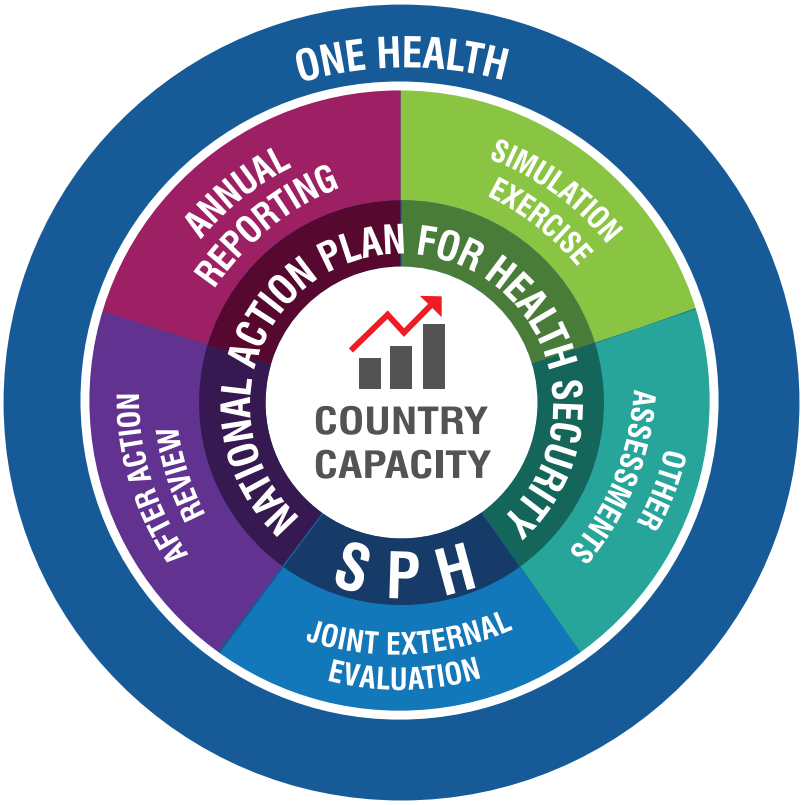
THE REPUBLIC OF UGANDA

NATIONAL ACTION PLAN FOR HEALTH SECURITY

2019 - 2023



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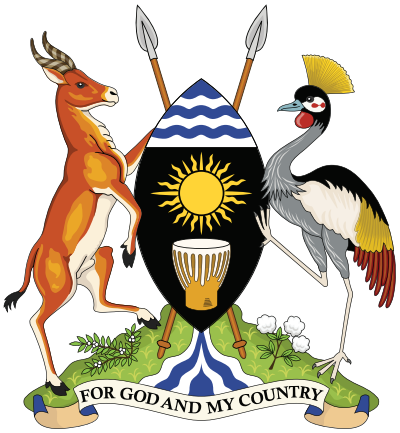

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August 2019

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ACRONYMS

AFENET	African Field Epidemiology Network
AMR	Antimicrobial Resistance
ASP	Antimicrobial Stewardship Program
CDC	US Centres for Disease Control and Prevention
CDDEP	Centre for Disease Dynamics, Economics & Policy
DGAL	Directorate of Government Analytical Laboratory
DHT	District Health Team
DVO	District Veterinary Officer
EAC	East African Community
EPR	Epidemic Preparedness and Response
EPR	Epidemic Preparedness and Response
FELTP	Field Epidemiology and Laboratory Training Program
GHS	Global Health Security
GHSA	Global Health Security Agenda
GoU	Government of Uganda
HSS	Health System Strengthening
IDI	Infectious Diseases Institute
IDSR	Integrated Disease Surveillance and Response
IFSS	Integrated Food Safety System
IGAD	Inter-Governmental Authority for Development
IHR	International Health Regulations
INFOSAN	International Network of Food Safety Authorities
IPC	Infection Prevention and Control
IRCM	Integrated Regional Coordination Mechanism
JEE	Joint External Evaluation
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MEAs	Multi-lateral Environmental Agreements
MoD	Ministry of Defense
MoGLSD	Ministry of Gender, Labour and Social Development
MTIC	Ministry of Trade, Industry and Cooperatives
MoH	Ministry of Health
MoIA	Ministry of Internal Affairs
MoS	Ministry of Security
MoST	Ministry of Science and Technology
MoU	Memorandum of Understanding
MoWE	Ministry of Water and Environment
NAP	National Action Plan
NAPHS	National Action Plan for Health Security

NDA	National Drug Authority
NDP	National Development Plan
NEMA	National Environment Management Authority
NGO	Non-Governmental Organization
NIPH	National Institute of Public Health
NOHP	National One Health Platform
NTF	National Task Force
NWSC	National Water and Sewerage Corporation
OHTWG	One Health Technical Working Group
OIE	World Organization for Animal Health
OPM	Office of the Prime Minister
PHE	Public Health Emergency
PHEOC	Public Health Emergency Operation Centre
PoE	Point of Entry
PPE	Personal Protective Equipment
REC	Regional Economic Communities
RRT	Rapid Response Team
SME	Subject Matter Expert
SMS	Short Message Service
SOP	Standard Operating Procedure
TADS	Trans-boundary Animal Disease and Zoonoses
UBOS	Uganda Bureau of Statistics
UN	United Nations
UNBS	Uganda National Bureau of Standards
UNEPI	Uganda National Expanded Program on Immunization
UVRI	Uganda Virus Research Institute
UWA	Uganda Wildlife Authority
VARM	Vulnerability and Risk Analysis and Mapping
VHT	Village Health Team
WHO	World Health Organization
OHCO	One Health Coordination Office
UPDF	Uganda Peoples Defense Forces
UPF	Uganda Police Force

FOREWORD

Uganda is signatory to the International Health Regulations (IHR) 2005, which mandates member states to strengthen capacities for health security. There have been reports of threats to security of physical, biological and chemical hazards. Emerging and re-emerging infections have descended into countries without warning and have caused unprecedented public health emergencies at national and international levels. The Ebola epidemic of 2014-2016 and the current outbreak in the Democratic Republic of Congo are glaring examples. There have also been reports of anthrax which is of potential concern to both human and animal life.

History tells us that major outbreaks of Influenza and Plague alter the course of socio-dynamics in many countries. It is, therefore, important that national governments prepare for these potential concerns which not only affect the health sector but threaten the entire socio-economic structures of society. The resources to contain these events, in our experience are astronomical, outside the limits of the national budgets. However, early detection and action often leads to effective containment within the framework of prevention. Using this approach, Uganda has been heralded as a leader in health security in the region.

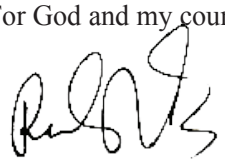
This plan responds to threats by pre-empting actions to contain these public health events before they generate public health emergencies of international concern. This plan gives a comprehensive approach in which human health and animal health is integrated, taking into account the dynamics of the environment. In particular, it also addresses the potential misuse of harmful chemicals, microbials and radiation. Prevention is the corner stone of the national response to these emergencies.

For successful implementation, a multi-pronged multi-sectoral approach is required. Equally important are partnerships at national and international levels.

The National Action Plan for Health Security (NAPHS) 2019 - 2023 provides a platform for coordination and collaboration to address public health emerging threats and improve national health security.

I am appealing to all sectors to embrace the NAPHS.

For God and my country



Rt. Hon. Ruhakana Rugunda

Prime Minister

PREFACE

Uganda is a leader in health security, and this has been demonstrated in the rapid containment of previous outbreaks such as Ebola Virus Disease. In addition, Uganda is championing the fight against Antimicrobial Resistance through surveillance and research in both human and animal sectors. We are also building capacities for an integrated National Laboratory System for quick detection of priority infectious agents.

As a signatory to the International Health Regulations 2005, the country undertook implementation towards compliance by scaling up of Integrated Disease Surveillance and Response (IDSR) and capacity building of Rapid Response Teams. The operationalization of the Public Health Emergency Operation Centre (PHEOC) in 2014, provided a platform for multi-sectoral collaboration during response to public health emergencies. A Memorandum of Understanding was signed in 2016 between Ministry of Health, Ministry of Agriculture, Animal Industries and Fisheries, Ministry of Water and Environment and Uganda Wildlife Authority to form the National One Health Platform.

Uganda piloted the Global Health Security Agenda in 2013 and continues to strengthen global health security capacities through collaboration and partnership with various development and implementing partners. Following the Joint External Evaluation in 2017, multisectoral teams developed the National Plan for Health Security 2019 -2023 under the guidance of the Office of the Prime Minister.

The plan aims to secure the health and wealth of 41 million Ugandans as well as visitors, tourists and travellers to Uganda. With the increase in travel and trade, the country has witnessed over the past 35 years, we need to strengthen the health security capacity to avoid the losses from large public health events. The estimated cost of 160 billion shillings (USD 43 million) for implementation of this plan will be sourced through incorporation into the National Development Plan III as well as additional funding from our health partners.

It is our humble plea that all ministries departments and agencies support this process to ensure a healthy, wealthy and resilient Uganda by 2040.

Lastly, we appreciate the immense support of the Office of the Prime Minster in all the endeavours that ensures smooth coordination and collaboration across sectors building health security capacity in Uganda.

For God and My Country.

Dr. Jane Ruth Aceng

Hon. Minister of Health

Acknowledgements

The Office of the Prime Minister would like to express sincere gratitude to all organisations and individuals that supported the development process of the Uganda National Action Plan for Health Security (NAPHS) 2019-2023.

The NAPHS development process was a follow up on the recommendations of the Joint External Evaluation conducted in June 2017 which attracted participation from a wide range of stakeholders from all relevant sectors. Appreciation also goes to the academia, civil society, UN agencies, and bilateral partners that provided valuable inputs and technical advice.

The process of developing this plan and implementation framework was participatory and involved engagement with key sectors and multidisciplinary stakeholders including government ministries, departments, agencies, and development partners. Special thanks go to Ministry of Health, Ministry of Agriculture, Animal Industries and Fisheries, Ministry of Water and Environment, and Uganda Wildlife Authority as well as World Health Organisation, US CDC, Infectious Diseases Institute, Resolve to Save Lives, and Food Agricultural Organisation that supported the finalisation of the NAPHS.

See Annex I for complete list of participants in the NAPHS development.

EXECUTIVE SUMMARY

Many of the world's most dangerous diseases, including Ebola, Anthrax, Cholera and Yellow Fever are recurrent health threats for Uganda; and the country continues to be a high-risk hotspot for other infectious disease outbreaks. Combating biological threats and health emergencies must be a cornerstone of Uganda's vision for healthy, wealthy, and resilient communities by 2040.

As a signatory to the International Health Regulations (2005), Uganda is expecting to take the necessary steps to develop, strengthen, and maintain core public health and emergency preparedness capacities. The Joint External Evaluation (JEE) of IHR core capacities conducted in June 2017 highlighted strengths and critical capacity gaps that exist in preparing for and responding to public health emergencies. According to the JEE, out of the 50 indicators across 19 technical areas, there was no capacity in 10% of indicators, limited capacity in 30% of indicators, developed capacity in 40% of indicators, and demonstrated capacity in 20% of indicators. No sustainable capacity was achieved for any of the indicators.

The National Action Plan for Health Security (NAPHS) 2023 defines the strategies, actions, and priorities the Government of Uganda will adopt to improve the country's ability to prevent, detect, and respond to public health emergencies. This plan is the first, full-fledged strategy of its kind in Uganda and adopts a whole-of-government approach to health security by leveraging the strengths of many different ministries, departments, agencies, partners, and funding streams.

NAPHS 2023 is a 5-year strategic plan developed collaboratively with relevant ministries, departments, and agencies (MDAs). The plan includes agreed-upon objectives based on the gaps identified in health security assessments, public health risks in the country, and strategic priorities of the stakeholders involved.

By design, the country adopted a multi-sectoral approach, leveraging the principles of One Health, with significant engagement in the process from MDAs and stakeholders. This multi-sectoral approach reflects a shared commitment to enhanced collaboration when addressing national health security.

The NAPHS covers all 19 technical areas required to improve health security. The estimated cost to implement all planned activities during 2019-2023 is 160 billion Ugandan Shillings. The major cost drivers of the NAPHS come from surveillance, antimicrobial resistance, medical countermeasures and personnel deployment, and national laboratory systems.

The proposed activities under the 19 technical areas will be implemented over the 5-year period through the involvement of different sectors, using a One Health approach, with the Office of the Prime Minister providing overall oversight. Wide participation of the UN agencies, implementing partners, international organizations, and bilateral partners will be embraced within existing coordination frameworks. MOH, MAAIF, MoWE and UWA shall maintain their traditional roles in the national one health platform of policymaking, providing guidelines,

training and capacity building, resource mobilization, monitoring the health sector response, and the coordination of partners. In the spirit of the plan, the line ministries and authorities shall provide guidance and support implementation of the NAPHS in the decentralized districts, municipalities, and city authorities.

Implementation has already begun and technical leads from all 19 technical areas and sector representatives will track implementation progress using an electronic platform. The expanded multisectoral health security platform, composed of all relevant MDAs, will meet twice per year to review implementation progress, share lessons learnt, and identify priority activities for the next planning period.

The NAPHS spells out a road map towards realisation of a health secure nation through robust preparedness, detection, and response system to public health emergencies and threats. The plan represents a robust commitment by all sectors and levels of the Government of Uganda to systematically build and maintain the core capacities, supported by relevant financing, to protect Uganda and the world from the impacts of public health emergencies.

1. BACKGROUND/CONTEXT

1.1 Country profile

Background

Uganda is a land locked country located in East Africa with a projected population of 41,215,593 (2019). It is bordered by South Sudan to the north, Kenya to the east, Tanzania and Rwanda to the south, and the Democratic Republic of Congo to the west. Over the past decade the country has experienced significant weather fluctuations, natural disasters and disease outbreaks which have affected most regions. On average, 200,000 people are affected by disasters every year (OPM, 2010).

Public Health Risks

Uganda is vulnerable to public health hazards and emergencies because of her geographical location in the meningitis and yellow fever belts, the filovirus triangle, and being a host to migratory birds coming from Europe. Uganda is also located in the volatile Great Lakes Region with a number of ongoing conflicts resulting in a large influx of refugees from neighbouring countries.

1.2 Progress in IHR implementation

In view of these vulnerabilities, the government of Uganda in collaboration with partners has instituted prevention and control measures aimed at mitigating the effects of the public health emergencies. These include rolling out Integrated Disease Surveillance and Response (IDSR) with support from the World Health Organization (WHO) as a framework for implementing International Health Regulations (IHR), 2005. IDSR builds district level capacities for public health emergency response. More than 6,000 health workers have been trained across the country, leading to timely detection and response to disease outbreaks.

In 2013, the Ministry of Health with support from CDC launched the Global Health Security Agenda (GHSA) Pilot Project to accelerate the country's compliance with the IHR (2005). The project resulted in strengthening of capabilities related to prevention, detection, and response. The establishment of a Public Health Emergency Operation Centre (PHEOC) resulted in further infrastructural investment and attaining additional support related to capabilities for real-time surveillance, reporting, and laboratory investigation tracking systems.

