Strategic Partnership for International Health Regulations (2005) and Health Security (SPH)

Workshop on Prioritization, Resource Mapping and Multisectoral Partnership Collaboration for the Implementation of the National Action Plan for Health Security

April 23-26, 2018 - Freetown, Sierra Leone

WHO/WHE/CPI/2019.19

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TABLE OF CONTENTS

ABBREVIATIONS & ACRONYMS

AAR	After Action Reviews
AMR	Antimicrobial Resistance
CPHRL	Central Public Health Reference Laboratory
DHMT	District Health Management Team
DPC	Directorate of Disease Prevention and Control
EOC	Emergency Operations Center
EVD	Ebola Virus Disease
FETP	Field Epidemiology Training Program
GHSA	Global Health Security Agenda
GPW	Global Programme of Work
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulations (2005)
IPC	Infection Prevention and Control
JEE	Joint External Evaluation
MAFFS	Ministry of Agriculture, Forestry and Food Security
M&E	Monitoring and Evaluation
MEF	Monitoring and Evaluation Framework
MoHS	Ministry of Health and Sanitation
NAPHS	National Action Plan for Health Security
PHECP	Public Health Emergency Contingency Plan
REMAP	Resource Mapping and Impact Analysis on Health Security Investment tool
RRT	Rapid Response Teams
SPH	Strategic Partnership for IHR and Health Security
WHO	World Health Organization

EXECUTIVE SUMMARY

Sierra Leone in 2016 was among the first African nations to volunteer to undergo the Joint External Evaluation (JEE) of the country's capacity to prevent, detect and rapidly respond to public health risks and threats. The JEE identified key areas for improvement including revision of public health laws and legislation, zoonotic disease prevention and response, strengthening surveillance at points of entry, antimicrobial resistance, detection and response, and development of a comprehensive multi-hazard National Public Health Emergency Preparedness and Response plan.

Sierra Leone used the JEE recommendations to develop a National Action Plan for Health Security (NAPHS), covering 2018-2022, with an implementation cost of about $291 million. Seeking to accelerate implementation, Sierra Leone was the first country to request support from the WHO Strategic Partnership for IHR and Health Security (SPH) in activity prioritization, resource mapping and multisectoral partnership collaboration. WHO SPH responded by conducting a workshop in Freetown, Sierra Leone, 23-26 April 2018, bringing together national ministries and agencies, as well as partners and donors including FAO, US CDC, USAID, IOM, Public Health England, China CDC and GIZ.

Workshop participants were placed in groups of five based on their technical areas of expertise and asked to score and prioritize health security activities in the NAPHS to be implemented in the first two years of the five-year NAPHS. The scoring of activities was based on 6 categories such as whether the activity is "low-hanging fruit", whether there is a known advocate for the activity and whether there are existing technical and financial resources available to complete the activity.

Some categories were worth more points than others in the scoring. A maximum score of 10 was possible for any activity that met all 6 criteria. The categories and their scores are illustrated in the table below.

Low-hanging fruit (1 or No)	**Highest Priority (Yes or No)**	**Known Advocate**	**Activity Timing (Ongoing, 1st, or Follow-on activities)**	**Resources Needed (High or Low)**	**Existing or Potential Funding Source(s)**
YES	YES	YES	Ongoing	LOW	YES
1	3	2	1	1	2

The exercise resulted in 107 activities with scores from 7 to 10 being prioritized for implementation in the first two years of the NAPHS. Real time surveillance had the biggest

budgeted amount of prioritized activities among the technical areas with $24,601,790.89. The graph below shows the technical 19 areas with their budgeted amounts of prioritized activities.

The resource mapping and impact analysis on health security investment (REMAP) tool developed by WHO was then used to map the existing partner and donor health security activities in Sierra Leone. The mapping showed that 33 partners and donors in the country are supporting various technical areas.

The mapping identified the number of partners and donors in each of the technical areas and demonstrated that National Laboratory System currently has 13 partners and donors, the highest number of all, followed by Emergency Response and Point of Entry, with nine each. The mapping identified technical areas without any partner or donor support, including food safety, radiation emergencies, medical counter measures, national legislation, and linking public health and security.

WHO concluded the workshop with a roundtable discussion between donors and key government decision makers to achieve alignment on the implementation of the prioritized activities. The process attracted new partnerships, funding, and technical support. When the resource mapping workshop showed some overlap in donor-funded projects, WHO encouraged donors to be more flexible in their earmarking of funds to achieve better

coordinated results. As a result, more than USD $50 million of new and reprogrammed funding was identified, both domestic and external, with domestic funding representing about 20% of the total.

BACKGROUND

Sierra Leone has a long history of health emergencies resulting from recurrent disease outbreaks and natural disasters that affect human, animal, and environmental health. The unprecedented West Africa Ebola Virus Disease (EVD) outbreak in 2014–2015 affected more than 14,000 people in Sierra Leone and killed another 3,956. The country's fragile health system suffered a severe shock and the epidemic took a heavy toll on the health workforce, with 221 deaths. The severity of the outbreak was exacerbated by limited investment in the country's health system and a lack of access to affordable health services, as the health sector was largely dependent on external funding sources.

Ebola is not the only threat in Sierra Leone. Maternal and child mortality rates are among the highest in the world. Communicable diseases such as cholera, yellow fever, Lassa fever (an endemic viral haemorrhagic fever), and rabies present significant public health threats. Flooding and landslides leave communities dangerously vulnerable to waterborne disease outbreaks and cholera. Zoonotic diseases also have a serious impact on human health. Numerous outbreaks have devastated livestock and caused significant losses in agricultural productivity and food security.

