**
Total budget for Thematic Area 9: Information systems and research = USD 18,925,000							

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
10.Enhanced surveillance during Epidemics, Case management and infection Prevention and Control (IPC)							
Support member states establish specialized centres for infectious diseases and health emergency management	120000	240000	480000	720000	360000	0	**1800000**

Support National Emergency medical teams to respond to public health emergencies	30000	300000	450000	450000	450000	450000	**2100000**
Provide technical support at the country level for emergency response during public health emergencies	35000	350000	350000	350000	350000	350000	**1750000**
Support member states to establish community-based surveillance	80000	160000	320000	480000	240000	0	**1200000**
Strengthen WANIDS (West Africa Network for Infectious Disease Surveillance)	12000	60000	60000	180000	180000	180000	**660000**
TOTAL		**1110000**	**1660000**	**2180000**	**1580000**	**980000**	**7510000**
Total budget for Thematic Area 10: Enhanced surveillance during Epidemics, Case management and infection Prevention and Control (IPC) = USD 7,510,000							

Thematic Areas and Key Activities for Implementation	**Unit Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total Budget (USD)**
11.Deployment of personnel and medical countermeasures (Response Operations)							
Deployment of the established ECOWAS regional rapid response team	100000	300000	500000	1000000	1000000	1000000	**3800000**
Support the coordination of the collective response by operational health partners and agencies of the United Nations in order to ensure equitable access to essential health services during emergencies;	120000	120000	120000	120000	120000	120000	**600000**
Provide specific protocols for the clinical management of identified high-threat pathogens and other hazards	35000	35000	35000	35000	35000	35000	**175000**
Establish a stockpile of Medical Counter Measures at the regional level	250000	250000	250000	250000	250000	250000	**1250000**
TOTAL		**705000**	**905000**	**1405000**	**1405000**	**1405000**	**5825000**

Total budget for Thematic Area 11: Deployment of personnel and medical countermeasures (Response Operations) = USD 5,825,000

Thematic Areas and Key Activities for Implementation	Unit Cost	2020	2021	2022	2023	2024	Total Budget (USD)
12. Resource mobilization for epidemic and health emergencies preparedness and response							
Advocate national governments to provide funding for epidemic and health emergency preparedness and response	2500	12500	25000	37500	37500	37500	**150000**
In collaboration with key partners, will work with donors to mobilize additional resources for epidemic and health emergency preparedness	0	0	0	0	0	0	**0**
TOTAL		**12500**	**25000**	**37500**	**37500**	**37500**	**150000**
Total budget for Thematic Area 12: Resource mobilization for epidemic and health emergencies preparedness and response = USD 150,000							
Overall Total: USD 83,274,000							

Annexes

References

1. West African Health Organisation (WAHO) | Economic Community of West African States(ECOWAS). http://www.ecowas.int/institutions/west-african-health-organisation-waho/. Accessed 9 Jul 2018.

2. About WAHO | West African Health Organization. http://w3.wahooas.org/web-ooas/en/a-propos. Accessed 9 Jul 2018.

3. Strategic plan - ECOWAS Treaty - Creation Protocol of WAHO | West African Health Organization. http://w3.wahooas.org/web-ooas/en/publications-et-recherches/strategic-plan-ecowas-treaty-creation-protocol-waho. Accessed 9 Jul 2018.

4. WHO | Lassa Fever – Nigeria. WHO. http://www.who.int/csr/don/20-april-2018-lassa-fever-nigeria/en/. Accessed 9 Jul 2018.

5. WHO | Dengue fever – Burkina Faso. WHO. http://www.who.int/csr/don/6-november-2017-dengue-burkina-faso/en/. Accessed 9 Jul 2018.

6. WHO | Rift Valley fever – Gambia. WHO. http://www.who.int/csr/don/26-february-2018-rift-valley-fever-gambia/en/. Accessed 9 Jul 2018.

7. WHO assists Ghana to deal with meningitis outbreak | Africanews. http://www.africanews.com/2016/01/25/who-assists-ghana-to-deal-with-meningitis-outbreak/. Accessed 9 Jul 2018.

8. WHO | Ebola outbreak 2014-2015. WHO. http://www.who.int/csr/disease/ebola/en/. Accessed 9 Jul 2018.

9. Disaster Risk in West Africa - DARA. https://daraint.org/risk-reduction-index/west-africa/disaster-risk-in-west-africa/. Accessed 9 Jul 2018.