Uganda conducted a pilot assessment of the GHSA implementation progress in February 2015 using the IHR (2005) core capacities. The findings acknowledged the country was on course

with the implementation of GHSA and IHR (2005), especially in disease surveillance, health information, and the PHEOC. That clear definition existed for the major elements of health security around the themes prevent, detect and respond to communicable diseases. An action plan was developed to address gaps identified in the assessment.

In addition to these vast monitoring exercises, Uganda requested for a Joint External Evaluation in December 2016 and subsequently undertook the exercise in June 2017. A multi-sectoral international External Evaluation Team of 15 members selected on the basis of their recognized technical expertise from a number of countries, and advisors representing international organizations conducted the assessment jointly with the Ugandan counterparts.

Uganda completed the Joint External Evaluation (JEE) in June 2017. The purpose of the JEE was to assess the country's capacity to prevent, detect and rapidly respond to public health emergencies (PHEs). Nineteen technical areas were assessed and scored on a scale of 1-5; with the score 1 suggesting no capacity, and 5 sustainable capacity. The technical areas were grouped under following four thematic areas; Prevent, Detect, Respond, other IHR related hazards and PoE (Figure1 below)

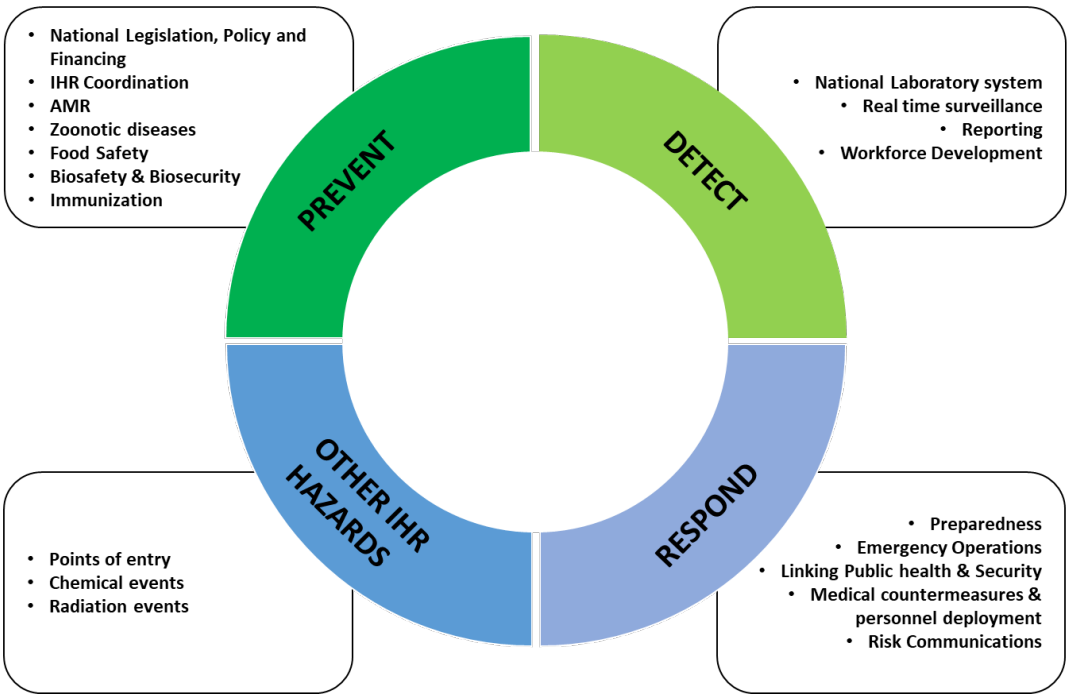


Figure 1 Distribution of the 19 technical areas across the Four Thematic Areas

1.3 Joint External Evaluation results

The situation analysis is informed by the findings of the Joint External Evaluation conducted in June 2017. The recommendations of the JEE report formed the basis for the formulation of the NAPHS. The findings from JEE are found in Annex II.

***Table 1**: Summary of capacity level for implementation of IHR (2005) core functions*

Score	Capacity level	No of indicators	% of total indicators
5	Sustained capacity	0	0%
4	Demonstrated capacity	10	20%
3	Developed capacity	20	40%
2	Limited capacity	15	30%
1	No capacity	5	10%
	Total	**50**	**100%**

***Source**: World Health Organisation, Uganda Joint External Evaluation Report 2017.*

The assessment showed that Uganda has demonstrated capacity in:

- Immunization
- Laboratory system
- Workforce development
- Real time surveillance
- Response operations
- Risk communication.

However, the country scored "no capacity" in:

- National legislation, policy and financing,
- Preparedness, and
- Points of entry.

The JEE recommended priority actions to address these gaps have been included in the Uganda National Action Plan for Health Security.

2. VISION, MISSION, OBJECTIVES, GUIDING PRINCIPLES AND CORE VALUES OF THE NAPHS

2.1 Vision

Healthy, wealthy and resilient communities in Uganda by 2040

2.2 Mission

To strengthen Uganda's health security capacity and community resilience against public health threats in compliance with International Health Regulations (2005).

2.3 Objectives

1. To strengthen the country's capacity to prevent, detect and respond to public health threats.
2. To strengthen the collaboration and coordination mechanism for NAPHS implementation through application of multi-sectoral and one health approaches.
3. To map and align existing and potential domestic and external financing to support NAPHS implementation.

2.4 Guiding principles

- **The One Health Approach:** The majority of emerging and re-emerging infections are zoonoses. Increasing human and animal interactions are the major drivers of emergence of zoonotic diseases and anti-microbial resistance. Furthermore, human-animal-environment interface may lead to other public health events which require multi-disciplinary collaboration by human, animal and environmental health experts to prevent and control such diseases or events.
- **Multi-sectoral approach:** Building the IHR core capacities requires collaboration and communication towards shared responsibility among multiple sectors. Effective partnerships and cooperation among the different ministries will be encouraged throughout implementation.
- **Collective responsibility:** Addressing public health threats should be based on values of solidarity, humanity and sustainable development. Health security is a collective responsibility for all stakeholders including government, civil society, private sector and the general population.

- **Collaboration and Partnerships:** Health security requires strong collaboration, partnerships and information sharing with actors within and outside the country's borders.

2.5 Core values

- Shared responsibility
- Transparency
- Information sharing
- Accountability
- Respect of each actor's jurisdiction

3. METHODOLOGY/PROCESS FOR THE DEVELOPMENT OF THE ACTION PLAN

3.1 Development of the NAPHS

Multidisciplinary and multi-sectoral subject matter experts convened and held a series of meetings between August 2017 to May 2019. The technical experts reviewed all the available national assessments including the 2017 JEE country report, the 2007 PVS, laboratory assessments and literature. The technical team composition was multi-sectoral and multidisciplinary with representation from key Government of Uganda line Ministries, Departments, Agencies and development partners. Priority actions identified during the 2017 JEE were included in the NAPHS as targets for interventions in order to improve the overall scores. The draft NAPHS was shared with stakeholders for technical input and suggested changes were incorporated. Review meetings between stakeholders were held for final input and buy-in. The planning process was coordinated by the Office of Prime Minister, operationally supported by the Ministry of Health, and included stakeholders from all relevant sectors. The full list of participants is available in Annex I.

3.2 Identification of Priority Activities

During the NAPHS validation and costing workshop in May 2018, technical working groups developed activities that were critical for stepping up their JEE score levels. The draft NAPHS was shared with stakeholders for technical input and suggested changes were incorporated. In addition to technical working group input, Uganda validated their activities using the GHSA & IHR Standardized Milestone Library which defined steps that needed to be taken to move from the current JEE level of capacity score to the next JEE level of capacity score.

After developing these activities, technical working groups prioritized strategic activities that could realistically be implemented during the first 18 months of implementation (2018-2019). The strategic activities were prioritised by country-specific risks and hazards, strategic plans and priorities of participating MDAs, and existing or potential funding sources.

Recommended priority activities were presented to key stakeholders for approval and subsequently incorporated into the NAPHS. The final document was then shared with key ministries and the OPM for final input, approval, revisions and printing.

Based on the successful cross-government joint prioritization process, the Government of Uganda plans to routinely conduct a NAPHS progress check and identify priority activities every 6 months until the next JEE is conducted.

3.3 Linkage to other government frameworks

The NAPHS operational framework references the work in the national vision 2040, National Development Plan (NDP III), technical guidelines, strategic plans and relevant policies of the various sectors and implementing MDAs. The different sector specific strategic plans shall contribute to the attainment of the NAPHS that subscribes to the NDP II and Uganda's Vision 2040. The NAPHS has been developed with the sole purpose of improvement of national capacities to implement IHR. The stakeholders shall implement all activities outlined in the NAPHS resulting from the JEE 2017 recommendations.

The NAPHS operationalization is envisioned to involve various Ministries, Departments and Agencies that contribute to the different technical areas outlined in the plan (see fig.1above). The different sectors will be coordinated through the Office of the Prime Minister (OPM) to ensure national health security in regard to human, animal and environmental health.

NAPHS implementation shall use an all government approach drawing on the Public Private Partnership linkages. Resources will be integrated in the sector budgets and additional resources mobilized from within government and partners. Accountability and reporting on progress made will be in line with the Joint Sector Reviews coordinated by the OPM. Uganda is a signatory to IHR (2005) and World Organisation for Animal Health (OIE) which requires regular reporting to WHO and OIE respectively. The National IHR Focal Point within the MoH and the OIE country delegate based in Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) will be informed of all progress made in attainment of IHR competences in addition to any major events in humans and animals respectively.

Linkages with these strategic and operational plans is critical to ensuring that domestic financing is made available for health security.

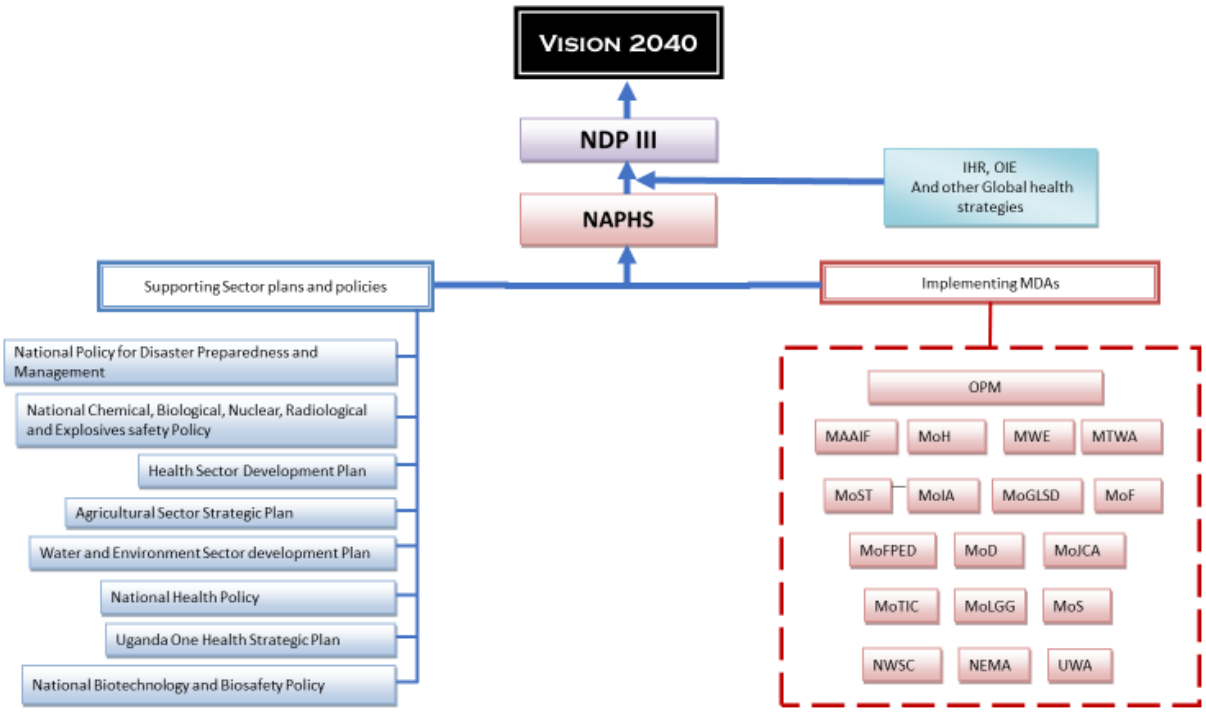


Figure 3: Diagram showing relation of MDAs and national plans relation to the NAPHS

COMPONENTS OF ACTION PLAN

This section describes priority strategic actions selected by technical area from 2019 to 2023, based on the prioritization process described earlier. Each strategic action described consists of more detailed activities along with the coordinating MDAs.

4.1 National Legislation, Policy and Financing

Targets

- An adequate legal framework for the country to support and enable the implementation of all its IHR obligations and rights.
- Revision, or when necessary, creation, of legislation and supporting instruments to properly facilitate implementation of IHR.
- Provision of adequate funding for IHR implementation through the national budgeting or other mechanisms to ensure availability of resources for implementation and response to public health emergencies at all times.

JEE Scores

P1.1	Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)	**3**
P1.2	The State can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with IHR (2005)	**3**
P1.3	Financing is available for the implementation of IHR capacities	**2**
P1.4	A financing mechanism and funds are available for the timely response to public health emergencies	**1**

Current status

Uganda has several laws governing public health to support and enable the implementation of her obligations and rights to comply with and implement the IHR (2005).These include legislative instruments governing public health surveillance and response; Cross-border agreements, protocols or memoranda of understanding (MoUs) with neighbouring countries with regard to public health emergencies in place within East African community.. These legislative instruments, however, are not yet in full alignment with the IHR.

The Contingencies fund at Ministry of Finance is not easily accessible during emergencies, and thus the structures to access the emergency funds need to be more clearly defined. In addition, the pathway for accessing national funding to support public health emergencies is not clearly.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Update in-country legal and policy framework to support implementation of IHR and OIE requirements							
Review key existing legislation and policies (Public Health Act, Animal Diseases Control Act, and Food Safety) that impede compliance with the International Health Regulations	MoH, MAAIF, MoWE, UWA	238,578,250					
Develop National One Health Policy, to incorporate animal and human health surveillance	MOH, MAAIF, MoWE, MoTA, MoGLSD	147,802,500					
Obj 2: Advocate for revision of legal instruments and policies to address existing gaps and challenges within the national administrative environment							
Develop and implement a national advocacy strategy to support revision of legal instruments and policies	MoH, MoJCA	408,350,345					
Obj 3: Develop an IHR advocacy and funding strategy for Parliament, Ministry of Finance, and other key decision-makers for increased government funding to support IHR implementation and emergency funding to all relevant sectors							
Advocate for domestic funding, equipment and staffing for IHR implementation.	MoFPED, MoH, MAAIF, MoWE, MoTA, partners	265,687,500					
Advocate for funding, equipping and staffing for the National One Health Platform and Coordination Office	MoH, MAAIF, MoWE, UWA,	755,243,595					
Establish and fund a budget line in relevant ministries for coordination activities between OIE and IHR focal points	MoH, MAAIF	480,000,000					
Obj 4: Establish an effective rapid response fund to support outbreak investigations and respond							

Review mechanism on accessing funds for public health emergency response from the MoFPED	MoFPED, OPM, MoH, MAAIF, MoWE, MoTWA	50,428,665					
TOTAL	**2,346,091,355**						

4.2 IHR Coordination, Communication and Advocacy

Targets

- Multisectoral and multidisciplinary approaches through national partnerships that allow efficient, alert and responsive system for effective implementation of the IHR.
- Coordinate nationwide resources, including sustainable functioning of a National IHR Focal Point – a national centre for IHR communication that is accessible at all times.
- Provide WHO with contact details of National IHR Focal Points, continuously update and annually confirm them.