To address the recurrent health threats, better planning, preparedness, and coordination are urgently needed.

The same health threats in Sierra Leone affect many other countries. The EVD outbreak in West Africa revealed an alarming level of unpreparedness to manage health emergencies and disasters in other countries in the region. A 2015 independent review of the response to the EVD outbreak recommended changes in how countries evaluate public health capacities and emergency response capacities, as required by the International Health Regulations (IHR, 2005).

Following the 2015 independent review, WHO developed the IHR Monitoring and Evaluation Framework for all WHO Member States, comprising four components, one mandatory and three voluntary.

First, countries undertake a mandatory annual self-assessment of their IHR capacities and report the results to the World Health Assembly. Second, a multi-pronged external peer reviewed evaluation (a joint evaluation exercise, JEE), involving both domestic and international experts, is undertaken every 4-5 years to assess a country's IHR capacities and its ability to prevent, detect, and rapidly respond to public health threats. This voluntary test helps countries identify the most critical gaps within their human and animal health systems and prioritize actions to improve preparedness and response capabilities. Since the 2016 launch of the JEE tool, 91 countries have volunteered and completed the assessment.
In addition to the JEE, countries undertake simulation exercises to test their readiness to prevent, detect, and respond to a health emergency. Finally, after-action reviews (AAR) have

been instituted for countries to assess their response to an emergency, and to identify best practices, gaps, and lessons learned. Simulation exercises and AAR are voluntary elements of the WHO IHR Monitoring and Evaluation Framework, requested by the country and supported by the three levels of WHO.

Sierra Leone was the sixth country in the African region to conduct a JEE in October 2016. Fourteen experts from 10 countries participated in the 5-day evaluation, together with more than 60 participants from government partner agencies. They assessed 19 technical areas to identify the most critical gaps within the country's human and animal health systems. Several recommendations were developed, including:

- Revise public health laws and legislation;
- Create a budget line for IHR and ensure funding from domestic and international sources;
- Strengthen the National IHR Focal Point and World Organisation for Animal Health functions;
- Strengthen cross-border collaboration and surveillance;
- Develop a "multi-hazard" National Public Health Emergency Preparedness and Response Plan, integrated with points of entry (air, land, sea) and contingency plans.

In addition to taking on board these recommendations, Sierra Leone developed a multi-year National Action Plan for Health Security (NAPHS) to better prepare for and manage health security threats in a coordinated way. The Ministry of Health and Sanitation took the lead in the planning, including mapping all actors involved in implementing health security activities. In October 2017, the Ministry convened more than 75 in-country and international experts in a workshop to finalize and cost a 5-year action plan. As a next step, Sierra Leone was the first country to request that WHO convene a Prioritization and Resource Mapping (REMAP) workshop.

The workshop in April 2018 focused on prioritizing activities and aligning ministries, programmes, partners, and donors. The aim was to align and agree on the first two years of NAPHS implementation.

REPORT ON THE SESSIONS

Day 1 - Monday, 23 April 2018
Objective of the meeting • Prioritization of NAPHS activities • Multisectoral collaboration; • Resource mapping to support NAPHS implementation
Summary of the meeting

Day one:

- Opening remarks by Dr. Amara Jambai of the Ministry of Health and Sanitation (MoHS), partner organisations and ministerial representatives for Sierra Leone
- Working groups review and recommend key priority actions within the costed NAPHS
- Mapping of sub-activity synergies to existing national plans

Day two:

- Introduction to multisectoral partnership collaborat**ion** framework
- Identification of relevant multisectoral actors for each priority activity
- Scoring of priority activities by weighted aggregate approach

Day three:

- Introduction to financing preparedness for sustainable health security implementation
- Identification of potential partners and resources according to priority score
- Activity costs mapped according to priority score

Welcome and Opening Remarks	
The meeting started at exactly 9:30 am with an individual prayer followed by introduction of almost 61 participants present. Participants included personnel from the various ministries and agencies such as Ministry of Health and Sanitation, the Ministry of Food and Agriculture, etc. and local and international partners such as MAFA, LCAA, EPA-SL, DPC/MoHS, NDSP/MoHS, PHNECO, SLRCS, PBSL/MoHS, LAB/MoHS, RSLAF/Medical, ONS, Njala University, W A/Rural/MoHS, Airport/MoHS, AFDB, US-CDC, China CDC, GIZ, PHE, WB, PREDICT/UCD, Breakthrough Action, FAO, IOM, and WHO, the World Bank and IOM. WHO, the ministries and partners were given the opportunity to give their welcome addresses.	
Partner Opening Remarks	All partners present at the start of the meeting were allowed to give their opening remarks. They all expressed their gratitude to be invited to be part of the meeting to support the prioritization of activities and to map all available resources to support Sierra Leone in IHR and Health Security. They all expressed their appreciation to WHO for taking a leadership role in this very important health activity and pledged their support to actualize all the efforts successfully. Partners involved in the opening remarks were CDC, FAO, China CDC and the Ministry of Food and Agriculture.
Opening Remarks by Dr. Jambai (MoHS)	Dr. Jambai welcomed all participants to the meeting and thanked them for their support in mapping the resources available in the country to enable the prioritization of activities. He said there is the need to prioritize at least a one-year plan by working closely with the partners.