10. World Bank Group. Sierra Leone Rapid Damage and Loss Assessment of August 14th, 2017 Landslides and Floods in the Western Area. World Bank; 2017. doi:10.1596/28836.

11. Survivors of Sierra Leone mudslide fear for future as camps close. ReliefWeb. https://reliefweb.int/report/sierra-leone/survivors-sierra-leone-mudslide-fear-future-camps-close. Accessed 9 Jul 2018.

12. Bigg M, Kpodo K. Ghana petrol station blast, flooding leave estimated 150 dead. https://www.reuters.com/article/us-ghana-blast/ghana-petrol-station-blast-flooding-leave-estimated-150-dead-idUSKBN0OK0KA20150604. Accessed 9 Jul 2018.

13. More than 50 houses swept away into Cross River, Nigeria. The Watchers - Daily news service | Watchers.NEWS. https://watchers.news/2017/01/11/landslide-cross-river-nigeria-january-7-2017/. Accessed 9 Jul 2018.

14. Hurricane Fred (2015). Wikipedia. 2018. https://en.wikipedia.org/w/index.php?title=Hurricane_Fred_(2015)&oldid=840831447. Accessed 9 Jul 2018.

15. Hurricane Igor. Wikipedia. 2018. https://en.wikipedia.org/w/index.php?title=Hurricane_Igor&oldid=847185134. Accessed 9 Jul 2018.

16. Drought, expanding deserts and “food for jihad” drive Mali’s conflict. Reuters. 2015. https://www.reuters.com/article/us-climatechange-mali-conflict/drought-expanding-deserts-and-food-for-jihad-drive-malis-conflict-idUSKBN0NI16M20150427. Accessed 9 Jul 2018.

17. Jenner L. Fires Cover Large Portions of West Africa. NASA. 2016. http://www.nasa.gov/image-feature/goddard/2016/fires-cover-large-portions-of-west-africa. Accessed 9 Jul 2018.

18. WHO EMRO | IHR core capacities | About | International Health Regulations. http://www.emro.who.int/international-health-regulations/about/ihr-core-capacities.html. Accessed 9 Jul 2018.

19. WHO | WHO African Region: JEE mission reports. WHO. http://www.who.int/ihr/procedures/mission-reports-africa/en/. Accessed 9 Jul 2018.

20. WHO | Polio in Niger. WHO. http://www.who.int/csr/don/2013_02_12/en/. Accessed 9 Jul 2018.

21. WHO Meningitis alarm: Deaths rising in Nigeria, Niger. The NEWS. 2015. http://thenewsnigeria.com.ng/2015/07/who-meningitis-alarm-deaths-rising-in-nigeria-niger/. Accessed 9 Jul 2018.

22. WHO | Chikungunya – Senegal. WHO. http://www.who.int/entity/csr/don/14-september-2015-chikungunya/en/index.html. Accessed 9 Jul 2018.

23. WHO | Zika virus infection – Cape Verde. WHO. http://www.who.int/csr/don/21-december-2015-zika-cape-verde/en/. Accessed 9 Jul 2018.

24. WHO | Lassa Fever – Liberia. WHO. http://www.who.int/csr/don/18-may-2016-lassa-fever-liberia/en/. Accessed 9 Jul 2018.

25. WHO | Lassa Fever – Togo. WHO. http://www.who.int/csr/don/23-march-2016-lassa-fever-togo/en/. Accessed 9 Jul 2018.

26. WHO | Lassa Fever – Benin. WHO. http://www.who.int/csr/don/19-february-2016-lassa-fever-benin/en/. Accessed 9 Jul 2018.

27. WHO | Rift Valley Fever in Niger. WHO. http://www.who.int/csr/don/24-november-2016-rift-valley-fever-niger/en/. Accessed 9 Jul 2018.

28. WHO | Wild polio and vaccine derived polio in Nigeria. WHO. http://www.who.int/csr/don/06-october-2016-polio-nigeria/en/. Accessed 9 Jul 2018.

29. Nigeria Centre for Disease Control. https://ncdc.gov.ng/reports/weekly. Accessed 9 Jul 2018.

30. WHO Regional Office Africa. Mapping the Risk and Distribution of Epidemics in the WHO African Region: a technical report. https://apps.who.int/iris/handle/10665/206560. Accessed 9 Jul 2018.

31. Burkina Faso: Dengue Outbreak - Sep 2017. ReliefWeb. https://reliefweb.int/disaster/ep-2017-000162-bfa. Accessed 9 Jul 2018.