JEE Scores

P2.1	A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	**2**

Current Status

IHR coordination operates through the IHR National Focal Point (IHR NFP) at the MoH National Disease Control Department Office. A multi-sectoral, multidisciplinary coordination and communication mechanism exists through the National Task Force (NTF) for public health emergencies. Public Health Emergency Operation Centre (PHEOC) under the Director General Health Services provides the platform and is the information centre for all PHEs.

However, NTF does not meet regularly outside outbreaks situations. Furthermore, there is no well-established IHR coordination mechanism for the other technical areas. The National One Health Platform was established, although the human resource and funding to coordinate the platform is inadequate.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Establish an efficient IHR-OIE coordination mechanism to monitor progress towards implementation of IHR activities							
PRIORITY YEAR 1: Develop TOR and SOPs for IHR focal points for each sector contributing to the NAPHS	MOH	28,105,000		■			
Determine structure and function of national IHR implementation: Training nominated IHR focal points and functionalize national IHR implementation	MOH	67,188,750	■	■	■		
PRIORITY YEAR 1: Implement specified IHR & IDSR activities by NFPs, sectoral FPs, and senior management	MOH, MAAIF	359,955,000		■	■	■	■
Ensure relevant offices and agencies which are coordinating IHR implementation are fully capable of 24/7 functionality (equipment, human resources and infrastructure)	MOH	737,225,000	■	■	■	■	■
PRIORITY YEAR 1: Advocate for senior management in relevant sectors to commit to supporting IHR core capacity-building efforts	MOH	81,615,000	■	■	■	■	■
Equip national focal points to verify emergencies and rumours of public health events	MOH	265,725,625	■	■	■	■	■
Conduct monthly IHR-OIE coordination meetings		14,400,000		■	■	■	■
Operationalize One Health policy at national and district levels	MOH, MAAIF, MoWE, UWA	420,189,040	■	■	■	■	■
Review pre-service public health training curricula to include a component for public health laws	MOH, MoES, UCDC, NCHE, UNCST, MakSPH	54,504,140		■			

Advocate for increased number of public health professionals in the staffing norms	MOH, MoES, UCDC, NCHE, UNCST, MakSPH	24,611,250					
TOTAL	**2,053,518,805**						

4.3 Antimicrobial Resistance

Target: A functional system in place for the national response to combat antimicrobial resistance (AMR) with a One-Health approach, including:

- Multi-sectoral work spanning human, animal, crops, food safety and environmental aspects. This comprises developing and implementing a national action plan to combat AMR, consistent with the Global Action Plan (GAP) on AMR,
- Surveillance capacity for AMR and antimicrobial use at the national level, following and using internationally agreed systems such as the WHO Global Antimicrobial Resistance Surveillance System (GLASS) and the OIE global database on use of antimicrobial agents in animals,
- Prevention of AMR in health care facilities, food production and the community, through infection prevention and control measures and,
- Ensuring appropriate use of antimicrobials, including assuring quality of available medicines, conservation of existing treatments and access to appropriate antimicrobials when needed, while reducing inappropriate use.

JEE Scores

P3.1	Antimicrobial resistance detection	**2**
P3.2	Surveillance of infections caused by antimicrobial-resistant pathogens	**2**
P3.3	Healthcare-associated infection (HCAI) prevention and control programs	**3**
P3.4	Antimicrobial stewardship activities	**3**

Current Status

The Uganda National Action Plan (NAP) on AMR (2018-2022) has been developed to guide the AMR response. The health facilities and laboratories participating in the detection and surveillance of AMR were mapped and will be supported on an ongoing basis.

Gradual enrolment of veterinary laboratories to the surveillance network is being undertaken. The human health surveillance network is linked to sample transportation and isolate referral system from lower health facilities to regional and national laboratories. Infection Prevention and Control (IPC) and antimicrobial stewardship activities, including antibiotic use and consumption measurement among humans, are supported at selected regional referral hospitals with routine national audits conducted by the MoH and partners.

Since the last JEE (conducted in 2017), the National AMR NAP monitoring and evaluation plan with indicators have been developed. Plans to include AMR surveillance and response in the water, environment and animal health sectors need to be developed and implemented. The national IPC program lacks a Health Care Associated Infections (HCAIs) control program and the national IPC committee is not functional. In addition, regulation of antibiotic use is not yet implemented as per the National Drug Act.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Strengthen the capacity of designated laboratories to conduct detection and reporting of all priority AMR pathogens for five years with a system of continuous improvement							
Finalize and disseminate NAP and M&E Plan that addresses all five strategic areas in a One Health approach	DG - MoH/MAIF, Uganda National Academy of Science (UNAS), AMR-TWG	1,287,704,355					
Develop an implementation plan and M&E Plan for each of the four sectors (human, animal, environment/water, and wildlife) addressing all five strategic areas of the NAPH and public-private partnerships	MoH, MAAIF, MoWE & UWA	365,501,170					
Procure laboratory equipment, reagents, supplies, and consumables to enhance laboratory testing capacity for detection and surveillance of AMR pathogens in the animal & human sectors	NMS, MAUL, JMS, UNHLS, NADDEC, Implementing partners	618,301,380					

Develop a curriculum and train laboratory staff on detection and characterization of AMR pathogens for both human and animal health with a system of CQI – including training of NMRL to perform reference-level antimicrobial resistance testing	UNHLS (MoH), NADDEC (MAAIF)	191,713,190					
Complete the development of testing SOPs and protocols for laboratory-based AMR and a system for reporting from facility to national for both human and animals	UNHLS, NADDEC	16,000,000					
Strengthen sample referral systems for detection of AMR priority pathogens	UNHLS, NADDEC	4,872,960,000					
Establish internal and external QA programs for designated animal health laboratories	UNHLS, NADDEC	1,504,000,000					
Obj 2: Strengthen laboratory information systems for improved surveillance of antimicrobial resistant pathogens							
Assess the national zoonotic disease burden in the AMR context and zoonotic AMR surveillance capacity	UWA, NADDEC (MAAIF), CPHL, UVRI, (MoH), OHCO	92,186,320					
Strengthen the national laboratory capacities to store and manage AMR pathogens and maintain a national biorepository of isolates	UNHLS, IDI, MAAIF	5,352,132,000					
Designate farms for AMR surveillance	MAAIF and AMR TWG	56,189,250					
Facilitate a National AMR Surveillance Coordination Committee	National AMR coordination centre	193,740,000					
Build capacity of sentinel surveillance site personnel through training and mentoring	National AMR coordination centre	66,988,125					
Develop an optimal AMR surveillance information system at NMRL/NCC/NADDEC	National AMR (NCC)/ NADDEC	211,984,140					
Create a national framework for collecting, collating, reviewing, and reporting AMR reports from facility to national and global	National AMR coordination centre	913,167,190					

levels							
Conduct an annual national multisectoral AMR conference for experiences and data sharing among researchers, practitioners, etc.	UNAMRC	656,712,500					
Build subject matter expertise at the National AMR Coordination Centre	National AMR coordination centre	2,385,301,867					
Obj 3: Strengthen the Healthcare-Associated Infection Prevention and Control program							
Develop a national HCAI policy	MoH, MAAIF	192,722,760					
Develop a national HCAI strategic plan	MoH, MAAIF	60,937,500					
Develop National IPC technical guidelines for animal health	MoH, MAAIF	56,507,500					
Reactivate the National IPC Committees with representatives from all sectors	DG-MOH, CAH-MAAIF	87,420,000					
Routinely assess facilities with HCAI programmes	National IPC Focal Person, IDI	83,920,000					
Establish surveillance systems for HCAI programs for animal health in five sites to include AMR prevention and airborne infection control	MoH	13,059,375					
Scale up surveillance systems for HCAI programs from 14 to 25 sites	MoH	74,160,000					
Build animal and human health workforce expertise/competencies on HCA IPC	National IPC Committee, IPC Focal Person, IDI	1,046,505,000					
Obj 4: Increase political engagement and advocacy for improved AMR programs							

Develop an AMR stewardship policy	OH platform	40,023,750					
Strengthen antimicrobial stewardship programs (ASP) for animal health to include monitoring of antimicrobial use, education/communication, and other interventions to improve antibiotic use at designated centres	MAAIF, MoWE and UWA	17,535,750					
Scale up Antimicrobial Stewardship Program for human health from 6 to 25 sites	MoH	47,693,750					
Develop facility specific SOPs, protocols, and databases for monitoring antimicrobial use in humans and animals	MoH, MAAIF, MoWE and UWA	72,066,380					
Identify areas or sectors for baseline survey on selected antimicrobial consumption	NDA, MoH, MAAIF	12,108,750					
Assess antimicrobial consumption levels across animal and human health sectors at national and facility level	NDA, MoH, MAAIF, NMS, JMS, MAUL, health facilities	310,017,535					
Identify antimicrobial agents for residual testing surveillance in human, animals, and agriculture	MOH Pharmacy Division	2,915,207					
Conduct multisectoral Training of Trainers (TOT) at national, regional and district levels on AMR stewardship	MoH, MAAIF, MoWE UWA, One Health platform	38,432,500					
Develop a harmonized multisectoral AMR training curriculum	MoH, MAAIF, MoWE and UWA, One Health platform	3,642,500					
Conduct advocacy meetings at national, regional, council and community levels on AMR	MoH	201,812,500					
Provide IPC supplies to 30 facilities	MoH, MAAIF, One health platform	3,609,600,000					

Improve infrastructure for water systems, isolation facilities and waste management	MoH, MAAIF, One health platform	2,500,000,000					
TOTAL	**27,255,662,244**						

4.4 Zoonotic Diseases

Target: Functional multi-sectoral, multidisciplinary mechanisms, policies, systems and practices are in place to minimize the transmission of zoonotic diseases from animals to human populations.

JEE Scores

P4.1	Surveillance systems in place for priority zoonotic diseases/pathogens	**2**
P4.2	Veterinary or animal health workforce	**3**
P4.3	Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	**2**

Current Status

The National One Health Platform coordinates the control and prevention of zoonotic diseases and other public health priorities. The One Health strategic plan focuses on the seven prioritized zoonotic diseases: Anthrax, Zoonotic Influenza, VHFs, Plague, Brucellosis, Human African Trypanosomiasis and Rabies. However, a One Health policy to establish legal and regulatory structures and funding mechanisms for OH activities at national and sub-national level is lacking.

The country has a strong passive surveillance system for trypanosomiasis, plague, influenza, Viral haemorrhagic fevers (VHFs). In the recent past, the country registered outbreaks of zoonotic Public Health Emergencies such as RVF, CCHF, EVD, Anthrax and Yellow Fever through the human health surveillance and later animal surveillance systems. This strengthened the One Health approach during response. Performance of Veterinary Services (PVS) is occasionally conducted and is used to guide decisions on control of zoonotic disease outbreaks. However, active integration of human and animal surveillance systems is required to institute a sustainable zoonotic disease control. Formal integrated zoonoses data sharing and a joint outbreak response mechanism among various agencies at national and sub-national levels need to be established.

Comprehensive training needs assessment and integrated training programs across the relevant sectors have not been developed.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Develop a national integrated priority zoonotic disease surveillance system							
Assess gaps in existing surveillance systems (animal and human) for priority zoonotic diseases	NOHP (MoH, MAAIF, MWE, UWA)	215,886,035					
Conduct validation and dissemination workshop to collect inputs to the surveillance system situation report	NOHP (MoH, MAAIF, MWE, UWA)	145,169,500					
PRIORITY YEAR 1: Develop operational plans for strengthening priority zoonotic disease surveillance systems	NOHP (MoH, MAAIF, MWE, UWA)	157,379,250					
PRIORITY YEAR 1: Strengthen national capacities for surveillance data management, collection, analysis, and sharing on priority zoonotic diseases	NOHP (MoH, MAAIF, MWE, UWA)	1,862,823,280					
Train IHR Focal Points in all relevant ministries and competent authorities on their roles and responsibilities *See Workforce Development D4.1 for progress*	NOHP (MoH, MAAIF, MWE, UWA)	*Covered in D.4.1*					
Obj 2: Create a workforce that is conversant with IHR, PVS, the One Health Approach, and surveillance							
PRIORITY YEAR 1: Define the competencies required for advanced, intermediate, and frontline OH practitioners	NOHP (MoH, MAAIF, MWE, UWA)/OHCO	24,999,000					
Address competency gaps among OH practitioners	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	2,260,271,897					
Create a One Health focal person for each district	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	212,666,500					

Obj 3: Establish a functional and effective system for responding to priority zoonotic diseases							
Strengthen participation in regular monthly meetings of One Health Coordination Office and quarterly meetings of OH TWG	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	131,130,000					
Evaluate and update the existing emergency response plan for priority zoonotic diseases	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	72,788,570					
Formulate a national One Health policy to effectively guide response to priority zoonotic diseases	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	66,412,000					
Develop risk communication strategy for priority zoonotic diseases (*including AMR*)	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	27,352,070					
Strengthen the response capacity of One Health Coordination Office	NOHP (MoH, MAAIF, MWE, UWA)/ OHCO	18,216,375					
TOTAL	**5,195,094,477**						

4.5 Food Safety

Target

A functional system is in place for surveillance and response capacity of the country for food-borne disease and food contamination risks or events with effective communication and collaboration among the sectors responsible for food safety.

JEE Scores

P5.1	Mechanisms for multi-sectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of food-borne diseases	**2**

Current Status

Several agencies currently regulate food safety in the country, including the Uganda National Bureau of standards (UNBS) and the Directorate of Government Analytical Laboratory (DGAL). Despite existence of the Food and Drug Act (1964) and the Drug Act (1993) - which establishes the National Drug Authority (NDA) - there is poor coordination of stakeholders contributing to food and drug safety. Currently, response to outbreaks of food-borne diseases is through the national Rapid Response team at the Ministry of Health. However, there is inadequate awareness of food safety measures across the food chain continuum and lack of a national plan to monitor food safety.