	He made it known to participants that, if they are able to come together and pool their resources, they can move forward in terms of health security. He said responsibilities should be given to the technical people who are capable and can work hard for better results. He admonished partners to stop injecting money into areas where there are no results and to redirect their investment into other technical areas where there will be better results. He advised all the participants to work very hard with the little available resources to achieve much in terms of results. He further admonished Sierra Leone nationals to utilize the human resources of partners and not always think about monetary investment. He expressed his appreciation to all participants, especially WHO, for making the meeting possible and opened the meeting.
Session 1: Introductory Discussion	
Dr. Charles Njuguna (WHO)	The representative of the WHO Country Office in Sierra Leone made known to participants that there is a very strong partnership in Sierra Leone that is of great help. The JEE helped identify gaps in each of the 19 technical areas and he admonished all to work hard to sustain the green areas and also to improve all the yellow and red areas. In terms of monitoring, Sierra Leone is doing well in annual reporting and WHO will provide the country with the tools to monitor progress. A M&E framework to conduct simulation exercises is also being implemented and Sierra Leone conducted exercises for Lassa fever and yellow fever. The JEE will be conducted again in the next four years to measure the level of improvement in the country's capacity in terms of health security and IHR. Sierra Leone is the first country to conduct the resource mapping for the IHR and prioritize its five-year action plan to move ahead in a One Health approach.

	He promised WHO's continued support to the government of Sierra Leone in advocacy and resource mobilization.
Dr. T. T. Samba (MoHS)	Sierra Leone is a signatory to the IHR (2005) and in 2015, WHO recommended a change from a system of self–assessment to the JEE with national action planning. This was in order to emphasize transparency and mutual accountability in the international community, which are essential in implementing IHR and the global health security agenda (GHSA) collectively. Based on that, the JEE process was initiated in Sierra Leone and completed with support from external examiners and WHO. This provided an objective basis for the development of a national action plan for strengthening the country's capacity to contribute to global health security. Dr. Samba said partners have been committed and supported Sierra Leone through funding, infrastructure, technical capacity building, equipment and technical assistance. He enumerated all the processes they have gone through as a country in term of health security: Sensitization & advocacy – June 2016 Internal self-assessment 10th – 14th Sep 2016 JEE 31st Oct – 4th Nov 2016: ▪ Peer review of internal self-assessment conducted ▪ Consensus achieved on status of implementation and prevailing strengths and challenges ▪ Country scores per indicator established ▪ Priority areas for improvement per technical area identified Final JEE report published in February 2017 Post JEE national action planning Sept 2017 – NAPHS prepared Workshop to identify national priorities and develop a draft five-year NAPHS 17th – 20th Oct 2017 • Identification of objectives, strategies, activities and M & E framework • Drafting of the NAPHS Secretariat retreat to consolidate the draft five-year NAPHS: 24th – 27th Oct 2017

	Draft NAPHS shared with internal and external stakeholders 2nd Nov 2017 NAPHS Costing – from Nov 2017 He expressed his appreciation to WHO, partners, donors and all who have been involved in all these processes leading up to the NAPHS prioritization and resource mapping activities. He then charged all participants to work hard to make this successful.
Ludy Suryantoro (Team Leader, Strategic Partnership for IHR and Health Security (SPH)	Ludy Suryantoro of WHO headquarters said that IHR (2005) Article 44.2 is the provision for facilitation of technical cooperation and logistical support to States Parties to mobilize financial resources and support developing countries in building, strengthening and maintaining their capacities. He gave the objective of the meeting as: Prioritization of activities Multisectoral collaboration Resource mapping to support implementation of activities by countries He said WHO is mandated to enhance strategic partnerships and increase countries' capacities through accountability, transparency and sustainability. He made it known to participants that, in building health security beyond Ebola, everybody has a role to play such as: • Countries will commit to providing national leadership & sustained support and resources • WHO will commit to an active coordinating, convening and monitoring role • Partners will commit to working closely and actively with WHO and each other to share relevant information and make their technical and funding contributions as complementary, synergistic and coordinated as possible with other initiatives. He admonished all to work very hard for the next 3 days to be able to achieve all the objectives of the meeting, because WHO is supporting countries to move forward with NAPHS to attract investments from both international and domestic financing. **Key points** • Evidence is power – increase the evidence base on financing for health security

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- Mainstreaming and integrating – embed financing needs for improved capacities into respective sectors, systems and macro-fiscal discussions
- Prioritize – system strengthening interventions and investments

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<tr><td colspan="2">Session 2: National perspective on country priority for health security including strengthening national capacities for IHR (2005)</td></tr>
<tr><td>Dr. Samba (MoHS)</td><td>

Dr. Samba enumerated all the major progress made by Sierra Leone in the capacity to detect, investigate and report.

Establishment of EOC
Sierra Leone has improved coordination of response. A priority has been the strengthening of institutional capacity for emergency response operations. The country now has a good human capacity under the Emergency Operations Center (EOC).

Human Resource for Directorate of Disease Prevention and Control (DPC) activities
There is improvement under the Field Epidemiology Training Program (FETP) from Basic/Frontline to intermediate.
Training of Rapid Response Teams (RRT) on the national and district levels still needs improvement

<table>
<tr><td>Improved</td><td>Gaps</td><td>Major Gaps</td></tr>
<tr><td></td><td>FETP</td><td></td></tr>
<tr><td></td><td></td><td>Animal Health HR</td></tr>
<tr><td></td><td>CBS</td><td></td></tr>
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Funding for health Emergencies
CFF has been funding the MoHS contingency fund, REDISSE CERC