32. Dengue outbreak in Abidjan, Ivory Coast - Outbreak News Today. http://outbreaknew-stoday.com/dengue-outbreak-abidjan-ivory-coast-99335/. Accessed 9 Jul 2018.

33. WHO | Meningococcal septicaemia associated with attending a funeral – Liberia. WHO. http://www.who.int/csr/don/06-july-2017-meningococcal-septicaemia-liberia/en/. Accessed 9 Jul 2018.

34. WHO | Meningococcal disease – Togo. WHO. http://www.who.int/csr/don/23-february-2017-menin-gococcal-disease-togo/en/. Accessed 9 Jul 2018.

35. WHO | Lassa Fever – Benin, Togo and Burkina Faso. WHO. http://www.who.int/csr/don/10-march-2017-lassa-fever-benin-togo-burkina-faso/en/. Accessed 9 Jul 2018.

36. WHO | Lassa Fever – Liberia. WHO. http://www.who.int/csr/don/22-february-2018-lassa-fever-libe-ria/en/. Accessed 9 Jul 2018.

37. 2014-2016 Ebola Outbreak in West Africa | History | Ebola (Ebola Virus Disease) | CDC. 2018. https://www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html. Accessed 9 Jul 2018.

38. West Africa - DARA. https://daraint.org/risk-reduction-index/west-africa/. Accessed 9 Jul 2018.

39. WHO | Joint External Evaluation of IHR Core Capacities of the Republic of Liberia. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.23/en/. Accessed 9 Jul 2018.

40. WHO | Joint External Evaluation of IHR Core Capacities of the Republic of Côte d'Ivoire. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.20/en/. Accessed 9 Jul 2018.

41. NCDC. Idea to Reality - Strategy and Implementation Plan, 2017 -2021. 2017.

42. WHO | Joint external evaluation of IHR core capacities of the Federal Republic of Nigeria. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.46/en/. Accessed 9 Jul 2018.

43. WHO | Joint External Evaluation of IHR Core Capacities of the Republic of Sierra Leone. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.16/en/. Accessed 9 Jul 2018.

44. WHO | Joint external evaluation of IHR core capacities of the Republic of Benin. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.48/en/. Accessed 9 Jul 2018.

45. WHO | Joint External Evaluation of IHR Core Capacities of the Republic of Senegal. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.31/en/. Accessed 9 Jul 2018.

46. WHO | Joint external evaluation of IHR core capacities of the Republic of the Gambia. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-REP-2017.61/en/. Accessed 9 Jul 2018.

47. WHO | Joint External Evaluation of IHR Core Capacities of the Republic of Ghana. WHO. http://www.who.int/ihr/publications/WHO-WHE-CPI-2017.26/en/. Accessed 9 Jul 2018.

48. MOH. National Epidemic Preparedness and Response Plan. 2016.

49. Health Ministry launches health emergency plan 2017-2019 - The Point Newspaper, Banjul, The Gambia. http://thepoint.gm/africa/gambia/article/health-ministry-launches-health-emergency-plan-2017-2019. Accessed 9 Jul 2018.

50. MOH. Murtala Muhammed Airport Public Health Contingency Plan. 2017.

51. One Health | CDC. 2018. https://www.cdc.gov/onehealth/index.html. Accessed 10 Jul 2018.

52. Liberia. Preparedness & Response. http://preparednessandresponse.org/countries/liberia/. Accessed 9 Jul 2018.

Assumptions used for Costing of the strategic Plan

Costing was done by calculating the unit price of each activity. That is how much it would cost WAHO to carry out a particular activity in a member country. The cost per year was then calculated by multiplying the unit cost by the number of times (member countries or places) the activity is to be carried out. The number of times an activity is to be carried out in a year was based on the regional activities in the framework and the targets set for each. The cost per year increases every year with the assumption that in each year, the number of member countries supported for an activity would increase till all member countries have benefitted from the activity.

For example, the activity on Advocate for the establishment of NCI for member states, it estimated to cost $5,000 for each member country. In the first year, a target of 3 member countries has been set ($5,000*3=15,000). For the next three years, it is expected that this activity would be carried out in four (4) countries each year, which is ($5,000*4=20,000). For the entire period of the plan, WAHO is estimated to spend $75,000 on advocating for the establishment of NCIs in the 15 member states.