Recommendations have been made for the country to develop regulations on food safety, join International Food Safety Authorities Networks (INFOSAN), create national platforms on food safety, set national food standards, promote good agricultural practices, and sensitize the population on food safety.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Develop a national integrated food safety framework and system							
Finalize legislation and regulations covering safe production, storage, distribution and monitoring of food *Refer to Legislation and Policy for progress on this activity*	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA, MoJCA	22,522,070					
PRIORITY YEAR 1: Conduct a stakeholder analysis to identify key stakeholders and focal points for food-borne disease surveillance and food contamination monitoring	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA	28,647,500					
PRIORITY YEAR 1: Prepare a Memoranda of Understanding between sectors of government relevant to food safety for purposes of harmonization	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA	9,106,250					
PRIORITY YEAR 1: Create a platform for coordination of food safety activities in line with international and national standards	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA, Private Consumer Authorities, MoES, academic and partners	441,731,288					
Assess the entire food production system to identify areas which compromise food safety and carry out risk assessments of priority food hazards	OPM	108,808,208					
Develop a 5-year national food safety strategic plan in line with NDP	OPM	133,186,035					
Develop a national food safety surveillance and monitoring guidelines, including thresholds for triggering investigations and responses	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA	22,522,070					
Develop an operational national surveillance and monitoring plan	MOH, MAAIF, UNBS,	82,272,160					

for food safety	MoWE, DGAL, MTIC, NDA						
Develop a risk communications strategy across the food chain for food safety emergencies	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA	648,731,375					
Create a reporting system for timely and systematic information exchange regarding food safety events between food safety authorities, surveillance units and other relevant stakeholders	OPM	196,990,000					
Implement monthly monitoring and surveillance of identified food risks across the food chain	OPM	1,954,335,000					
Implement integrated food safety risk analysis according to commodity value chains	OPM	189,327,500					
Strengthen international collaboration in INFOSAN	PHEOC	290,152,500					
Strengthen support to Directorate of Government Analytical Laboratory and other relevant labs to carry out food safety analysis for public health emergencies	DGAL	5,260,000,000					
Align the food value chain with the Global GAP	MOH, MAAIF, UNBS, MoWE, DGAL, MTIC, NDA, MoJCA	856,289,000					
TOTAL	**10,244,621,028**						

4.6 Biosafety Biosecurity

Targets

- A multi-sectoral national biosafety and biosecurity (BSBS) system with dangerous pathogens identified, held, secured and monitored in a minimal number of facilities according to best practices. Continued training on biological risk management and educational outreach to be conducted to promote a shared culture of responsibility, reduce dual-use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents.
- Ensure that country specific biosafety and bio-security legislation, laboratory licensing and pathogen control measures are in place as appropriate.

JEE Scores

P6.1	Whole-of-government biosafety and bio-security system is in place for human, animal and agriculture facilities	**3**
P6.2	Biosafety and bio-security training and practices	**3**

Current Status

Uganda has a National Biotechnology and Biosafety Policy (2008), the National Health Laboratory Policy (2009), and the Biosafety Bill (2012). A Laboratory Biosafety Biosecurity Manual 2015 (2nd edition) and a national bio-risk training curriculum exists for in-service personnel. Biological risk management training and educational outreach are conducted to promote BSBS. A National Inventory of select agents has been developed and housed at the Biosecurity secretariat. The national BSBS system is in place, ensuring that especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities according to best practices.

The Biosafety and Biosecurity Association of Uganda has been formed with the Biosecurity secretariat at UNCST. BSBS legislation to provide a framework for guiding the sector is not yet in place. The harmonized national guidelines for licensing and regulation of

laboratories across sectors are not yet finalised. There is no integrated BSBS training into pre-service curricula and a comprehensive pathogen consolidation plan across sectors.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Establish and implement laws and standards for national biosafety & biosecurity systems							
PRIORITY YEAR 1: Review the Draft Biosecurity Bill and policy	MoSTI, UNCST, MAAIF, MoH, MoES, UWA, OPM, Office of the President, MOD, academia and private sector	35,569,000	■				
Sensitize the Biosecurity Bill & corresponding policies among political leaders	MoSTI, MOH, MAAIF, UNCST, MOWE, MOD, MOIA	237,470,000		■	■	■	■
Finalize and enact the Biosecurity Bill	MOH, MAAIF, MOWE, MOD, MOIA, MOSTI, MOTA, Parliament	17,712,500		■			
PRIORITY YEAR 1: Strengthen the National Multisectoral Biosecurity Secretariat	MOH, MAAIF, UNCST, MOWE, MOD, MOIA	147,431,822		■			
Update national inventory of dangerous pathogens and toxins	UNCST	1,100,713,125	■	■	■	■	■
Develop a biosecurity risk communication strategy	UNCST, MoSTI, MOH, MAAIF, MOWE, MOD, MOIA	112,151,640		■	■		
Support enforcement and inspections of laboratories	MOH, MAAIF, MOSTI	95,153,000	■	■	■	■	■
PRIORITY YEAR 1: Review and harmonize framework, guidelines, and processes for licensing all labs in the country	UVB, Allied Professionals Council, MOH, UNHLS, UNCST, MAAIF	25,200,500	■	■			

Obj 2: Strengthen national biological risk management training and practices to promote a shared culture of responsibility							
Provide continuous professional development for all employees in health facilities of both human and animal sectors, including field health practitioners in both fields	NOHP, MOH, MAAIF, Biosafety & Biosecurity Association Uganda	416,109,375					
Incorporate BSBS considerations into pre-service training curricula	MOES, UNCST, BSBS Secretariat, MOH, MAAIF, MOSTI, NCHE and academia	38,175,000					
TOTAL	**2,225,685,962**						

4.7 Immunisation

Target

A national vaccine delivery system with nationwide reach, effective distribution, easy access for marginalized populations, adequate cold chain and ongoing quality control that is able to respond to new disease threats.

JEE Scores

P7.1	Vaccine coverage (measles) as part of national programme	**3**
P7.2	National vaccine access and delivery	**4**

Current Status

The National Expanded Program on Immunization (UNEPI) is currently implemented in line with the Immunization Act (2016), the Global Vaccine Action Plan 2011- 2020, and the National Health Sector Strategic Plan 2015/16 -2019/2020. A number of human vaccine preventable diseases including zoonoses are covered in the immunization program. Commodity forecasting, cold chain maintenance, procurement and distribution are undertaken with support of the Uganda National Medical Stores. MAAIF runs a vaccination program against selected priority diseases in the animal health sector, although some diseases are categorised as public and private good animal disease vaccines. This leads to inadequate coverage of vaccination in the animal populations.

Despite this progress, limited cold chain capacity and poor vaccine stock management often result in vaccine stock outs at national and district level in both human and animal sector. In addition, there is need to develop the Uganda National Immunization Plan as well as strengthen animal immunization systems.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Improve capacity of the One Health platform in vaccine management							
Support the development of a statutory instrument to include the priority zoonotic diseases as responsibility of national and subnational levels for their prevention, detection and control	MAAIF, MoJCA, MOH	103,675,000					
PRIORITY YEAR 1: Coordinate cross-sector implementation of activities to strengthen capacities for immunization against priority zoonotic diseases	MOH, MAAIF	400,150,000					
PRIORITY YEAR 1: Increase human and animal health workforce capacity in vaccine management at national and subnational levels	MOH, MAAIF	934,436,006					
Strengthen cold chain management capacities across animal and human health sectors.	MOH, MAAIF	7,155,097,150					
PRIORITY YEAR 1: Develop and implement a national vaccination plan for vaccine preventable priority zoonoses, highlighting rabies vaccination and elimination programme	MAAIF, MOH	294,602,070					
TOTAL	**8,887,960,226**						

4.8 National Laboratory Systems

Target

Surveillance with a national laboratory system, including all relevant sectors, particularly human and animal health, effective modern point of care and laboratory-based diagnostics.

JEE Scores

D1.1	Laboratory testing for detection of priority diseases	**4**
D1.2	Specimen referral and transport system	**3**
D1.3	Effective modern point-of-care and laboratory-based diagnostics	**3**
D1.4	Laboratory quality system	**3**

Current Status

The country has designated seven national laboratories for detection of priority diseases. The laboratories have varying levels of capacity to test for various human and animal health related hazards. These labs include: UVRI, NADDEC, CoVAB, DGAL, DMM, UBOS, and NDA. Capabilities to conduct proficiency tests for zoonoses and trade sensitive diseases is available at MAAIF and the national animal health laboratory network that is able to test, identify, and field products for diagnosis zoonotic diseases.

Areas for strengthening the national laboratory network are highlighted in the National Laboratory Strategic Plan, including human resource and infrastructure development, quality management, supply chain management, specimen referral, results-reporting and laboratory information systems, and integration and coordination of the national laboratory network.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Expand capacity to detect and share results of all ten WHO Core tests, including priority zoonotic diseases							
PRIORITY YEAR 1: Conduct capacity assessment for zoonotic disease diagnosis within the laboratory networks	MOH, MAAIF	270,343,710					
Develop and pre-test the assessment tool for MAAIF labs	MOH, MAAIF	13,970,000					
Discuss accreditation of tests in the designated reference laboratories for zoonotic diseases	UNHLS, NADDEC, UVRI, UNBS & academia	9,106,250					
Adopt and implement on Laboratory information sharing systems by all laboratories	MOH, MAAIF						
Obj 2: Implement One Health system to collect, package, and transport priority biological specimens to national laboratories from at least 80% of districts within the country for advanced diagnostics **Obj 2.1: Integrate the transportation of animal samples into the human health National Specimen Referral and Transport network**							
Update Hub Specimen Transportation Guidelines to include animal samples	MAAIF, MOH, UWA	606,777,500					
Develop Veterinary sample referral guidelines	MAAIF, MOH-CPHL, UWA	82,577,500					
Train veterinary workers on sample collection guidelines at regional level	MAAIF, MOH, UWA	1,445,928,000					
PRIORITY YEAR 1: Integrate transport of animal samples into the national specimen referral and transport network	MAAIF, MOH, UWA	3,628,000,000					
Conduct supervision of laboratories	MOH-CPHL, MAAIF	2,555,800,000					

Conduct Specimen Transportation Network Review meeting	MOH, MAAIF, UWA	179,170,000					
Draft Memoranda of Understanding for integrated sample shipment	MOH, MAAIF, UWA	10,927,500					
Create feedback mechanisms on Hub activities at Regional level	MOH, MAAIF, UWA	203,980,000					
Obj 3: Implement point of care (POC) diagnostics for applicable priority diseases							
Review POCT policy to integrate MAAIF	MOH-CPHL, MAAIF	17,412,500					
Stakeholders meeting to disseminate POC Policy	MOH-CPHL, MAAIF	119,585,000					
Conduct CPD trainings for lab personnel on point of care testing	MOH-CPHL, MAAIF	893,175,000					
Develop SOPs, guidelines and manuals for POC diagnostics	MOH-CPHL, MAAIF	75,225,000					
Conduct technical supervision and mentorships for POC diagnostics	MOH-CPHL, MAAIF	1,486,680,000					
Obj 4: Expand licensing and appropriate quality management systems to 80% of public health laboratories in both animal and health sector by December 2022							
PRIORITY YEAR 1: Develop a strategic plan for animal health laboratories	MOH, MAAIF	343,579,140					
Designate official Lab Quality officers in existing MAAIF structures at the national level	MAAIF	575,384,890					
Update Quality Management policies and guidelines	MOH, UHBS, DGAL, MAAIF	145,365,000					
Develop quality management system at the national referral level	MOH, MAAIF	570,730,000					

Roll out quality management systems in human and animal health laboratories	MOH, MAAIF	148,810,000					
Integrate animal disease surveillance into the current national IDSR guidelines	MOH-ESD, OHCO, MAAIF	34,632,500					
Train key MAAIF staff on conducting Lab Quality Management System (LQMS-PT) at a national level	MAAIF	71,905,000					
Build national capacity for calibration of laboratory equipment at UNBS and CPHL Calibration Centres	CPHL, UNBS						
Develop a national accreditation system for testing, inspecting, certificating, and calibrating all medical, veterinary, and pharmaceutical labs	UNBS, MOH, MTIC, MAAIF						
TOTAL	**13,484,064,490**						

4.9 Real time Surveillance

Targets

- Strengthened indicator-based and event-based surveillance systems that are able to detect events of significance for public health and health security
- Improved communication and collaboration across sectors and between sub-national, national and international levels of authority regarding surveillance of events of public health significance; and
- Improved national and sub-national level capacity to analyse and link data from the strengthened early warning surveillance, including interoperable, interconnected electronic tools. This would incorporate epidemiological, clinical, laboratory, environmental testing, product safety and quality and bioinformatics data.

JEE Scores

D2.1	Indicator- and event-based surveillance systems	**4**
D2.2	Interoperable, interconnected, electronic real-time reporting system	**3**
D2.3	Integration and analysis of surveillance data	**3**
D2.4	Syndromic surveillance systems	**3**

Current Status

Real-time surveillance systems, though inadequate, are in place for both MAAIF and MoH and have been rolled out countrywide. The system for real-time surveillance reporting particularly within the animal sector requires strengthening. Periodic environmental surveillance is undertaken. Event-based electronic system are limited at MAAIF, leading to ineffective response.

The human resource capacity requires strengthening for effective data handling, disease detection and response in all sectors. Similarly, the involvement of private sector facilities is critical in surveillance and linking to national reporting systems. Electronic surveillance systems have to be strengthened to improve interoperability and information sharing between sectors. There is also need to enhance environmental surveillance and improve availability of surveillance tools and linkage of the surveillance data between human, environment, water and animal health.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Strengthen human health surveillance systems at all levels to ensure they are electronic, interoperable and interconnected with laboratory and animal health surveillance data							
PRIORITY YEAR 1: Update IDSR strategic plan and incorporate the JEE recommendations	MOH-ESD	44,357,500					
Conduct training on IDSR for public and PNFP facilities in new districts and include untrained health workers and armed forces	MAAIF, MOH	990,302,000					
Conduct training of trainers for animal, wildlife, and environment sectors in IDSR and field epidemiology	MAAIF, MOH, UWA	89,317,500					
Conduct trainings on IDSR for private, for-profit human and animal health sector practitioners	MOH, MAAIF, UWA	992,234,000					
Conduct training on EBS and IBS for the DVOs and the DHT before the rollout to new districts	MAAIF, UWA, MOH	1,611,562,500					
Develop IDSR curriculum for pre-service institutions	National Curriculum Development Centre	136,886,250					

Include IDSR training curriculum into the pre-service public health training institutions	MOH	227,928,750					
Conduct IDSR for health facilities of the armed forces	MOH	537,187,500					
PRIORITY YEAR 1: Conduct training of village volunteers in community surveillance (VHTs, CHWs)	MOH, MAAIF	479,436,000					
Consistently update, print and distribute tools for data collection and reporting for human health sector	MOH	2,700,000,000					
Consistently update, print and distribute tools for data collection and reporting for animal and environment health sectors	MAAIF, UWA, MWE	3,553,928,750					
Develop system for linking suspect case reports and laboratory data supporting both detection and response activities for at least three notifiable priority diseases	MOH, MAAIF, MOD	145,365,000					
Carry out water quality and sanitation surveillance and report to relevant authorities	MOH, MWE	80,000,000					
Obj 2: Strengthen animal health surveillance; develop an electronic surveillance system at the national and sub-national levels that includes routine review of animal health surveillance data to identify and address reporting, analysis and feedback gaps							
Procure ICT equipment for EBS surveillance	MOH	1,981,440,000					
Procure ICT equipment for animal disease surveillance	MAAIF, UWA	2,726,000,000					

Roll out electronic reporting system (EMPRESI) in the animal sector	MAAIF, UWA	1,458,320,625					
Link human health, animal health, and other electronic reporting systems to a single interoperable system	MOH, MAAIF, MWE, UWA	43,643,312					
Develop training materials for the users of the interoperable electronic surveillance system	MOH, MAAIF, UWA, MWE	194,628,750					
Train trainers in the interoperable, electronic surveillance system	MOH, MAAIF, UWA, MWE	44,658,750					
Print training materials	MOH, MAAIF	245,000,000					
Conduct trainings for district data managers, DHOs, DVOs, VHOs, and health facility leadership	MOH, MAAIF	4,494,062,500					
Conduct support supervision	MOH, MAAIF	563,760,000					
Conduct quarterly review meetings for system developers and users to review and improve the performance of the interoperable, electronic surveillance system	MOH, MAAIF, UWA	563,815,000					
Obj 3: Promote use of surveillance data at all levels to enhance early detection and response and to improve reporting rates, timeliness, and quality for animal and human health sectors							
Conduct training of district staff on real-time surveillance data use and reporting	MOH-ESD, MAAIF	2,731,875,000					
Conduct regular data quality assessment exercises	MOH-ESD, MAAIF	469,800,000					
Develop and disseminate SOPs for surveillance data validation	MOH, MAAIF, UWA	1,078,891,250					

PRIORITY YEAR 1: Publish weekly One Health Epidemiological Bulletin	MOH, MAAIF, UWA	35,000,000					
Obj 4: Create a syndromic surveillance system							
Define 10 syndromic events of public importance that are reportable	MAAIF, MOH, UWA	3,642,500					
Print and disseminate priority syndromic reportable events	MAAIF, MOH, UWA	500,000,000					
TOTAL	**28,723,043,437**						

4.10 Reporting

Target

Timely and accurate disease reporting according to WHO and OIE requirements and consistent relay of information to FAO.