Priority: Funding for emergencies that is commensurate

Policies, Laws and Regulations

1. Public health ordinance undergoing revision

Priority: Complete the modernization
Laboratory capacity

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	Central Public Health Reference Laboratory (CPHRL) Refurbished Other labs established at Jui, Kenema, Connaught Capacity building on a fairly large scale **Priority:** Further strengthen lab services to support Directorate of Disease Prevention and Control (DPC) (MoHS and Ministry of Agriculture, Forestry and Food Security (MAFFS) activities **IPC- Infection prevention and control** 1. Isolation capacity greatly enhanced 2. Continuous improvements made, frequent structured supervisions 3. Health workers now much better protected 4. Priority exercise has been carried out 5. Simulations planned and carried out 6. Risk assessment carried out 7. Priority: Strengthened capacity for response **Preparedness** 1. Status of preparedness has improved greatly 2. Much still to be done 3. Priority**:** all hazards plan, a system for stockpiling of supplies, a comprehensive risk and resource mapping of priority public health hazards **Chemical and radionuclear hazards, Points of Entry** 1. Enact Draft National Chemicals Management Act 2017 2. Develop a comprehensive radioactive waste management policy 3. Develop strategic plan for port health
Session 3: Partner Support to Government	
All the donors and partners present were given the opportunity to inform the audience about their interventions and support to Sierra Leone. The following are some of their presentations:	
FAO	The representative of FAO informed participants that they are currently working with MAFFS to build their capacity and the competencies needed at the ministry. FAO is supporting 4 main technical areas 1. Zoonotic diseases 2. Biosafety and biosecurity Labs 3. National Laboratory System

	4. Food safety
UK Aid	UK Aid provided support in response to the Ebola outbreak in the country and refurbished 3 laboratories and trained 5 health staffs to operate the labs. They will provide other support in human capacity building, monitoring and surveillance
CDC	The representative of CDC described support for emergency response and strengthening of the country health system. Surveillance: Revitalization of the integrated disease surveillance and response (IDSR) and improvement of the electronic surveillance system. They are also supporting the following: 1. Workforce development 2. National Laboratory System They are currently developing a curriculum for the IPC training program. They are also strengthening the capacity of the laboratory system, supporting the simulation exercise on emergency response.
China CDC	Supported the Ebola fight, supporting the laboratories in detection. Improved skills of hospital workers in data collection and analysis. Going forward, they will provide education on public health and surveillance.
GIZ	Supporting human resources for health, with 2 international experts to train students on public health in 2 universities. They are also providing support for cross border activities and cholera prevention. GIZ, moving forward, will work with the MoHs on health financing and support real time surveillance, including giving out tablets to collect and report data.
Universities	The universities have played a major role under the One Health program. The universities have also been involved in research. They have collected samples of pig for Ebola analysis. They have also taken samples of dogs and analysed for rabies.
IOM	Health border mobility management is the program being executed by IOM. They are operating by mapping areas prone to transmission of disease and strengthening the activities of the District Health Management Team (DHMT). Cross border posts have been established in some border towns. They have also provided clean drinking water for the people of the border towns.
Session 4: Prioritization of in-country activities to strengthen IHR and health security	
Participants were grouped into five teams to work together to prioritize activities of the 19 technical areas in the NAPHS. Dr. Njuguna explained that the reason for conducting	

this prioritization exercise to enable the country to implement most of its activities within the next two years. He called for stronger partnerships and coordination and information sharing.

Below are the prioritization criteria:

Low-hanging fruit (1 or No)	Highest Priority (Yes or No)	Known Advocate	Activity Timing (Ongoing, 1st, or Follow-on activities)	Resources Needed (High or Low)	Existing or Potential Funding Source(s)
YES	YES	YES	Ongoing	LOW	YES
1	3	2	1	1	2

The above criteria gave a total score of 10 for any activity that had a positive score in all categories. After prioritization and scoring of all the 155 activities outlined in the National Action Plan on Health Security (NAPHS) costing tool, 107 prioritized activities with scores from seven to 10 were analysed.

Among the 19 technical areas, real time surveillance had the biggest budgeted amount of prioritized activities with $24,601,790.89. The graph below shows the technical areas with their budgeted amounts of prioritized activities.

Below are the five groups with their responsibilities and their assigned technical areas

***Group 1** was led by* Dr. Jalloh – MAFFS (Presenter), Wilson Gachari – WHO (Moderator) and MoHS representative as rapporteur and were assigned the *following technical areas*

- *National Legislation, Policy and Financing*
- *IHR Coordination, Communication and Advocacy*
- *Immunization*

Group 2 Marcus Eder PHE (Moderator), Doris Harding – MoHS (Presenter) and representative from MAFFS as rapporteur and were assigned the *following technical areas*

- *National Laboratory System*
- *Anti-microbial Resistance (AMR)*
- *Biosafety and Biosecurity*

Group 3 – Representative from CDC (Moderator), Roland Conteh - MoHS (Presenter) and representative from Ministry of Lands, Country Planning & Environment as rapporteur and were assigned the *following technical areas*

- *Zoonotic Disease*
- *Real Time Surveillance*
- *Reporting*
- *Workforce Development*

Group 4 - Led by Dr. Moosa - MoHS (Presenter), Robert Musoke - WHO (Moderator) and partners as rapporteur and were assigned the *following technical areas*

- *Preparedness*
- *Emergency Operations Centres*
- *Linking Public Health & Security Authorities*
- *Medical Countermeasures and Personnel Deployment*
- *Risk Communication*

Group 5 - Led by Dr. Sillah – MoHS (Presenter), representative from IOM (Moderator) and some of the partners as rapporteur and were assigned the *following technical areas*

- *Point of Entries (PoEs)*
- *Chemical Events*
- *Radiation Emergencies*
- *Food Safety*

Day 2
Session 5: Multisectoral Partnership Collaboration
It was explained to participants the meaning, benefits and the outcomes of Multisectoral Partnership Collaboration for countries, partners and donors with regards to IHR and health security.