The total cost for implementing each thematic area each year and for the entire period of the plan are indicated at the end of each thematic area.

Estimated unit cost of activities/ interventions in each thematic area are shown in the table below:

Unit cost of activities per Thematic Area

1. Coordination, Legislation and Policies	Unit Cost (US$)
Cost of supporting each member states through Technical Assistance in the development of guidance, tools, training and advocacy materials in order to improve multi-sectoral implementation of the IHR (2005)	7500
Cost of advocating establishment of NCI for each member state by WAHO.	5000
Cost of supporting each member state to align/ harmonize all relevant existing legislations on IHR (2005)	25000
Cost of supporting each Member States in the development of national policies and costed NAPHS	25000
Cost of supporting each Member State to develop national risk communication plan	20000
Cost of supporting each Member State to develop multi-sectorial AMR action plan	25000
Cost of providing regional platforms to strengthen NCI networking and the exchange of best practices, including through annual regional and sub-regional meetings	30000
Cost of disseminating examples of good practices of development and strengthening of multisectoral platforms for coordinated decision-making for IHR implementation will be at no cost	0
Cost of supporting each Member State in the establishment of a functional National Coordinating Institute (NCI)	20000
Cost of establish Regional PHEOC in The RCDSC to improve regional coordination of public health emergencies at the regional level	100000
Cost of supporting each Member State upon request, in the development and revision of relevant national legislative and regulatory frameworks, and standard operating procedures	5000

Cost of supporting each Member State in the implementation of national policies and costed NAPHS	12000
Cost of supporting each Member State in the establishment of a functional National EOC to coordinate health emergency response	10000
Cost for supporting each Member State to strengthen communication and co-ordination mechanism between regional and national level is at no cost	0

2. Surveillance on epidemic prone diseases and risk of health emergencies	**Unit Cost (US$)**
Cost of supporting each Member State to establish an interoperable, interconnected electronic real-time reporting system	17500
Cost of Supporting each Member State with analysis and strategic utilization of information collected through national surveillance systems to inform evidence-based policymaking;	12500
Cost of supporting each Member State for implementation and evaluation of early warning systems for priority health hazards and improve the regular and timely analysis and dissemination of epidemiological data, including laboratory results	10000
Cost of Supporting each Member State to facilitate training and capacity-building on all-hazard risk assessment including biological, chemical, radiological, nuclear and natural hazards	25000
Cost of supporting each Member State with Technical Assistance to promote the IDSR strategy	7500
Cost of promoting the adaptation of DHIS2 platform to enhance interoperability for real time reporting in each member state	10000
Cost of Supporting each Member State to establish AMR surveillance	20000

3. Workforce Development and Capacity to contain Epidemics and Health Emergencies	**Unit Cost (US$)**
Cost for supporting regional centres to train and develop the require workforce capacities for each ECOWAS Member states through various teaching methods	245000
Cost to support Curriculum Development to meet specific needs of each Member states	12000
Cost of Supporting Harmonization of existing Training curriculum in each ECOWAS member state region	8000
Cost of Supporting Quality Assurance of training programs through defines evaluation and accreditation standards for training institutions in each member state	5000
Cost to develop regional workforce plan for emergency preparedness and response	180000
Cost for promoting sharing of best practices and good outcomes for each member states between member states	10000

Cost for Promoting training on one health for each member state	10000
Cost for developing regional training guidelines	75000
Cost for Accelerate/ facilitate the establishment of regional training centers	75000
Cost for development and maintenance of regional Rapid Response Team database for effective deployment	25000

4. Stockpiles and Medical Countermeasures	**Unit Cost (US$)**
Cost of Supporting each Member State to ensure guaranteed availability of medical countermeasures (essential supplies and pharmaceuticals) on the basis of the countries risk profile	5000
Cost of Supporting each Member State in coordination, harmonization and the development of relevant protocols such as clinical management of identified high risk pathogen and other emerging pathogens based on the risk profile of the sub-region.	25000
Cost of establishment of regional security stock for public health emergencies for each member state	50000
Cost of Supporting each Member State for the Establishments of Emergency medical teams' initiative	7000
Cost of Supporting each Member State for the development of SOPs and other guidelines in case management	20000
Cost of Supporting each Member State for the establishment of National Case Management and Infection Prevention Center with IPC systems in place	65000
Cost of Supporting each Member State to develop health emergency and logistic plan	50000
Cost of Supporting each Member State to ensure quality of medicines/drugs for health emergencies	35000
Cost for Supporting each Member State to control quality of drugs and supplies	35000
Cost to Promote drugs and supplies sharing between countries during health emergencies for each member state	10,000
Cost to develop standardized regional Medical Counter Measures plan on the basis of regional risk profile	165000
Cost to develop a regional database for case management centers (isolation/holding centers) for GIS mapping during epidemics	8000
Cost to define procedures around the management of the regional emergency stockpile	50000
Cost to support the strengthening of Member States capacities to conduct and regularly update national risk mapping and national preparedness, response and contingency plans for each member state	15000
Cost to establish and operationalize the ECOWAS regional rapid response team	100000
Cost of providing specific regional protocols for the clinical management of identified high-threat pathogens and other hazards	150000