JEE Scores

D3.1	System for efficient reporting to FAO, OIE and WHO	**3**
D3.2	Reporting network and protocols in country	**3**

Current Status

Uganda has an active PHEOC with leadership, staff and technology to rapidly coordinate the response to public health emergencies. The PHEOC has effective situational awareness systems linked to all districts, all One Health stakeholders, and is fully connected to the National Emergency Coordination and Operations Centre (NECOC).

However, it has been observed that there are low reporting rates in animal and human health sectors which lead to inefficiency in the implementation of activities. There is a need to strengthen surveillance and reporting systems for both human and animal health, including the private sector, to achieve ≥80% reporting rate; strengthen coordination between all relevant actors and ensure electronic reporting systems that are interoperable and interconnected for animal health, human health and food-safety surveillance; and provide the necessary facilitation to enable the IHR/OIE focal point to perform their duties.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Strengthen coordination between all relevant actors and ensure electronic reporting systems are interoperable for animal and human health, and build capacity of IHR/OIE focal points to perform their duties							

Train IHR and OIE national focal points and relevant personnel in their obligations of reporting to WHO and OIE	MAAIF, MoH, UWA, MoWE, OPM	181,253,328					
Train IHR and OIE national focal points at high level their obligations of reporting to WHO and OIE		300,000					
Hold quarterly IDSR/IHR/OIE meetings	MoH, MAAIF	321,387,500					
PRIORITY YEAR 1: Orient the district staff (DVO, DHT, Water and Environment, and UWA) on One Health strategy to address zoonotic diseases *(See Zoonotic disease)*	OHCO	18,170,625					
PRIORITY YEAR 1: Conduct training of trainer workshops in disease reporting and data collection (medical and veterinary)	MoH, MAAIF, UWA, MoWE	62,916,875					
Train licensed medical practitioners on data collection tools for diseases and other public health events	MoH	2,121,157,500					
PRIORITY YEAR 1: Train licensed private veterinary practitioners on data collection tools for diseases and other public health events	MAAIF, UWA	1,101,900,000					
Support professional bodies to carry out supportive supervision (human health)	MoH	187,920,000					
Support professional bodies to carry out supportive supervision (animal health)	MAAIF, UWA	165,792,000					
Obj 2: Strengthen surveillance and reporting systems for both human and animal health with a special attention to the private sector to achieve >80% reporting rates for both public and private sectors							

Develop an integrated supervisory checklist	MoH, MAAIF, MoWE, UWA	17,412,500					
Develop a national reporting protocol to WHO, OIE, and FAO	MoH, MAAIF, MoWE, UWA	17,412,500					
Provide continuous mentorship and supportive supervision on surveillance reporting for private and public medical practitioners	MoH, MAAIF, MoWE, UWA, UPF, UPDF	939,600,000					
Provide continuous mentorship and supportive supervision on surveillance reporting for private and public veterinary practitioners	MoH, MAAIF, MoWE, UWA, UPF, UPDF	939,600,000					
Conduct quarterly surveillance review meetings for all DHOs, DSFPs, DLFPs, Biostats, and DVOs at a regional level	MoH, MAAIF, MoWE, UWA	995,062,500					
Update regularly the list of reporting facilities (private and public) into DHIS2	MoH, MAAIF, MoWE, UWA	211,920,000					
TOTAL	**7,281,805,328**						

4.11 Human Resources / Workforce development

Target

Country has skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system for the effective implementation of the IHR. Human resources (HR) shall include but not limited to nurses and midwives, physicians, public health and environmental specialists, social scientists, communication, occupational health, laboratory scientists/technicians, biostatisticians, information technology (IT) specialists and biomedical technicians. There is a corresponding workforce in the animal sector of veterinarians, animal health professionals and para-veterinarians, epidemiologists.

JEE Scores

D4.1	Human resources available to implement IHR core capacity requirements	**3**
D4.2	FETP or other applied epidemiology training programme in place	**4**
D4.3	Workforce strategy	**3**

Current Status

The Field Epidemiology Training Program (FETP) has been supporting capacity building for the last seven years. It does, however, lack the multi-sectoral approach to build IHR capacity. The existing in-service curricula are skewed to the human sector and are not adequate to address the needs of Veterinary Public Health or One Health Platform in general.

Although tracking of personnel scores highly in the JEE, Uganda lacks a database that clearly documents personnel to prevent, detect, and respond to PHEs or for surge capacity at national or international levels. Composition of teams is ad hoc, not multi-sectoral, and with personnel that are non-verifiable. There is need to develop the ability to track, map and trace multi-sectoral IHR personnel.

Personnel tracking, mapping, and tracing will also further allow for measurement of effectiveness and impact to prevent, detect and respond to PHEs. There is, therefore, a need to evaluate the FETP, map HR for IHR, review progress in achieving the HR requirements for IHR, develop a harmonized certified training curriculum and establish the National Institute of Public Health.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Update multisectoral managers and implementers on IHR knowledge, understanding and core capacities							
Train IHR focal points in all relevant ministries and competent authorities on their roles and responsibilities	OPM, all relevant ministries	20,412,750	■				
PRIORITY YEAR 1: Update Senior Line Ministry officials and program managers on IHR core capacity	OPM, all relevant ministries	29,090,000	■				
PRIORITY YEAR 1: Update mid-level program managers in relevant ministries on IHR core capacity requirements	OPM, all relevant ministries	55,852,750	■	■			
Conduct regular multisectoral IHR focal point meetings	OPM, all relevant ministries	14,409,375	■	■	■	■	■
Orient the private sector health, trade and travel partners on IHR reporting	OPM, MOH, MOTA	192,445,000		■	■		
Orient the media on IHR reporting requirements and risk communication	OPM, all relevant ministries	384,890,000		■	■	■	■
Obj 2: Streamline frontline in-service training programs and institute a comprehensive FETP workforce							
Evaluate ongoing phase 1 integrated District Frontline FETP/EOC operations/eIDSR/IPC One Health training curriculum and its impact on	MOH/ESD, MAAIF, MOD, MWE, MOES, NCHE, UNCST, CDC, UWA, IDI, training institutions	209,491,140		■			

improving Uganda's capacity to prevent, detect, and respond to public health threats and hazards							
Map trained human resources through existing professional bodies	Multi-sectoral TWG (MoH/ESD, MAAIF, MoD, MoWE, MoES, NCHE, UNCST, CDC, UWA, OHCEA, IDI, academia)						
PRIORITY YEAR 1: Review integrated Frontline FETP training curriculum and develop national implementation plan in alignment with evaluation and HR mapping exercises, including the healthcare private sector and the community health workers	MoH, MAAIF, Multi-sectoral TWG, NCDC and Academia	45,222,500					
PRIORITY YEAR 1: Evaluate impact of integrated Frontline FETP/EOC activation/eIDSR One Health training curriculum on improving Uganda's capacity to prevent, detect, and respond to public health threats and hazards	Multi-sectoral TWG (MoH/ESD, MAAIF, MoD, MoWE, MoES, NCHE, UNCST, CDC, IDI, academia)	22,522,070					
Conduct annual review to assess progress in achieving milestones in frontline training programs at all levels, including parish and village levels	Multi-sectoral TWG (MoH/ESD, MAAIF, MoD, MoWE, MoES, NCHE, UNCST, CDC, OHCEA, IDI, academia)	131,445,000					
Obj 3: Strengthen multisectoral workforce planning and development for global health							
Review and update existing strategic plans for Uganda's workforce development for health security in all relevant sectors, including human, animal, wildlife, environmental, and security workforce	MoH/OPM, MoWE, MoD, MoTWA, MAAIF	30,162,760					

Advocate for and support filling identified gaps in the existing strategic plans for Uganda's multisectoral workforce development for health security	MOH, OPM	143,237,500					
Conduct annual review to assess progress in achieving milestones in frontline training programs	MOH	91,825,000					
Advocate for the establishment of a National Institute of Public Health	MOH, OPM	93,720,000					
TOTAL	**1,464,725,845**						

4.12 Preparedness

Target

Development and maintenance of national, intermediate (district) and local/primary level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. This covers mapping of potential hazards, identification and maintenance of available resources, including national stockpiles and the capacity to support operations at the intermediate and local/primary levels during a public health emergency.

JEE Scores

R1.1	National multi-hazard public health emergency preparedness and response plan is developed and implemented	**1**
R1.2	Priority public health risks and resources are mapped and utilized	**1**

Current Status

Uganda has a National Policy for Disaster Preparedness and Management (2011) which provides the country's preparedness strategy for any events of public health importance.

Some hazard and contingency plans have also been developed for specific diseases such as Ebola Virus Disease, Red eye Disease, and Avian Influenza. The national District Health Information System (DHIS-2) at the MoH contains an inventory of all public and private health facilities. A database exists of some experts, national and district rapid response teams, district surveillance coordinators and partners. This database is maintained at the PHEOC; however, this could be expanded to be more comprehensive. Uganda has institutions and mechanisms for training multi-disciplinary field epidemiologists and other frontline staff to prevent, detect and respond to PHEs and has been conducting regular simulation exercises.

However, the current national multi-hazard emergency preparedness and response plan should be revised and updated to meet IHR and PVS core capacity requirements. It is important that surge capacity plans and procedures to respond to national and international events of public health concern at all levels should be clearly articulated and disseminated.

It is recommended that systems to regularly test the response plan and procedures in actual emergencies or simulation exercises and modify/update as needed are implemented / instituted.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Review and update the current national multi-hazard emergency preparedness and response plan to meet IHR core capacity requirements, according to a risk assessment conducted							
PRIORITY YEAR 1: Draft National Multihazard Public Health Emergency Response and Preparedness Plan, including preparedness and response activities, based on existing strategic plans with relevant national and subnational stakeholders	MoH, MAAIF, OPM, UWA	181,545,585					
Conduct a comprehensive resource mapping for emergency response	MoH, MAAIF, OPM, UWA	112,610,350					
PRIORITY YEAR 1: Develop hazard-specific contingency plans and SOPs	MoH, MAAIF, OPM, UWA, MoWE, MoD, MoFPED	358,988,970					
Conduct biannual assessments (including simulations, tabletop exercises, surveys and questionnaires for National, Regional, and District RRTs) to test preparedness and response capabilities for different hazards	MoH, MAAIF, OPM, UWA, MoWE, MOD, MoFPED	175,260,000					
Conduct annual support supervision of the contingency plans in 14 health regions	MoH, MAAIF, UWA	357,012,000					
Preposition a minimum package of essential supplies for emergency response at regional	MoH, NMS, NDA, NECOC, WHO-CO, UNICEF	644,118,031					

referral hospitals (cholera kits, investigation kits, PPEs, disinfectants, vaccines, specimen carriers, etc.)							
Conduct a consultative meeting with relevant stakeholders, including parliamentary committees, to agree on functional mechanisms to mobilize available funding resources for emergency response within 24 hours	MOH, MAAIF, UWA, Parliament	9,106,250					
Establish coordination mechanisms between emergency response partners and OPM	OPM	50,010,000					
Obj 2: Carry out comprehensive resource mapping for emergency response, according to the hazard profiles already done							
PRIORITY YEAR 1: Assess country readiness to respond to priority hazard emergencies	OPM, NTF	116,360,000					
TOTAL	**1,950,922,906**						

4.13 Emergency response operations

Target

Uganda has a coordination mechanism, incident management systems, exercise management programmes and public health emergency operation centre (PHEOC) functioning according to minimum common standards; maintaining trained, functioning, multi-sectoral rapid response teams, and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of an emergency.

JEE Scores

R2.1	Capacity to activate emergency operations	**4**
R2.2	EOC operating procedures and plans	**4**
R2.3	Emergency operations programme	**4**
R2.4	Case management procedures implemented for IHR relevant hazards.	**3**

Current Status

Uganda has an established and staffed Public Health Emergency Operations Centre (PHEOC). The PHEOC has an operational framework and coordinates with the relevant line ministries. The PHEOC is donor funded and housed in rented space, risking sustainability.

Uganda has SOPs and guidelines for management of highly contagious pathogens such as VHFs; detailing clinical management of cases identified and isolated in appropriate facilities. The country also has a Uganda Clinical Guideline, that provides general guidance on management of various diseases (both communicable and noncommunicable). There is however need to update these guidelines and SOPs and expand focus to other disease conditions of public health concern.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Strengthen the operational capability of the PHEOC							
PRIORITY YEAR 1: Conduct consultative meetings with relevant stakeholders to establish the National Institute of Public Health, where PHEOC will be housed and incorporated	MOH	156,447,400					
PRIORITY YEAR 1: Develop a strategic plan to incorporate PHEOC funding into MOH structures	MoH, Partners	69,265,000					
Identify and obtain a permanent physical space for the EOC	MoH, MoFPED	46,884,375					
Create public awareness about national EOC	MoH	34,400,000					
Establish 14 regional health EOCs, including training of staff	MoH, EOC						
Obj 2: Test existing PHEOC business and continuity plans, including all relevant sectors							
Develop an exercise program to maintain sustainable capacity and routine exercises/testing	MoH, EOC, Partners	115,578,000					
PRIORITY YEAR 1: Train relevant officials and staff in public health emergency management, IMS, and EOC operations	MoH, Partners	115,041,875					
Conduct a two-day training exercise to test the PHEOC business continuity plan	MoH, PHEOC, AFENET	34,060,500					

Obj 3: Plan for and conduct Hot Wash exercises and After-Action Reviews for all events for which the PHEOC has been activated							
Conduct AARs, including hot washes, for all events for which the PHEOC was activated. Systematically integrated learnings into trainings and national plans.	MoH, PHEOC, MAAIF, Partners	166,416,875					
Obj 4: Review PHEOC SOPs with the relevant stakeholders to adequately address the multihazard principles, and develop a CONOPS covering the all hazards approach to emergency response							
Conduct a five-day meeting with the relevant stakeholders to review and update current SOPs to include IHR relevant hazards	MoH, PHEOC, MAAIF, AEC, CBRNE, UPF, UPDF, DGAL, NARO, UNBS, Partners	78,356,250					
Develop a finalized updated CONOPS for the PHEOC based on existing handbook	MoH, PHEOC, Partners	40,928,105					
Conduct one-day simulation exercise to validate approved CONOPS	MoH, PHEOC, MAAIF, Partners	28,554,250					
TOTAL	**885,932,730**						

4.14 Linking public health and security authorities

Target

Country conducts a rapid, multisectoral response in case of a biological event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, such as to investigate alleged use events.

JEE Scores

R3.1	Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	**2**

Current Status

Uganda has a draft general guidance on detaining/quarantining an individual who presents a public health risk. there is also guidance on identification and control of potential biological events or other public health events that may be intentional through Intelligence and Counterterrorism at the border. The MOH, MAAIF and security authorities to participant in joint activities aimed at improving preparedness and response. There are also public health experts involved in emergency response linked to the Biological and Toxins Weapons Convention (BTWC). Internationally, the country is connected to the INTERPOL through the Ministry of Internal Affairs INTERPOL National Central Bureau (NCB) for Uganda.

There has been limited joint capacity building amongst the sectors on management of public health emergencies, particularly in regard to information sharing and joint investigations/responses. There is also a need to finalise and formalise joint response activities between the sectors through MoU's, SOPs and a coordination platform for responsible ministries. There are no regular reports between Public Health and Security Authorities.

More efforts and commitment should be invested in finalizing and approving the draft MoU to provide a strong focus on multi-sectoral mechanisms to deal with the various CBRNE incidents.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: To improve collaboration and coordination between security authorities and public health authorities							
PRIORITY YEAR 1: Develop and adopt a multisectoral LE/PH emergencies response plan for joint investigations national Chemical, Biological, Radiological, Nuclear and Explosives events	MOS	44,729,570					
Set up a multi-agency joint operational LE/PH coordination centre for CBRNE	MOS	352,293,577					
PRIORITY YEAR 1: Develop a multisectoral LE/PH joint CRBNE emergency investigation and response curriculum	MOS	46,111,380					
Conduct a joint training for LE and PH personnel in joint CBRNE investigations and response	MOS	44,710,000					
Develop multisectoral SOPs and response protocols for joint investigations for National CBRNE incidents	MOS	83,985,000					
Conduct a functional Simex to validate the coordination of SOPs and response protocols	MOS	496,260,000					
Set up a CBRNE emergency facility with deployable mobile rapid response capability	MOS	10,000,000,000					
TOTAL	**11,068,089,527**						

4.15 Medical countermeasures and personnel deployment

Target

National framework for transferring (sending and receiving) medical countermeasures, and public health and medical personnel from international partners during public health emergencies; and procedures for case management of events due to IHR relevant hazards.

JEE Scores

R4.1	System in place for sending and receiving medical countermeasures during a public health emergency	**2**
R4.2	System in place for sending and receiving health personnel during a public health emergency	**2**

Current Status

National guidelines to address quality assurance from international providers of MCM have been developed. A national budget for MCM is funded through the NMS and the OPM. Personnel deployment is coordinated at ministerial level. Stockpiling of supplies is ensured through the PHEOC and the NECOC. However, national MCM and NRRT plan have to be urgently developed to guide these processes.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: To strengthen National multi sectoral framework for implementing MCMs for PHEs							
Conduct a workshop to assess the risks, document MCM needs, and develop and MCM plan and SOPs for the animal sector	MAAIF/OHCO	80,717,070					
PRIORITY YEAR 1: Conduct a national risk	OPM, MoH	69,274,140					

assessment of public health threats							
Develop and exercise a policy for sending and receiving MCM in a public health emergency	MoH, MAAIF, OPM	36,208,320					
PRIORITY YEAR 1: Review and finalize the updated draft MCM plan and develop relevant SOPs including a One Health stock of relevant MCM and incorporate findings from animal health MCM workshop	MoH, MAAIF, OPM	143,810,000					
Conduct a tabletop exercise to validate updated SOPs and MCM plans for both human and animal health	MoH, MAAIF, OPM, UPDF	25,450,000					
Approve final draft of MCM plan and SOPs	MoH, MAAIF, OPM, Partners	7,106,250					
PRIORITY YEAR 1: Conduct two advocacy meetings with the relevant parliamentary committees to expedite availability of contingency fund	MoH, MAAIF, OPM	--					
Develop operational manuals and emergency procurement plans for MCM for animal health	OHCO, MAAIF	44,764,570					
Obj 2: Establish an integrated framework for sending and receiving health personnel during public health emergencies							
Develop national personnel deployment guidelines and operational plan, including SOPs and training needs for both domestic and international deployment	MoH, NECOC/PHEOC - OHCO	81,856,210					
Validate draft MCM policy, plan and SOPs	MoH, NECOC/PHEOC - OHCO	44,060,000					
Obtain approval of and policy from NTF and relevant stakeholders	MoH, NECOC/PHEOC - OHCO	7,106,250					

Launch approved policy by senior top management of relevant ministries	MoH, NECOC PHEOC - OHCO	80,725,000					
Distribute final Personnel Deployment Policy and operational plan, including SOPs, nationally	MoH, NECOC/PHEOC - OHCO	35,000,000					
Test operational plan through the development and implementation of a TTX	MoH, NECOC/PHEOC - OHCO	14,936,664					
Preposition emergency supplies for response to emergencies	MoH, NECOC/PHEOC - OHCO	14,000,000,000					
TOTAL	**14,671,014,464**						

4.16 Risk communication

Target

States Parties use multilevel, multi-sectoral and multifaceted risk communication capacity for public health emergencies. Real-time exchange of information, advice and opinions during unusual and unexpected events and emergencies so that informed decisions to mitigate the effects of threats, and protective and preventative action can be made. This includes a mix of communication and engagement strategies, such as media and social media communications, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

JEE Scores

R5.1	Risk communication systems (plans, mechanisms, etc.)	**2**
R5.2	Internal and partner communication and coordination	**4**
R5.3	Public communication	**4**
R5.4	Communication engagement with affected communities	**4**
R5.4	Dynamic listening and rumour management	**3**

Current Status

National risk communication plans have been developed and personnel to support risk communication exist at the MOH. Efforts to strengthen inter-partner risk communication should be strengthened with more government commitment to support risk communication.

In Uganda, permanent and surge staff who are dedicated to risk communication during emergencies are in place. There are shared communication plans, agreements and/or SOPs between response agencies. Additionally, training is provided

to the risk communications personnel for response to all health hazards. There exists an internal arrangement for the clearance of messages to the public. Multi-sectoral collaboration for risk communication is present and active within the NTF. Collaborative arrangements are in place with public and private media which guarantees access for the delivery of key risk communication messages. Risk communication during emergencies and outbreaks is availed to the communities using local languages. All communication materials are pre-tested by the Behavioural Change Committee (BCC) before being printed and approved for use in the field.

In Uganda, risk communication coordination between all relevant partners is weak. There is need to strengthen coordination of risk communication between all relevant partners. There is lack of planned risk communication training for responders prior to emergencies. There is need to conduct risk communication training and simulation exercises at national and sub-national levels as well as with media houses (radios, TV, print, etc) and risk communication partners (Red Cross, UNICEF), so as to develop a consistent approach across the country.

Additionally, risk communication messages to public are largely donor sponsored. There is urgent need for Government to fund risk communication messages to the public during emergencies, in support with partners. Lastly, the impact of risk communication messages and feedback to the public has never been assessed. There is need to design evaluation studies to assess the impact of risk communication activities and feedback to the community.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Develop a national multi-sectoral risk communications strategy and train risk communication personnel to respond effectively during emergencies							
Develop a sustainable funding mechanism for Risk Communications using relevant government sector resources	MoH, MAAIF, OHCO	132,843,750					
PRIORITY YEAR 1: Mobilize relevant sectors	MoH, MAAIF, OHCO	4,026,640,000					

to support risk communication activities in their budgets (national and subnational levels)							
Develop a national multisectoral risk communication strategy and a costed plan	MoH, MAAIF, OHCO	199,294,140					
Train risk communication personnel to respond effectively during emergencies	MoH, MAAIF	2,044,699,375					
Obj 2: Establish a national coordination platform that coordinates all risk communication stakeholders, including private sector							
Develop SOPs for coordination of partners	MoH, MAAIF	32,123,125					
Establish and operationalize a national coordination platform that brings together all risk communication stakeholders, including private sector	MoH, MAAIF, OHCO	693,367,500					
Obj 3: Train and orient all designated spokespersons in risk communications prior to the emergency							
Strengthen risk communication programming	MoH, MAAIF, OHCO	142,701,932					
PRIORITY YEAR 1: Conduct assessments of risk communicators in human and animal health at national and subnational level	MoH, MAAIF, OHCO	54,504,140					
PRIORITY YEAR 1: Conduct trainings for risk communicators in human and animal health at national and district level	MoH, MAAIF, OHCO	574,062,750					
Obj 4: Strengthen feedback mechanisms with communities for effective risk communication							
Conduct training of sub-county leaders and social mobilizers on community engagement	MoH/MAAIF	23,511,000					

Strengthen feedback mechanisms with communities for effective risk communication	*To be determined*	1,469,173,125					
Obj 5: Conduct evaluation campaigns to assess effectiveness of risk communication channels used every year							
Strengthen the functionality of the call centres in MOH and MAAIF	MoH, MAAIF, OHCO	222,387,383					
Conduct evaluation campaigns periodically to assess effectiveness of risk communication channels	MoH, MAAIF, OHCO	37,002,760					
Conduct periodic KAPB studies on perceptions, risky behaviour, and misinformation among the communities	MoH, MAAIF, OHCO	22,826,725					
Obj 6: Conduct AMR awareness creation campaigns							
Develop AMR communication and advocacy strategy	MoH, MAAIF, Pharmaceutical Society, UMC, AHPC	193,810,924					
Develop IEC materials	MoH, MAAIF	720,694,375					
TOTAL	**10,589,643,004**						

4.17 Points of Entry

Targets

The country designates and maintains core capacities at international airports, ports and ground crossings that implement specific public health measures required to manage a variety of public health risks.

JEE scores

PE.1	Routine capacities established at points of entry	**1**
PE.2	Effective public health response at points of entry	**1**

Current Status

There is no central coordination and monitoring office in place for the delivery of public health services at points of entry. In addition, no POE is designated with respect to the IHR guidelines.

The few PoEs that have public health hazards detection & response capacities (facilities & skilled human resources) for both humans and animals are weak. The majority of PoEs have no detection and response capabilities, especially those undesignated for revenue and immigration management. An assessment by WHO and MOH of IHR core capacities and implementation at nine ground crossing points (October 2016) concluded that core capacities for implementation of IHR at the ground crossing points were below the requirements for compliance and that effective public health response at the points of entry was lacking. In addition, the daily influx of refugees crossing the border into Uganda has remained high and the border particularly with DRC is porous. This increases the risk of spread of outbreak prone diseases to and from neighbouring countries.

Entebbe International Airport screens all travellers through inspections of yellow fever vaccination papers and a thermal scanner. The International Airport also has access to equipment and personnel to examine and transport ill travellers to relevant medical facilities.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Designate all POEs and implement IHR core capacities for detection and response to potential public health hazards							
PRIORITY YEAR 1: Designate Points of Entry and implement IHR core capacities at each of them	MOH, MAAIF, MIA, MOS	198,652,375					
Establish a multisectoral coordination centre for monitoring POE, according to IHR standards	MOH, MAAIF	4,996,125					
Obj 2: Develop a POE public health emergencies plan and capacities for detection and response that are linked to the regional and national public health emergencies plan and capacities							
PRIORITY YEAR 1: Develop a contingency plan for detection and response to human and animal public health hazards at POEs with respect to IHR guidelines	MOH, MAAIF, MIA, MOS, MTIC	88,322,625					
PRIORITY YEAR 1: Operationalize the detection and response plans to human and animal public health hazards at POEs with respect to IHR guidelines	MOH, MAAIF	581,459,000					
Increase animal health workforce at the POEs to carry out One Health IHR related activities	MAAIF, MOH	2,378,814,375					
TOTAL	**3,252,244,500**						

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4.18 Chemical Events

Target

States Parties with surveillance and response capacity for chemical risks or events. This requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal, animal health and the environment.

JEE Scores

CE.1	Mechanisms established and functioning for detecting and responding to chemical events or emergencies	**2**
CE.2	Enabling environment in place for management of chemical events	**2**

Current Status

Uganda's national coordinating body for chemical safety is the Department of Occupational Safety and Health at MoGLSD. The coordinating agency for multilateral environment agreements (MEAs) is Ministry of Water and Environment, which has established a clearing house in National Environment Management Authority (NEMA) on chemical management information exchange.

Existing gaps include absence of a national multisectoral chemical response action plan, which should incorporate the training and exercises of relevant agencies. No institution has the mandate on all toxic industrial chemicals. Other recommended interventions include establishing a framework for licensing, building capacity for the management of hazardous chemicals, and enhancing laboratory capacity for detection of chemical threats.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Build effective and lasting national chemical safety and chemical security management capabilities for detection and response to chemical events, according to IHR (2005)							

Perform risk assessment, map resources, and develop National Chemical safety and security plan	MoD (NBC Regiment), DGAL MoWE, NEMA, UNBS	475,561,074					
Develop an inventory of the chemical stocks within the country	UNBS, MoD (NBC Regiment), DGAL, MoGLSD, MAAIF, MoWE, NEMA	74,484,011					
Develop a multisectoral chemical emergency response plan (subset of the National Chemical Safety and Security Plan)	OPM/NECOC	112,184,949					
Conduct joint functional and operational exercises to validate and operationalize the above plans	NECOC, MoGLSD/Dept of Occupational Health, MOD, DGAL, MAAIF, WHO, MoWE/NEMA	101,630,315					
Perform audits of 10% of selected chemical factories nationally each year	MoGLSD, MoWE/NEMA, UNBS, MTIC	325,473,750					
Train health and relevant sector personnel in high risk districts on investigation and response to chemical events	MoH, MoWE/NEMA, MGLSD, MAAIF	400,803,710					
Obj 2: Establish a National Focal Point and operationalize the National Poison Centre							
Establish national focal points for sharing information regarding chemical events	DGAL & Police CBRN Unit, NECOC	2,017,412,500					
Create awareness of, and link government and private health facilities to, National Poison Centre	DGAL & Police CBRN Unit	270,109,375					
Assess select chemical labs with handling capacity for chemical events and IHR (2005) compliance	DGAL & Police CBRN Unit, MoH, MAAIF, UNBS, NEMA	4,830,000					
Upgrade select chemical labs according to IHR standards	DGAL & Police CBRN Unit, UNBS						
Train chemical lab staff on analytical chemistry	DGAL & Police CBRN Unit, UNBS	249,795,750					

Adapt the EU CBRNE risk mitigation recommendations for strengthening the Uganda CBRNE legal framework	DGAL, Police CBRNE Unit	158,823,250					
TOTAL	**4,191,108,684**						

4.19 Radiation emergencies

Target

States Parties should have surveillance and response capacity for radiological emergencies and nuclear accidents. This requires effective coordination among all sectors involved in radiation emergencies preparedness and response.

JEE Scores

RE.1	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	**2**
RE.2	Enabling environment in place for management of radiation emergencies	**2**

Current Status

Uganda developed the Atomic Energy Act (2008) to mandate the Atomic Energy Council (AEC) and Atomic Energy Regulation Draft Atomic Energy (Nuclear Security) Regulations (2016) to improve the security of radioactive sources. The AEC was created under the Ministry of Energy and Mineral Development in a draft national nuclear security plan (2012) with both preventive and response attributes and guidelines. In addition, the national Multi-Sectoral Radiation Emergencies Committee (including the Ministry of Energy and Mineral Development, UPDF, UPF, Atomic Energy Council, and NEMA) is in place to respond to radiation emergencies.

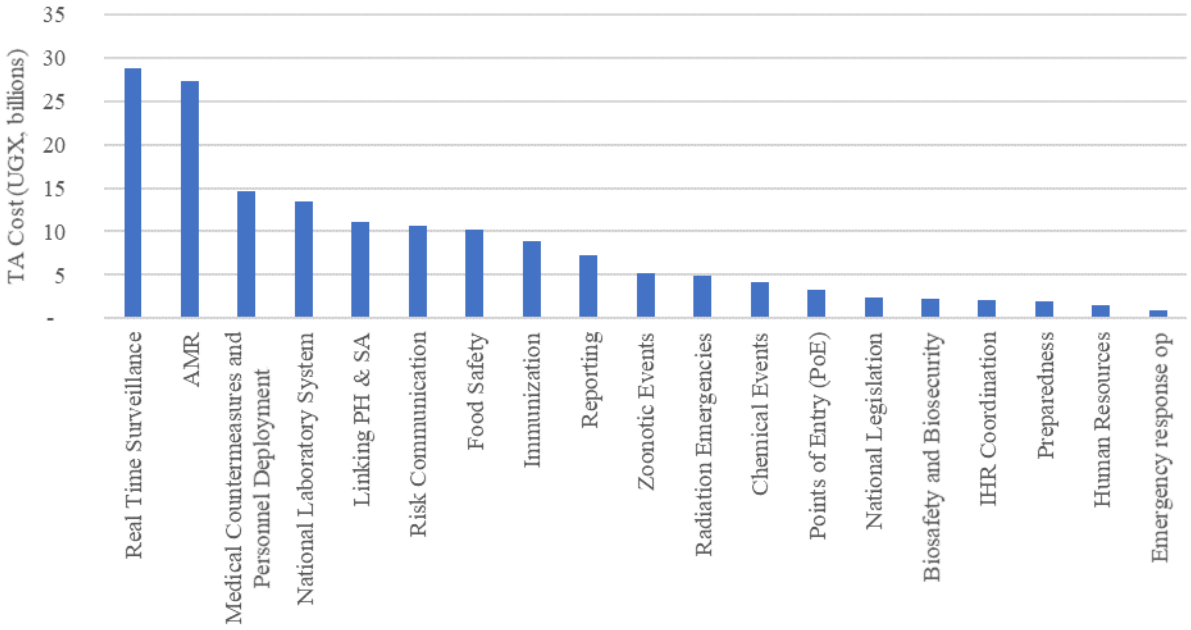
Uganda has not ratified and is not the signatory to the Convention on Early Notification of a Nuclear Accident. Management of radiological emergencies is underdeveloped. There is need to ratify the Convention on Early Notification of a Nuclear Accident, finalize the CBRNE policy, NNRERP and SOPs and human resource development for the management of radiation emergencies.

Strategic Actions	Responsible Authority	Budget (UGX)	2019	2020	2021	2022	2023
Obj 1: Build national nuclear safety and security capacities in preparedness, detection and response to radiation emergencies							
Finalize the draft CBRNE policy, NNRERP and SOPs for detection, response and training of personnel for radiation emergencies	Ministry of Energy (AEC), MOGLSD	336,750,780					
PRIORITY YEAR 1: Sign the Convention on early notification of a nuclear accident and Convention on assistance in case of radiological or nuclear emergencies	Ministry of Energy (AEC), Ministry of Foreign Affairs	259,187,500					
Incorporate nuclear and radiological emergencies into the national training and exercise program under "One Health" approach	Ministry of Energy (AEC), MOH, MAAIF, UNCST, MCHE, MOES, UPF, UPDF, CBRNE, MOWE/NEMA	197,838,625					
Address gaps in infrastructure and equipment availability for radiological detection and response	Ministry of Energy (AEC), OPM, Ministry of Foreign Affairs	2,000,000					
PRIORITY YEAR 1: Establish a function MOU and efficient information sharing and management of radiation emergencies among all stakeholders	Ministry of Energy (AEC), MOH, UPF, CBRNE/UPDF, Ministry of Information, OPM-NECOC, URCS, MAAIF, UNBS, MOGLSD, NEMA, DGAL	91,391,250					
Obj 2: Create national radiation emergencies detection and response centres that are well-coordinated with other agencies capable of generating a timely radiation emergencies situation report							
PRIORITY YEAR 1: Identify health facilities at the national and high-risk districts, and train and equip staff to manage radiation emergencies	Ministry of Energy (AEC), MOH, OPM	810,543,842					

Develop a calibration laboratory for the equipment used in detection and response to radiological and nuclear emergencies	Ministry of Energy (AEC), UNBS	3,240,000,000					
TOTAL	**4,937,711,997**						

Summary of cost analysis

The total estimated cost of the Ugandan NAPHS is UGX 160,708,941,019 ($42,571,905 USD), covering all 19 technical areas in prevent, detect and response to public health events between 2019 - 2023.



The major cost drivers of the NAPHS include 1) real-time surveillance, 2) AMR, 3) Medical countermeasures, and 4) the national laboratory system.

Technical area	Major initiatives (2019 – 2023)
Surveillance	Conduct trainings for district and national level health workers from animal and human health on the newly established integrated real-time surveillance system **4,494,062,500 UGX** ($1,190,480 USD)
AMR	Strengthen the national laboratory capacities to store and manage AMR pathogens and maintain a national biorepository of isolates **5,352,132,000 UGX** ($1,417,783 USD)

Medical countermeasures	Preposition emergency supplies for response to enforce an integrated framework for sending and receiving health personnel during human, animal, and environmental public health events **14,000,000,000 UGX** ($3,708,609 USD)
National laboratory system	Integrate transport of animal samples into the National Specimen Referral and Transport Network, in order to effectively implement a One Health system **$3,628,000,000 UGX** ($961,059 USD)

4. Implementation of NAPHS

5.1 Governance of the NAPHS

In its implementation, NAPHS shall use a multi-stakeholder, One Health approach. An implementation plan will be conducted each year for all pertinent stakeholders and ministries to understand key actions that will be needed to be prioritized. The NAPHS activities costing will be integrated into the pertinent ministries request for budget every year, and additional resources mobilized from within government and partners.

The National IHR focal point housed in the MoH, and the OIE country delegate based in MAAIF, will be informed of all progress made in attainment of IHR competences. Oversight and monitoring will be a function of the Office of the Prime Minister while the chair of the OH TWG will provide technical leadership to implementation. (Refer to figure 2)

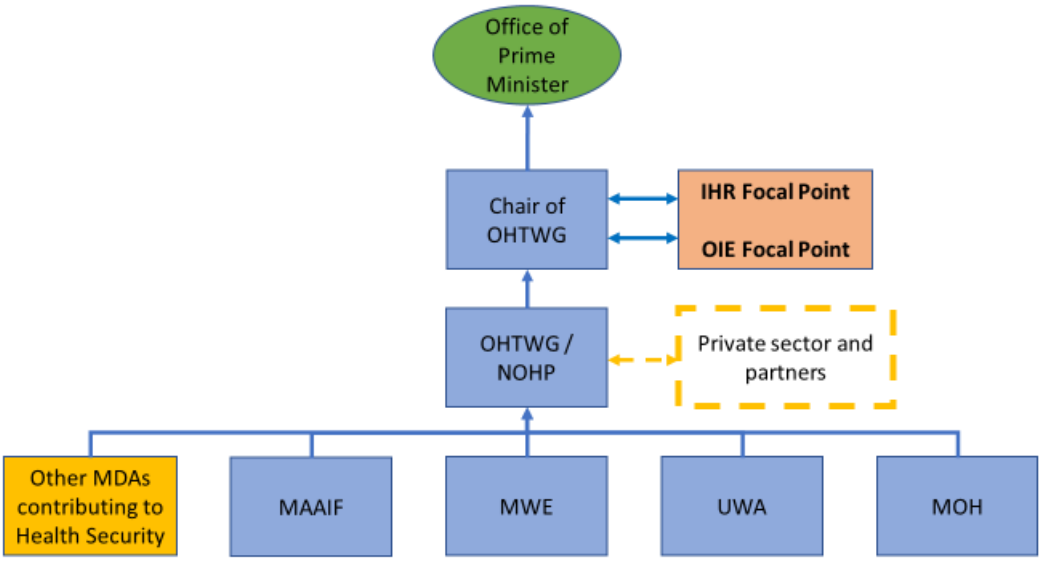


Figure 4: Organogram for NAPHS implementation

Office of the Prime Minister

OPM will lead on coordination, accountability and reporting in line with the Joint sector reviews.

Technical working group

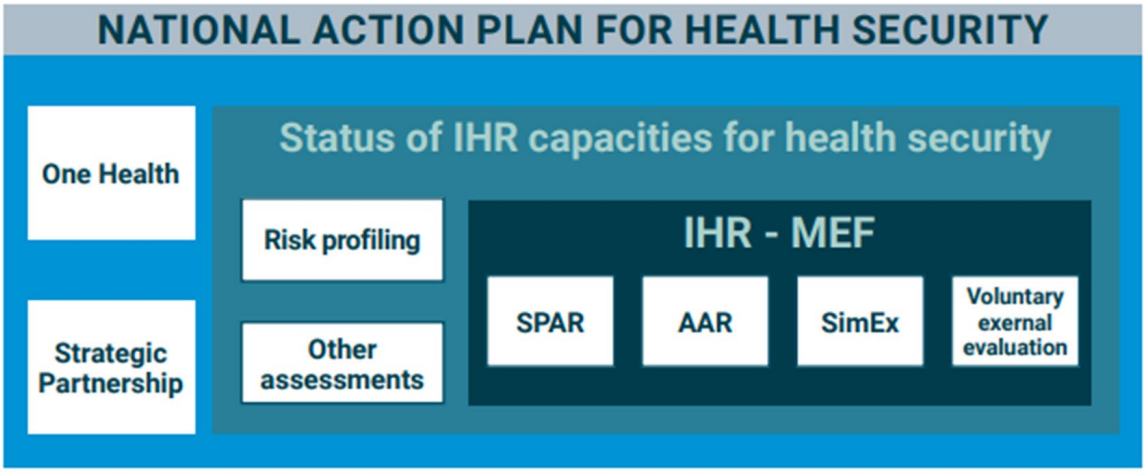
A national steering committee comprising of representation from the pertinent NAPHS sectors will also support the coordinating activities of the OPM. The committee will have designated focal points from line ministries, departments, agencies, academia, UN agencies and private sector for each NAPHS technical area. The committee will be chaired by the chair of the OH TWG and work in collaboration with the National One Health Platform to strengthen its activities.

5.2 Monitoring and Evaluation strategy

The purpose of the M&E strategy is to support the Government of the Republic of Uganda (GOU) to fully comply with the IHR (2005) by monitoring progress of activities for the 19 Technical Areas within the NAPHS. These activities have been identified as important contributors to increasing the country's JEE health security capacity scores.

The monitoring process will be coordinated by the OPM in collaboration with the IHR NFP and the chair of the OH TWG.

This M&E strategy is aligned with the global IHR M&E Framework and incorporates supporting documents such as the WHO Benchmarks[1], the IHR Self-Assessment Annual Reporting (SPAR)[2] Tool, as well as data from After Action Reports (AARs) and Simulation Exercises (Simex).



: IHR (2005) Monitoring & Evaluation framework https://apps.who.int/iris/bitstream/handle/10665/276651/WHO-WHE-CPI-2018.51-eng.pdf?sequence=1

[1] https://www.who.int/ihr/publications/9789241515429/en/

[2] https://extranet.who.int/sph/news/ihr-self-assessment-annual-reporting-tool-spar-2018

Monitoring and Evaluation plan

The strategy will follow 3 prongs:

1. *Monitoring Implementation of the NAPHS*

a. Creation on Technical Area focal teams: To promote a sense of ownership of the NAPHS implementation process by NAPHS stakeholders, create continuity in the reporting, and contribute to a national-level M&E strategy, a Focal Person (FP) for each Technical Area will be identified within the respective ministries.

b. Self-reporting by stakeholders: A self-reporting monitoring tool will be used through a collaborative process to incorporate NAPHS stakeholder input and Technical area FPs on NAPHS activities. This will facilitate the tracking process for NAPHS activities by providing data on key variables (e.g. progress, funding updates and challenges) that are essential to successful implementation.

c. Technical Area Review Meeting: Regularly scheduled one-on-one meetings will be held between monitoring team and each line ministry or implementing partner to discuss the Technical Areas that the ministry/implementing partner is contributing to. The Monitoring team will work with the FP in the respective ministries to convene representatives for each Technical Area from that ministry for these monitoring meetings.

Within the technical monitoring meetings, monitoring data will drive discussion on NAPHS activity implementation. Identification of successes, bottlenecks or gaps, and areas for improvement will also be discussed to inform subsequent activity planning within the Technical Areas. This strategy will strengthen partnership engagement and improve the quality of subsequent reporting. This approach will also be used to identify and utilise other reporting channels in use by the different NAPHS stakeholders.

2. *Identifying & Realigning Priority Activities*

a. Mid-year review meetings: This will be a one-day review engagement conducted mid-year following the calendar year attended by representatives from all the line ministries (including FPs), implementing partners, and other key stakeholders. The purpose for this meeting is to share progress, challenges and status updates on NAPHS implementation and discuss the planned activities. Best practices will be documented and shared with partners, which will increase awareness among NAPHS stakeholders about progress towards the JEE recommendations and strengthen cross-sectoral collaboration.

b. Annual review meetings: This will be a two-day review meeting building upon results from the mid-year review process and other progress updates. Documents such as the WHO Benchmarks and SPAR, along with results from Simex and AARs will be used to guide this process. Suggested participants at this review will include; technical persons,

managers, commissioners, administrators, ministers, leadership representation from other implementing partners and representation from the development partners. Recommendations at this forum will facilitate selection and prioritization of activities for the following year to inform subsequent planning for NAPHS implementation.

3. *Documentation and Disseminating of Results*

a. Monthly progress reports: The monitoring team will provide progress reports implementation and updates to Monitoring and Evaluation (M&E) for NAPHS. These reports will be shared with 1) Ministries and the Prime Minister; 2) Other Uganda-based organizations; 3) Development partners (i.e. CDC, WHO, RTSL)

b. Quarterly Newsletter: This will be written to provide brief updates about the NAPHS implementation process to stakeholders. The Newsletter will be circulated through email to line ministries, sectors, and other partners supporting NAPHS implementation.

c. Publications and Conferences: As appropriate, the monitoring team will work with key stakeholders to develop and share publications with the wider community (nationally and globally) that communicate Uganda's progress with NAPHS implementation. These may include original scientific publications, contribution to bulletins and conference papers. Such publications will include but are not limited to innovations, successes, lessons learnt, best practices, and progressive status on the JEE recommendations in alignment with the IHR 2005.

d. MDA Quarterly review meetings: The monitoring team participate in ministry quarterly review meetings.

1. ANNEXES

Annex 1: Attendance List for members contributing to the NAPHS develoment

NAME	INSTITUTIN
Ben Masiira	AFENET
Hasifa Bukirwa	AFENET
Herbert Kazoora	AFENET
Nulu Bulya	AFENET
Olivia Namusisi	AFENET
John Nuwagaba	Airport Medical services
Birungi Joshua	Atomic Council
Thomson Okello	CAA
Bao-Ping Zhu	CDC
Daniel Stowell	CDC
Dr. Jaco Homsy	CDC
Dr. Joseph Ojwang	CDC
Juliet Kasule	CDC
Lisa Nelson	CDC
Patricia Tanifum	CDC
Steven Balinandi	CDC
Thomas Nsibambi	CDC
Vance Brown	CDC
Patrick Banura	CHAI
Maureen Kyomuhendo	Coca Cola
Kabasa David	COVAB
Julius Okuni	COVAB
Denis K. Byarugaba	COVAB
Samuel Majalija	COVAB
David J. Kabasa	COVAB
Moses Joloba	CWRU
Ngonde Wilberforce	DCIC
Opolot Okaasai	Dept. Crop Resources
Andrew Ockenden	DFID
E. Burnett	DFID
Gema Redondo	DFID
Ms. Ritah Nakigudde	DFID
Robinah Lukwago	DFID

Kepher Kateu	DGAL
Rhoda Nauda	DGAL
Denis Kyabaggu	EAPHLNP
Namungo Patience B	Energy and Mineral
John Steven Okech	European Union
Chrisostom Ayebazibwe	FAO
Mubiru Sarah	FAO
Sam Okuthe	FAO
Susan Ndyanabo	FAO
Edith Nantongo	FH1360
Eric Kakoole	GAVI
Vicent Mujune	GOAL
Christine Mwebesa	Health Service Commission (HSC)
Dr. Pius Okong	Health Service Commission (HSC)
Ddungu S	HSC
Immaculate Nakibuuka	ICRC
Francis Kakooza	IDI
Judith Nanyondo	IDI
Justine Bukirwa	IDI
Kenneth Mulindwa	IDI
Lydia Nakiire	IDI
Mohammed Lamorde	IDI
Peter Babigumira	IDI
Peter Mukiibi	IDI
Richard Walwema	IDI
Rogers Kisame	IDI
Solome Nantumbwe Mutumba	IDI
Joaniter Nankabirwa	IDRC
SimonPeter Mundeyi	Immigration
Victoria Kajja	IOM
Bildard Baguma	JMS
Acyeles Omodi	KCCA
Daniel Okello Ayen	KCCA
Emilian Ahimbisibwe	KCCA
Isaiah Chebrot	KCCA
Serukka David	KCCA
Alex Bambona	MAAIF

Carolyn Namatovu	MAAIF
Alfred Wejuli	MAAIF
Beatrice Nannozi Kasirye	MAAIF
Ben Senkeera	MAAIF
Bosco Okuyo	MAAIF
Dan Tumusiime	MAAIF
Emmanuel Isingoma	MAAIF
Fred Monje	MAAIF
Gloria Tamale	MAAIF
Juliet Ssentumbwe	MAAIF
Martin Kasirye	MAAIF
Merabu Acham	MAAIF
Michael Kimaanga	MAAIF
Micheal Omodo	MAAIF
Moses Mwanja	MAAIF
Paul Lumu	MAAIF
Robert Mwebe	MAAIF
Sam Richards Erechu	MAAIF
Thecphilus Mwesige	MAAIF
Deo Ndumu	MAAIF
Doris Kiconco	MAAIF
Jolly Hoona	MAAIF
Rose Ademun	MAAIF
John Okiror	MAAIF
Kyokwijuka Benon	MAAIF
Noeline Nantima	MAAIF
Ejobi Francis	Mak.VET College
Bosco Oruru	MakSPH
Steven Ssendagire	MakSPH
Sowedi Muyingo	MAUL
Moses Mwesigwa	Min Gender Labour social Development
Mr. Alex Asiimwe	Min Gender Labour social Development
Joaniter Nakacwa	Min Justice and constitutional Affairs
Sarah Mitanda	Min Justice and constitutional Affairs
Susan Odongo	Min Justice and constitutional Affairs
Arthur Ibaale	Min of Internal Affairs
Robert Kibuuka	Min Science and Technology

Juliet Kyokuhaire	Min. Finance Planning and Economic Development
Faye Bagamuhunda	Min. of security
Dinnah Apeduno	Min. Trade and Industry
Peter Odong	Min. Trade and Industry
Mrs. Doreen Katusiime	Minister of Tourism Wildlife and Antiquities
Prof. Ephraim Kamuntu	Minister of Tourism Wildlife and Antiquities
Boniface Amalla	MoH
Bernard Lubwama	MoH
David Mutegeki	MoH
Judith Ssemasaazi Amutuhaire	MoH
Alfred Driwale	MoH
Allan Muruta	MoH
Anne Nakinsige	MoH
Bernard Opar	MoH
Charles Olaro	MoH
Diana Atwine	MoH
Eldard Mabumba	MoH
Emmanuel Othieno	MoH
George Upenytho	MoH
Henry Mwebesa	MoH
Immaculate Ampeire	MoH
Jackson Amone	MoH
Jane Ruth Aceng	MoH
JB Waniaye	MoH
Johnbaptist Waniare	MoH
Joseph Okware	MoH
Okiror Stephen	MoH
Patrick Tusiime	MoH
Peter Okwero	MoH
Sarah Byakika	MoH
Susan Nabadda	MoH
David Muwanguzi	MoH
Emma Sam Arinaitwe	MoH
Emmanuel Ainebyoona	MoH
Fred Sebisubi	MoH
Harriet Miriam Atim	MoH
Harriet Akello	MoH

Harriet Mayinja	MoH
Hilda Barbara Wesonga	MoH
Hon. Moriku Kaducu	MoH
Joyce Mutesi	MoH
Jude Okiria	MoH
Julian Kyomuhangi	MoH
Kiiza Peter	MoH
Michael Kibuule	MoH
Mugisha James	MoH
Mukooyo Edward	MoH
Nabakooza Jane	MoH
Namugga Judith	MoH
Nguna Joyce	MoH
Nsungwa Jesca	MoH
Rebecca Akinzirwe	MoH
Richard Kabagambe	MoH
Richard Kabanda	MoH
Richard Okwir	MoH
Ronald Ssegawa Gyagenda	MoH
Safari Specioza Katusiime	MoH
Sam Nalwala	MoH
Sam Olumu	MoH
Scovia Ajidiru	MoH
Seru Morris	MoH
Stephen Akena Abwoye	MoH
Tabley Bakyaita	MoH
Usamah Kaggwa	MoH
Vivian Sserwanja Nakaliika	MoH
Walimbwa Ali	MoH
Paul Mbaka	WHO
Charles Isabirye	MoH
Celestin Bakanda	MoH/IDI
Doreen Gonahasa	PHFP/MOH
Herbert Bakiika	MoH/IDI
Immaculate Nabukenya	MoH/IDI
Johnbaptist Kibanga	MoH/IDI
Solome Okware	MoH/IDI

Pamela Zanika	MOH/UNEPI
Natukunda Passy Patricia	MOH-ACP-HTS
Maxwell Onapa Otim	MoSTI
Reuben Kiggundu	MTaPs
Peter Ourah	MTIC
Kajumbula Henry	MUCHS
Dr. Henry Kajumbula	Mulago NRH, Microbiology Dept
Derrick Mimbe	MUWRP
Jocelyn Kiconco	MUWRP
Aaron Kibirizi	MWE
Alfred Okot Okidi	MWE
Betty Mbolanyi	MWE
Collins Oloya	MWE
Dadinoh Ndibarema	MWE
Eng. Dominic Kavutse	MWE
Eng. Richard Cong	MWE
Etimu Simon S. E	MWE
Florence Adong	MWE
Gilbert Ituuka	MWE
Julia Kamala	MWE
Julius Mafumbo	MWE
Kamala Julia	MWE
Lillian Idrakua	MWE
Martha Naigaga	MWE
Mr. Watson Wakooli	MWE
Obubu J. Peter	MWE
Peter J. Obubu	MWE
Silvestre Gwanyi Herbert	MWE
Simon S. E. Etimu	MWE
Stephen David Mugabi	MWE
Joseph Mbihaye	NARO
Margaret Masette	NARO
Richard Ssewakiryanga	National NGO Forum
Juliet Awori Okecho	NDA
Paul Okware	NMS
Mary Akumu	NTRL
Alex Gisagara	NWSC

Dr. Irene Naigaga	OHCEA
Pamela Komujuni	OPM
Abdul Muwanika	OPM
Benjamin Kachwero	OPM
Florence Mbabazi	OPM
Gerald Menhya	OPM
Hadard Arinaitwe	OPM
Ibrahim Wandera	OPM
Isaac Mugera	OPM
Julius Mucunguzi	OPM
Leila Ssali	OPM
Mayanja Gonzaga	OPM
Pamela Gumisiriza Komujuni	OPM
Raymond Kirungi	OPM
Roland Bless Taremwa	OPM
Roy Mwanga Mugoya	OPM
Teddy Namara	OPM
Timothy Lubanga	OPM
Dorothy Nabunya	PHEOC
Dr. Issa Makumbi	PHEOC
Joshua Kayiwa	PHEOC
Milton Makoba Wetaka	PHEOC
Simon Kyazze	PHEOC
Daniel Kadobera	PHFP
Dativa Maria Alideki	PHFP
Alex Ario	PHFP
Juliet Namagulu	PHFP
Stephen Kabwama	PHFP
Bernard Atwine	Presidents Office
Dr.Arnold Ezama	Red Cross
Robert Kwesiga	Red Cross
Amanda McClelland	RTSL
Colby Wilkason	RTSL
Diana Kiiza	SABIN Vaccine Institute
David Treseder	Samaritan Purse
Winyi Kaboyo	TDDAP
Yeff Mecaskey	TDDAP

Rebecca Kengoro	UCPA
Sam Watasa	UCPA
ASP Joshua Oluka	Ug. Prison Services
ASP Nelson Wandera	Ug. Prison Services
James Mugoya	Ug. Prison Services
Kigenyi Saad	Ug. Prison Services
Oluka Joshua	Ug. Prison Services
Wandera Nelson	Ug. Prison Services
Grace Ssali Kiwanuka	Uganada Health Care Foundation
Josephine Okwera	Uganda Red Cross Society
Paul B. Okot	Uganda Red cross Society
Ahmed Katumba	UHSC
Ben Manyindo	UNBS
Moses Matovu	UNBS
Yasin Lameriga	UNBS
Ndifuna Abdul	UNBS
Yasin Lemeriga	UNBS
Mary Okwakol	UNCHE
Opuda Asibo	UNCHE
Beth Mutumba	UNCST
Aidah Nakanjako	UNDP
Julius Kasozi	UNHCR
Atek Kagirita	UNHLS/CPHL
Joseph Nkodyo	UNHLS/CPHL
David Matseketse	UNICEF
Doreen Mulenga	UNICEF
Eva Kabwongera	UNICEF
Miriam Lwanga	UNICEF
Aida Girma	UNICEF
Ambrose Oiko	UPDF
Joseph Mugagga Lubega	UPDF
Damian Kato	UPDF
Charles Nuwakuma	UPDF
Ambrose Musinguzi	UPDF
Godwin Bagash	UPDF
John Tagaswire	UPDF
Samuel Okurut	UPDF

Mubiru Andrew	UPF
Ndashimye Gregory	UPF
Peter Oumo	UPF
Justine Mirembe	UPMB
Hassan Wasswa	URA
Paul Okot	URSC
Deborah Malac	US EMBASSY
Patricia Rader	USAID
Wilberforce Owembabazi	USAID
David Mutongo	USAID P&R
Barnabas Bakamuntumaho	UVRI
Julius Lutwama	UVRI
Josephine Bwogi	UVRI
Robert Downing	UVRI
Ronald Seguya	UVRI
Patrick Atimnedi	UWA
Robert Aruho	UWA
Gloria Grace Akurut	UWA
Sam Mawanda	UWA
Florence Kyalimpa	UWA
Patrick Atim	UWA
Andrew Bakainaga	WHO
Collius Mwesigye	WHO
Edson Katushabe	WHO
Felix Ocom	WHO
Jayne Tusiime	WHO
Miriam Nanyunja	WHO
Bayo Fatumbi	WHO
Innocent Komakech	WHO
Maureen Nyonyintono	WHO
Nathan Natserie	WHO
Patrick Wokorach	WHO
Sandra Nabatanzi	WHO
William Lali Ziras	WHO
Yonas Tegegn Woldemariam	WHO
Musa Sekamatte	ZDCO

Annex II: JEE summary results

Technical areas	Indicators	Score
National legislation, policy and financing	P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)	**3**
	P.1.2 The State can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with IHR (2005)	**3**
	P.1.3 Financing is available for the implementation of IHR capacities	**2**
	P.1.4 A financing mechanism and funds are available for the timely response to public health emergencies	**1**
IHR coordination, communication and advocacy	P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	**2**
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	**2**
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	**2**
	P.3.3 Healthcare-associated infection (HCAI) prevention and control programs	**3**
	P.3.4 Antimicrobial stewardship activities	**3**
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	**2**
	P.4.2 Veterinary or animal health workforce	**3**
	P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	**2**
Food safety	P.5.1 Mechanisms for multi-sectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of food-borne diseases	**2**
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and bio-security system is in place for human, animal and agriculture facilities	**3**
	P.6.2 Biosafety and bio-security training and practices	**3**
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	**3**
	P.7.2 National vaccine access and delivery	**4**
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	**4**
	D.1.2 Specimen referral and transport system	**3**
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	**3**
	D.1.4 Laboratory quality system	**3**
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	**4**
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	**3**
	D.2.3 Integration and analysis of surveillance data	**3**
	D.2.4 Syndromic surveillance systems	**3**
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	**3**
	D.3.2 Reporting network and protocols in country	**3**
Workforce	D.4.1 Human resources available to implement IHR core capacity requirements	**3**

development	D.4.2 FETP or other applied epidemiology training programme in place	**4**
	D.4.3 Workforce strategy	**3**
Preparedness	R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented	**1**
	R.1.2 Priority public health risks and resources are mapped and utilized	**1**
Emergency response operations	R.2.1 Capacity to activate emergency operations	**4**
	R.2.2 EOC operating procedures and plans	**4**
	R.2.3 Emergency operations programme	**4**
	R.2.4 Case management procedures implemented for IHR relevant hazards.	**3**
Linking public health and security	R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	**2**
Medical countermeasures and personnel deployment	R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency	**2**
	R.4.2 System in place for sending and receiving health personnel during a public health emergency	**2**
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	**2**
	R.5.2 Internal and partner communication and coordination	**4**
	R.5.3 Public communication	**4**
	R.5.4 Communication engagement with affected communities	**4**
	R.5.5 Dynamic listening and rumour management	**3**
Points of entry	PoE.1 Routine capacities established at points of entry	**1**
	PoE.2 Effective public health response at points of entry	**1**
Chemical events	CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies	**2**
	CE.2 Enabling environment in place for management of chemical events	**2**
Radiation emergencies	RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	**2**
	RE.2 Enabling environment in place for management of radiation emergencies	**2**

OUR PARTNERS