Session 6: Presentation of the Priority Areas

The data on the prioritization was analysed in a more meaningful way to be able to identify the greater priority activities out of the 155 activities of the 19 technical areas. In the analysis,

Group 2 presentations

The group first presented on the antimicrobial resistance (AMR) and the following were the first activities that were rated highly based on the scoring:

AMR	Raise awareness on AMR	6
AMR	Integration of AMR plan into the NLSP	5
AMR	Review and update national HCAI plan	5
AMR	Establish surveillance system of HCAI in 25 government hospitals	5
AMR	Support, monitor and evaluate infection prevention and control programs in collaboration with national IPC Unit and stakeholders	5
AMR	Establish occupational health program for health workers	5
AMR	Strengthen national and community linkages/partnership for IPC in human, animal, and agricultural sectors	5
AMR	Review and update treatment guidelines to include appropriate antibiotic use	5
AMR	To establish treatment and testing algorithm inclusive of antibiotic use	5
AMR	Develop regulation for antibiotic use in animals, agriculture and fisheries	5
AMR	Monitor prescription and consumption patterns in both human and animals	5
AMR	Establish antimicrobial stewardship committees at health facilities level	5
AMR	Update the National Medicines Policy to include use of antimicrobial agents	5

The second presentation by group 2 was on biosafety and biosecurity

Biosafety and BioSecurity	Review and update the National Laboratory Strategic Plan 2016-2020 to include biosecurity and to integrate biosafety for animal and environmental health laboratories	6
Biosafety and BioSecurity	Establish a national One Health biosafety committee including chair	5
Biosafety and BioSecurity	Establish integrated waste management protocol including decommissioning protocol for all biological agents and equipment.	5
Biosafety and BioSecurity	Appoint and train One Health biosafety and biosecurity officers in all human, animal and environmental laboratories	5
Biosafety and BioSecurity	Build One Health technical capacity for biosafety and biosecurity (at relevant laboratory sites)	5

The third presentation by group 2 was on National Laboratory System

National Laboratory System	Develop an integrated syndromic and laboratory-based POCT algorithm	6
National Laboratory System	Build the testing capacity for environmental health laboratories to test for water and food safety	5
National Laboratory System	Improve communication for timely reporting of laboratory results	4.5
National Laboratory System	Improve the capacity for bacteriological testing culture and ASTs for Human health	4.5
National Laboratory System	Establish a network of specimen transportation at all levels - national and international	4.5
National Laboratory System	Establish a tracking system for specimen referral and transportation	4.5
National Laboratory System	Establish sustainable commodities supplies system	4.5

Questions/Suggestions

1. The group complained that the human laboratory should be separated from the animal laboratory in the scoring because they felt the human laboratory is much important than the animal and that has made them score low under National Laboratory System.

2. Another participant wanted an explanation to the comment that the "human laboratory is much important than the animal" and the response was that, if a dog bites any person, that person will be taken to the lab and not the dog.

3. The group further complained that, due to the importance of this activity "Establish a network of specimen transportation at all levels - national and international" they should have had a rating of 6 had it not been for the animal factor.

4. The group requested the animal and human activities with regards to the National Laboratory System be split to ensure high rates for most of the National Laboratory System activities.

Group 3 presentations
They explained in detail how they arrived at a consensus.

Question: It was raised by one of the participants that, the group did not take into consideration the environmental component when making a decision on "Strengthen Community-based surveillance system in the context of "***One Health program***". Other people advocated for the strengthening of the area of environment and animals.

The group requested to reconvene to consider their choices again to ensure the right answer.

Group 4 presentations

The group first presented on Preparedness and the following were the first activities rated highly based on the scoring:

12-Preparedness	Develop a One Health compliant all hazards plan	6
12-Preparedness	Establish comprehensive risk and resource mapping of priority public health hazards	6

The group presented on Emergency Response Operations and and the following were the first activities rated highly based on the scoring:

13. Emergency Response Operations	Develop a costed strategic plan for EOC that should be review and tested annually.	6
13. Emergency Response Operations	Capacity building for surge personnel	5

The group presented on Risk Communication and the following were the first activities rated highly based on the scoring:

16-Risk Communication	Finalize the EOC communications strategic plan.	5
16-Risk Communication	Sustain regular communications with partners	5

16-Risk Communication	Develop messaging and materials for risk communication	5	
16-Risk Communication	Create a dedicated budget line for addressing risk communications response in MoHS & MAFFS	5	

Questions/Suggestions

1. Under preparedness, a participant raised the concern of why simulations were not part of the high priority activities and the response was, "It is under the emergency response."

Group 5 presentations

The group first presented on the PoE, the following were the first activities that were rated highly based on the scoring:

17-PoE	Develop Strategic plan for Port Health	5
17-PoE	Develop framework, SOPs, guidelines and tools for border health	5
17-PoE	Cross border engagement for information sharing, joint outbreak response and planning	5
17-PoE	Develop a national public health emergency contingency plan (PHECP) for emergencies at PoEs	5

The group first presented on Chemical Events, the following were the first activities rated highly based on the scoring:

18-Chemical Events	Promote programs to develop chemicals-management instruments (national profiles, national implementation plans, national emergency preparedness and response plans).	5
18-Chemical Events	Develop communication framework for pollution and chemicals management	5
18-Chemical Events	Enact Draft National Chemicals Management Act 2017	5
18-Chemical Events	Enact Draft regulations for the management of toxic and hazardous substance	5
18-Chemical Events	Develop/adopt chemical standards in air, water, waste water, sediment/sludge, plant and human specimen, soil, exhaust fumes and products	5

18-Chemical Events	Develop and enact national chemical standards regulations for all environmental media	5	
18-Chemical Events	Enactment of electronic waste management regulation	5	

Questions/Suggestions

1. "Develop/review policy for port health services" was not one of the high priority activities and some of the participants were of the view that, considering its importance, it should be reconsidered to be prioritized as a high priority activity.
2. A participant asked if the group is aware of the use of chemicals by companies and farmers for spraying their farm produce. **Response –** Most of the companies and farmers do not follow the environmental impact assessment process of handling chemicals.
3. A participant asked if there are linkages between chemical control and laboratory services. **Response-** There is a link between labs and chemical control but the policy needs to be strengthened and enforced.
4. The group informed participants that, the bill to "*Develop a comprehensive Radioactive waste management policy, regulations, plan and guidelines*" is before parliament to be passed.

Session 7: Rescoring of the Activities

The scoring of activities under each of the criteria was reconsidered based on participant reactions and comments following the first presentations. According to them, the initial scoring criteria assigned low scores to some high priority activities, therefore making them low priority activities. Based on their request, the scoring criteria was changed as shown below:

Low-hanging fruit (1 or No)	Highest Priority (Yes or No)	Known Advocate	Activity Timing (Ongoing, 1st, or Follow-on activities)	Resources Needed (High or Low)	Existing or Potential Funding Source(s)
YES	YES	YES	Ongoing	LOW	YES
1	3	2	1	1	2

The new scores were then presented to participants to ensure their understanding and their agreement. Some of the comments that came up during and after the presentation were:

1. The National Laboratory System group wanted activities which had both human and animal component to be split up to attract a fair and representative score.
2. Participants were satisfied with the new score for **"*Develop a national public health Emergency Contingency Plan (PHECP) for emergencies*"** at PoE because

that activity is a high priority. The score was 8 under the new criteria compared to the first score of 4.

3. Under surveillance, the group wanted a review of the score of "***Establish mechanism for collaboration and coordination between human and animal health sector in the context of One Health***" which had high scores in both the old and new scoring criteria. To them it was not a high priority activity.
4. The group wanted to look at the activities again and finalize the scoring at their group levels, having understood the process of scoring.

Session 8: Finalization and Analysis of the Scoring

All the groups worked together again to brainstorm on the new scoring criteria and confirm and finalize their scoring on each of their activities. They all worked for the next 45 minutes with the exception of group 2 which had a problem with the scoring of all activities under the National Laboratory System that had both human and animal components.

Analysis of the activity scoring

Analysis of the 107 activities with scores 7-10 show that AMR has the highest number of activities in that score range while food security, medical counter measures and linking public health and security had the least number of activities in the score range of 7 to 10.

Of the 107 activities that scored between 7 and 10, only 15 of them scored a 10. Thirty-seven of the activities had a score of 9, 25 activities had a score of 8 and 30 activities scored a 7.

The table below shows the technical areas with the least budgeted amounts in the NAPHS costing tool among prioritized activities with scores 7-10:

Food Safety	440569.1406
Radiation Emergencies	332994.5313
Risk Communication	125246.0938
Preparedness	116575.5208
National Legislation, Policy and Financing	92896.875
Reporting	66683.46354
Workforce Development	59191.66667
Med Counter Measure	17269.53125

Figure 1: The number of activities per technical area for each of the 107 activities with 7-10 point scores

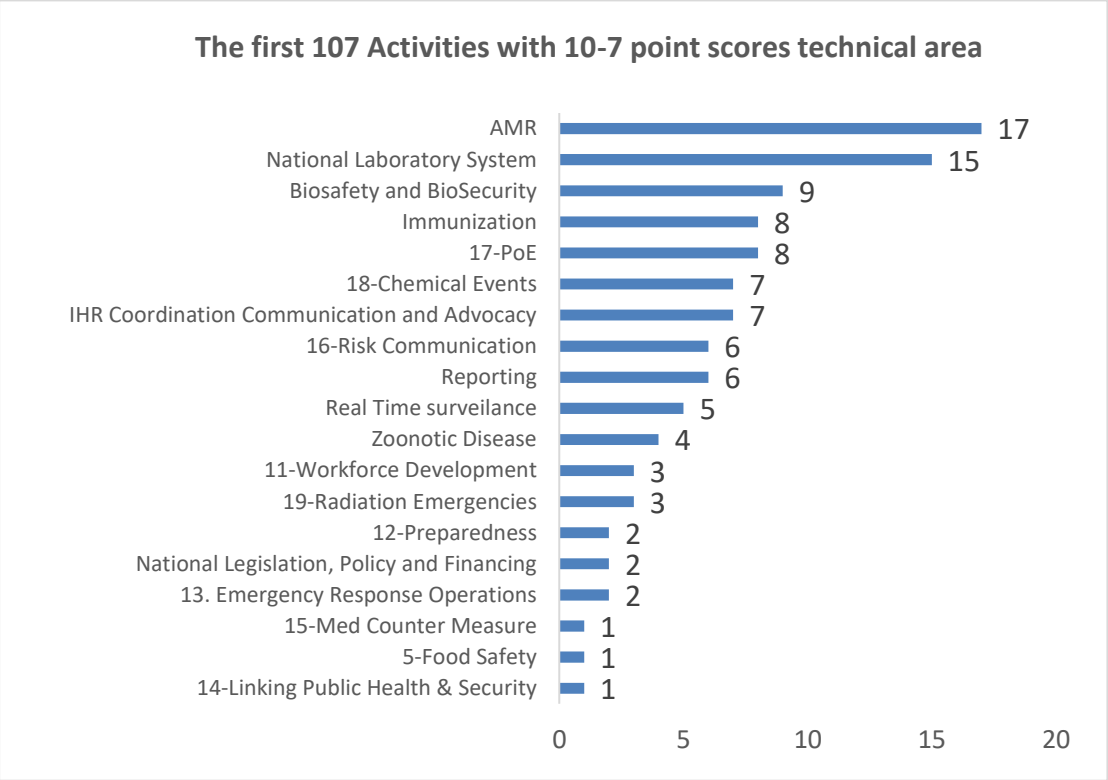


Figure 2: The scores for the 107 prioritized activities with scores 7-10

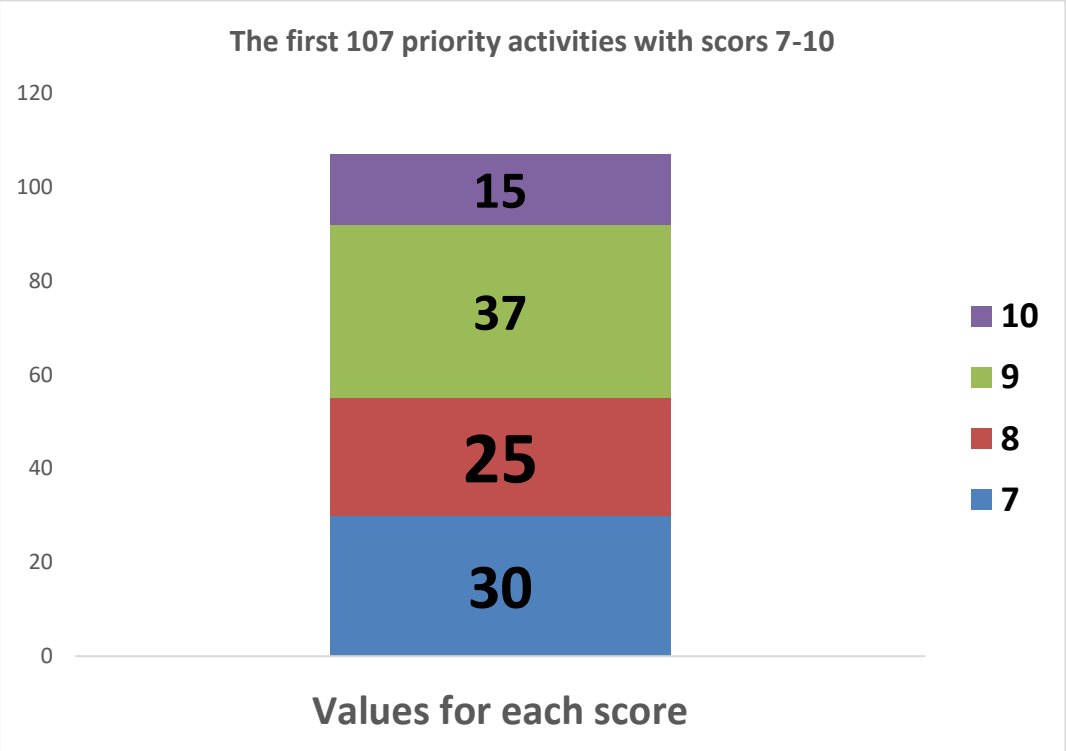
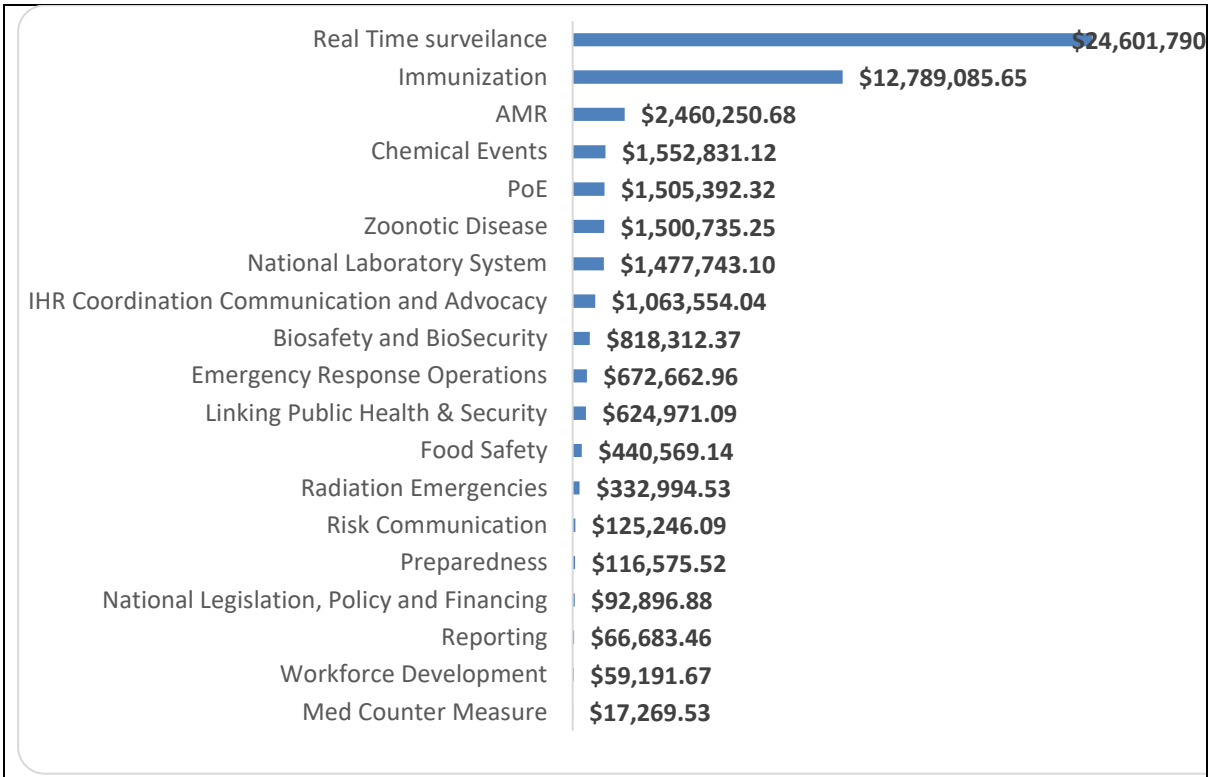


Figure 3: The budgeted amount by technical area for the activities with scores of 7 to 10



Day 3
The third day was for the resource mapping and began with a presentation on financing preparedness for sustainable health security. It focused on: 1. Introduction of financing preparedness and guidance 2. Conceptual understanding For five-year financing preparedness, the following are the key steps: 1. Identify activities and the resources 2. Prioritization of activities
Session 9: Presentation of the Resource Mapping Tool Bismarck Adusei and Glenn Lolong of WHO presented the resource mapping tool to participants and explained the importance of the tool in mapping all the available resources in the country. The tool was designed for accountability and transparency for the investments by donors and partners in the country. It also helps identify areas that have substantial resources and areas that have minimum or no investment. This can provide guidance to partners and donors on where to invest for better results. Participants were positive about the tool because of its mapping and analysis capabilities through the dashboard interface.

Participants returned to their initial groups to map out all the available resources in the country with the resource mapping tool. Analysis of the data by the tool revealed that there are currently 33 partners and donors in the country supporting various technical areas.

Further analysis helped to identify the number of partners and donors in each of the technical areas and showed that National Laboratory Systems currently has 13 partners and donors, the highest number of all. The next highest is Emergency Response and Point of Entry, 9 each.

The analysis also identified other technical areas without any partner or donor support. Those include food safety, radiation emergencies, medical counter measures, national legislation and linking public health and security.

Technical Areas	Donors and Partners
AMR	US - CDC
	USAID
Biosafety and Biosecurity	Canada
	US - CDC
	USAID
Chemical Events	European Commission
	GEF (Global Environment Facility)
	MLF (Multi-Lateral Fund)
Coordination	USAID
Immunization	European Commission
	GAVI
	Rotary International
	US - CDC
Laboratory	Canada Aid
	China CDC
	Chinese Government
	DFID
	DoD DTRA
	European Union
	Global Fund
	JICA
	UK AID
	UNICEF
	US - CDC
	USAID
	World Bank
Points of Entry	CDC
	DFID

	GIZ
	Italy
	MBTF
	MPTF
	MRU
	US - CDC
	USAID
Preparedness	DFID
	Italy
	Switzerland
	UK AID
	USAID
Reporting	USAID
Response	DFID
	Italy
	Luxembourg Development Cooperation
	MDTF (UNDP Multi-Donor Trust Fund)
	Netherlands
	Norad
	Switzerland
	UK AID
	USAID
Risk Communication	GIZ
	USAID
Surveillance	AfDB
	China CDC
	DFID
	MPTF
	US - CDC
	USAID
	WHO
	World Bank
Workforce Development	UK AID
	US - CDC
	USAID
	World Bank
Zoonotic	USAID

Session 10: Group Work to Reorganize the Timelines of Priority Activities

Participants returned to their groups to look at their high priority activities and match them with the implementation timelines in their costed plan to ensure those activities are implemented within two years.

Session 11: Documentary on International Health Regulations

A documentary on the importance of IHR (2005) was shown to participants. This was shown for participants to be aware of the reasons for countries, partners and donors to come together to ensure all countries are able to comply.

Session 12: Presentation on the Strategic Partnership for IHR and Health Security

Ludy Suryantoro and Glenn Lolong of WHO headquarters made a presentation on SPH so participants can better understand the features and benefits. The components were displayed and explained.

All the resources available through the online Strategic Partnership Portal such as an inventory of partners and donors for each of the technical areas for each country was shown to participants.

Results of the meeting

WHO concluded the workshop with a roundtable discussion between donors and key government decision makers, which resulted in elimination of bottlenecks and better alignment among all stakeholders for the implementation of the prioritized activities. Led by WHO, the REMAP process attracted new partnerships, funding, and technical support. When the resource mapping workshop showed some overlap in donor-funded projects, WHO encouraged donors to be more flexible in their earmarking of funds to achieve better coordinated results. As a result, more than USD $50 million of new and reprogrammed funding was identified, both domestic and external, with domestic funding representing about 20% of the total.

The collective approach undertaken by the Ministry of Health created an environment of partnership and dialogue. Partners worked together to ensure better coordination and reduce earmarking. The Government agreed to provide an update on progress to WHO every three months.

Sierra Leone's resource mapping leads into the NAPHS implementation phase. Stronger national leadership and ownership of health security, improved donor coordination, and mapping of provincial activities and investments by donors resulted from the workshop. The achievement of broad support for implementation of prioritized activities better equips Sierra Leone to prevent, detect, and respond to health emergencies. The work undertaken by Sierra

Leone illustrates how an at-risk country can take the steps necessary to better prepare for a health emergency in a coordinated fashion, along with domestic and international partners.

ANNEX: List of Participants

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