5. Risk Communication and Community Engagement	**Unit Cost (US$)**

Cost to facilitate linkages to regional risk communication networks and platforms for each member state	5000
Cost to provide each Member State the necessary guidance, training, tools and on-site and remote support as part of the emergency risk communication five-step capacity-building package	10000
Cost of Supporting each Member State to develop national risk communication strategy for epidemic preparedness and response	35000
Cost of Supporting each Member State for integration of the package into national action plans for health emergency preparedness	7500
Cost of Supporting each Member State to strengthen community based surveillance	12000
Cost of Supporting each Member State in the development of risk communication systems and mechanisms	15000
Cost to provide each member states training tools on-site as well as remote support	20000
Cost to advocate to each member state to dedicate budget for risk communication activities at no cost	0

6. Point of Entry	Unit Cost (US$)
Cost of developing a regional platform aimed at strengthening interactions of member states and also for information sharing	85000
Cost of develop and implement a regional cross-border surveillance strategy	165000
Cost of supporting each Member State for the Coordination of activities aimed at strengthening interaction of member states at the point of entry through formal and informal platforms and networks	7500
Cost of supporting each Member State in strengthening and maintaining routine and emergency capacities at points of entry	25000
Cost to develop and maintain a database for designated Point of Entry and regularly update a list of IHR (2005) designated points of entry in the ECOWAS Region.	22500
Cost of development of Standardize SOPs for Point of Entry for the region	22500
Cost to collaborate with uniformed service (e.g. military or immigration) in coordination of activities for each Member State	10000

7. Strengthening Laboratory Systems and Networks	Unit Cost (US$)
Cost of Supporting each Member State to establish a National Public Health Laboratory (NPHL) network including animal health, food safety and environment laboratories within each Member State and the Regional Centre for Disease Control	35000
Cost of Supporting each Member State in strengthening and maintaining quality-assured regional laboratory networks for emergency preparedness building on the existing WHO and other international laboratory networks and promote regional information exchange between the laboratories	15000
Cost to establish a national Laboratory Technical Working Group, LTWG (semi-autonomous) in each Member State	20000
Cost to set standards for public health laboratories across the region	120000

Cost of Supporting each Member State to Establish a laboratory regulatory body for monitoring and certification of laboratory professionals and their working environment in both public and private settings	25000
Cost to establish a regional integrated, efficient and effective laboratory management information system, with supporting infrastructure, supplies and capacity building	175000
Cost to develop regional policy guideline on bio-risk management in line with international standards and establish a regional bio-surveillance network linked to member states laboratory networks	80000
Cost of Supporting each Member State in establishing and improving national and international referral systems for clinical and environmental samples through the development of national sample referral guidelines and export permits, the WHO Infectious Substances Shipping Training, and training in bio-risk management	20000
Cost of Supporting each Member State to ensure dissemination of, or develop where needed, examples of national good practices of public health laboratory systems that can serve as models for countries undergoing laboratory restructuring and laboratory quality training	10000
Cost of supporting the development of laboratory human resources capacity through the implementation of WAHO's harmonized training curricula in each member states	35000
Cost of supporting each member states in establishing and improving national and international referral system	20000
Cost of supporting each member states in strengthening and maintaining quality-assured regional laboratory networks for emergency response, building on the existing WHO and other international laboratory networks and promote international information between the laboratories	15000
Cost of Supporting each Member State to strengthen the capacity of NPHLs and NRLs to respond to outbreaks and emerging diseases	25000

8. The One Health Approach	**Unit Cost (US$)**
Cost to provide technical guidance, tools and best practices for implementing a One Health approach, including those contained in the revised tripartite zoonosis guide and toolkit In collaboration with key partners for each member state	5000
Cost of Supporting each Member State with IHR (2005)/ performance of veterinary services bridging workshops to enhance the linkages between human and animal health sectors;	50000
Cost of Supporting each Member State in strengthening their capacity to address zoonosis under the IHR (2005);	25000
Cost of implementation of the regional One-Health platform	10000
Cost of Supporting each Member State to develop an integrate environmental and vector management plans	75000
Cost of Supporting each Member State to develop the One-Health strategic plan in ECOWAs region	35000
Cost of Supporting each Member State to institutionalize the "One Health Approach"	50000

9. Information systems and research	Unit Cost (US$)
Cost to support the development and implementation of a regional interoperable HIMS with linkages to each member states	175000
Cost of Supporting each Member State to develop a functional computerized and efficient LIMS, with linkages to the regional reference laboratories	45000
Cost of Supporting each Member State to establish a regional research consortium in public health emergencies (emergency and re-emerging diseases; disaster risk reduction)	150000
Cost of identifying a regional Center for excellence for research and to support capacity building of the center to conduct research on priority epidemic prone diseases including zoonotic diseases	120000
Cost of Supporting each Member State to develop operational research and technical capacity to enhance epidemiological and public health emergency research	45000
Cost of Supporting the development of a regional research platform aimed at providing interaction with research and academic intuitions	85000
Cost of securing funding for a call as grant announcement on research of epidemic prone diseases to promote research in our sub-region	2500000
Cost of Supporting each Member State to develop a robust electronic HIMS for responding to outbreaks which can generate line-list, relevant charts such as epi-curve and situational reports	85000
Cost of Supporting each Member State to facilitate linkages to the regional laboratory and research centers to collaborate with member countries during public health emergencies to provided solutions to unanswered questions	5000
Cost of Supporting each Member State to ensure that member states use the existing e-platform during outbreaks linked to the DHIS2	5000

10.Enhanced surveillance during Epidemics, Case management and infection Prevention and Control (IPC)	Unit Cost (US$)
Cost of Supporting each Member State to establish specialized centers for infectious diseases and health emergency management	120000
Cost of Supporting each Member State to support National Emergency medical teams to respond to public health emergencies	30000
Cost to provide technical support at the country level for emergency response during public health emergencies for each member state	35000
Cost of Supporting each Member State to establish community-based surveillance	80000
Cost of Supporting each Member State to strengthen WANIDS (West Africa Network for Infectious Disease Surveillance)	12000

11.Deployment of personnel and medical countermeasures (Response Operations)	Unit Cost (US$)
Cost to deployment of the established ECOWAS regional rapid response team	100000
Cost to support the coordination of the collective response by operational health partners and agencies of the United Nations in order to ensure equitable access to essential health services during emergencies;	120000
Cost to provide specific protocols for the clinical management of identified high-threat pathogens and other hazards for each member state	35000

Cost of establishing a stockpile of Medical Counter Measures at the regional level	250000

12. Resource mobilization for epidemic and health emergencies preparedness and response	Unit Cost (US$)
Cost to advocate national governments to provide funding for epidemic and health emergency preparedness and response for each member state	2500
Cost of collaboration with key partners, to work with donors to mobilize additional resources for epidemic and health emergency preparedness at no cost	0

Major Recent Public Health Emergencies in ECOWAS Region

Disease	Affected countries	Year
Poliomyelitis	Niger	2013
Ebola Virus Disease	Liberia, Sierra Leone, Guinea, Mali, Nigeria and Senegal	2014
Meningitis outbreak	Nigeria, Niger	2015
Chikungunya	Senegal	
Zika Virus outbreak	Cape Verde	
Wild Polio and Vaccine derived Polio	Nigeria	2016
Lassa Fever outbreak	Niger, Nigeria, Togo, Benin and Liberia	
Rift Valley Fever	Niger	
Yellow Fever, Monkey Pox, Meningococcal Diseases, Cholera, Lassa fever and Acute Hepatitis E	Nigeria	2017
Dengue	Burkina Faso, Cote d'Ivoire	
Meningococcal Disease	Liberia, Togo	
Lassa Fever outbreak	Togo, Benin and Burkina Faso	
Lassa Fever	Nigeria, Liberia	2018
Rift Valley Fever	Gambia	
Highly pathogenic Avian Influenza outbreak	Ghana	

Steering Committee of strategic Plan

Name	Position	e-mail

Sources: