

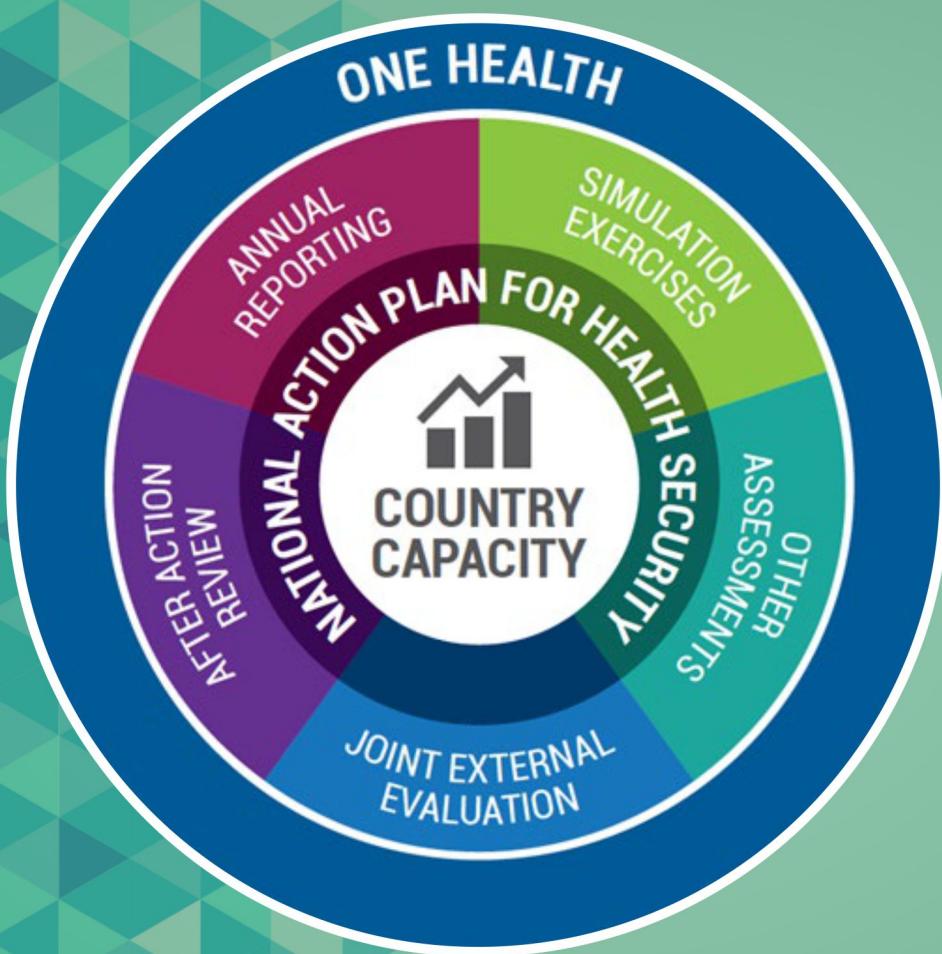


National Action Plan for Health Security

Federal Republic of Nigeria

[2018-2022]

FOR A SAFER AND MORE PROSPEROUS NIGERIA



NOVEMBER 2018



National Action Plan for Health Security Federal Republic of Nigeria (2018-2022)

RELEVANCE

The West Africa Ebola epidemic demonstrated the economic damage that large scale epidemics can create and highlighted critical capacities that Nigeria must continue to develop to protect Nigerian citizens. Nigeria has been confronted with numerous outbreaks since 2017, including yellow fever, monkeypox, Lassa fever, cholera, and cerebrospinal meningitis; Nigeria has responded to and contained these outbreaks, but further steps must be taken to detect them earlier to prevent illness and death. Preparedness for pandemics and health emergencies has a high return on investment, estimated at \$2–7 for every \$1 committed.

STRATEGY

The National Action Plan for Health Security (NAPHS) is a comprehensive multi-sectoral plan that integrates multiple workplans including REDISSE, NCDC Strategy Plan, AMR Action Plan, and immunizations plans, addressing the major gaps identified by the Joint External Evaluation (2017) and Performance of Veterinary Services (2010) assessments, and prioritizing them by national strategies and risks. As such, the NAPHS is an “overarching” plan and can be used to create linkages and monitor progress of major health security initiatives.

The NAPHS is intended to provide: *a*) a clear roadmap for implementation over a 1–2-year period, allowing for annual revisions to the plan based on capacities gained and activities implemented; and *b*) a menu of costed activities for future years, which can easily be incorporated into annual implementation plans and integrated into partner activities. As such, this document is complemented by internal products including individual workplans developed by the individual technical areas and an overarching NAPHS tracking platform that will be used for mutual accountability.

Critical financing gaps remain; advocacy, resource mobilization, and coordination between relevant stakeholders will be critical to implement activities to keep Nigerians safe.

Contents

Acronyms and Abbreviations	5
Preface from the Minister of Health	6
Acknowledgements by the NCDC Director General	7
Executive Summary	8
Background and Context	12
Preparedness for Prosperity.....	12
Public Health Risks.....	13
From Crisis to Opportunity: Alignment of Planning Processes	16
Development of the National Action Plan for Health Security (NAPHS)	16
Prioritization for Implementation	17
Structure of the NAPHS	17
Next Steps	18
IHR Coordination and Governance for Implementation	18
Linkages	18
Implementation	18
Monitoring and Evaluation.....	19
Biannual Review and Annual Plan Revision.....	19
Implementation Plans for 2018-2019, by Technical Area	20
National Legislation, Policy, and Financing.....	20
IHR Coordination	23
Antimicrobial Resistance	25
Zoonotic Diseases	29
Food Safety	32
Biosafety and Biosecurity	35
Immunizations	38
National Laboratory System.....	41
Surveillance and Reporting (Combined Technical Areas).....	44
Workforce Development.....	47
Preparedness	50
Emergency Response Operations.....	53
Linking Public Health and Security Authorities.....	56

Medical Countermeasures and Personnel Deployment.....	59
Risk Communication.....	63
Points of Entry	66
Chemical Events.....	69
Radiation Emergencies	72
Annex 1: Costed NAPHS (2018–2022)	75
Annex 2: JEE Results and Priority Actions	76
Annex 3: Performance of Veterinary Services (PVS) Assessment and Recommendations - 2010	84
Annex 4: Participant List.....	88
Annex 5: Inventory of Costed Activities, 2018–2022.....	91
References	161

Acronyms and Abbreviations

AFP	Acute Flaccid Paralysis
AMR	Antimicrobial Resistance
CSO	Civil Society Organizations
EOC	Emergency Operations Centre
FEC	Federal Executive Council
Gavi	The Vaccine Alliance
GNI	Gross National Income
GPEI	Global Polio Eradication Initiative
IEC	Information, Education and Communication
IHR (2005)	International Health Regulations (2005)
IHR MEF	International Health Regulations (2005) Monitoring and Evaluation Framework
IHR NFP	International Health Regulations National Focal Point
INFOSAN FP	International Food Safety Authorities Network Focal Point
IPC	Infection Prevention and Control
ITSON	Integrated Training for Surveillance Officers in Nigeria
JEE	Joint External Evaluation
LGA	Local Government Area
MDA	Ministries, Departments and Agencies
NAPHS	National Action Plan for Health Security
NCDC	Nigeria Centre for Disease Control
NFELTP	Nigeria Field Epidemiology and Laboratory Training Programme
NHSDPII	National Health Sector Development Plan II
NPHCDA	National Primary Health Care Development Agency
NSIPSS	National Strategy on Immunization and Primary Health Care Systems Strengthening
ONSA	Office of the National Security Adviser
PHE	Public Health Emergency; Public Health England
PVS	Performance of Veterinary Systems
REDISSE	Regional Disease Surveillance Systems Enhancement Project
SDG	Sustainable Development Goals
SPAR	State Party Annual Reporting Tool
VRAM	Vulnerability Risk Assessment Mapping
WPV	Wild Polio Virus

Preface

The Ebola outbreak in 2014 raised awareness of the need to have strong coordination mechanisms at all levels to prevent the disease from spreading within and outside the country. We were fortunate to have contained the outbreak at the time, although those events highlighted the chaos and potential economic damage and loss of life that can occur if we were not prepared. Since then, we have been faced with several outbreaks and public health emergencies including monkeypox, yellow fever, Lassa fever, measles, cholera, cerebrospinal meningitis, floods, and insurgency. These events have highlighted that efficient government collaboration is critical for effective preparedness and response to these emergencies when they arise.

The Joint External Evaluation (JEE), conducted in 2017, demonstrated many critical gaps that need to be filled to protect us from the next major event. These results have helped to guide the NAPHS planning process and to develop a roadmap for health security strengthening in Nigeria.

Preparedness for health security is like an insurance policy for our national health and prosperity. Although we hope that we never face a deadly epidemic like the West Africa Ebola epidemic of 2014–2016, we need to ensure that we are ready at all times. In the meantime, capacity building is needed to ensure that we can continue our effective legacy of a strong immunization system and workforce development program, keep our food and water supplies safe, keep our health workers protected from infection, and ensure that we have systems in place for early warning and response for routine outbreaks and epidemics.

The activities presented in this document represent the minimum needed investments, and cost approximately 130 Naira per capita per year, which includes important efforts to strengthen our national immunization programme. The Ebola epidemic and global pandemics like SARS costed billions of dollars to contain and have had large effects on economic growth. Small investments in our public health systems now can prevent major economic damage from the next epidemic.

We encourage all stakeholders from public and private sectors, to carefully review this document and use it as a country-owned roadmap for health security. We have carefully come to consensus about major priorities for action, based on the JEE, Performance of Veterinary Services assessment, risk assessments, and institutional priorities. We hope that the NAPHS can serve as a guiding framework for all partners to work together for health security.



Professor Isaac F. Adewole, FAS, FSPSP, FRCOG, DSc (Hons)
Honourable Minister,
Federal Ministry of Health

Acknowledgements

The Nigeria Centre for Disease Control (NCDC), as the International Health Regulations National Focal Point, would like to recognize the Government of Nigeria for its commitment to protecting the health and safety of Nigerians as demonstrated by the whole-of-government approach to the development of the National Action Plan for Health Security (NAPHS), 2018–2022.

The journey towards the development of this plan has been long and rewarding, beginning with the first preparatory workshop conducted in Abuja in February 2018. Since then, participants from 40 organizations have come together to prepare, validate, cost, and finalize this plan.

We express our sincere appreciation to all the stakeholders from across Nigeria's Ministries, Departments, and Agencies who contributed tirelessly to the successful development of this plan. I reserve special mention to the leads of the 19 technical areas from the Federal Ministry of Health, Nigeria Centre for Disease Control, Federal Ministry of Agriculture and Rural Development, National Primary Health Care Development Agency, Ministry of Defence, Office of the National Security Adviser, National Environmental Standard and Regulation Enforcement Agency, the Nigerian Nuclear Regulatory Authority, among others.

External partners, including the World Health Organization, United States Centers for Disease Control and Prevention, Public Health England, the Food and Agriculture Organization, and Resolve to Save Lives have provided crucial technical assistance to the development of the plan, and we hope they will continue to do this as we transition to sustainable capacity building to keep all Nigerians safe.



Dr. Chikwe Ihekweazu
*Director General,
Nigeria Centre for Disease Control (NCDC)*

Executive Summary

Nigeria has been exposed to many disease epidemics and other public health threats. Recent notable public health emergencies (PHEs) of national and international concern to Nigeria include Lassa Fever, Cholera, Meningitis, Yellow Fever and Monkeypox.

The International Health Regulations (2005), have been a key instrument in benchmarking emergency preparedness for Nigeria. The Joint External Evaluation (JEE) of IHR core capacities conducted in June 2017, highlighted some strengths and deficiencies that currently exist in preparedness and response to public health emergencies.

This National Action Plan for Health Security (NAPHS) seeks to strengthen the IHR core capacities by adopting strategies, establishing priorities, and implementing activities intended to close the identified gaps with the goal of preventing, detecting, and responding to public health threats. The NAPHS is a 5-year strategic plan developed collaboratively with relevant Ministries, Departments and Agencies (MDAs) of the Federal Government of Nigeria. The strategic plan includes agreed-upon objectives based on gaps identified by health security assessments including the JEE and Performance of Veterinary Services (PVS) assessments, public health risks in the country context, and strategic priorities of the involved stakeholders.

The country adopted a multi-sectoral approached hinged on the principles of 'One Health' with significant participation in the process from stakeholders from relevant government ministries and agencies, including security authorities. These included the Office of the National Security Adviser and the Federal Ministries of Health, Agriculture and Rural Development, Environment, Mines and Steel Development, Finance, Budget and National Planning, Defence, Transport, Science and Technology, Justice, and Information.

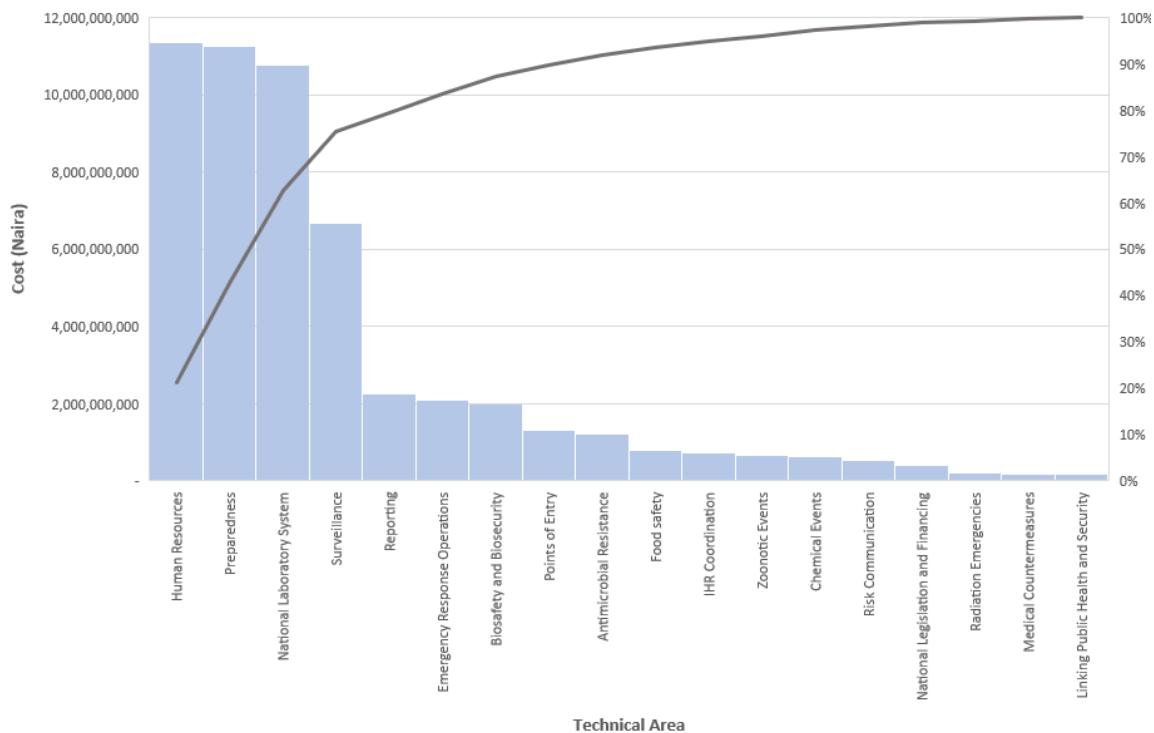
There has been a conscious attempt to ensure that proposed activities are inter-sectoral and linked with on-going national strategies, plans, policies and guidelines, including the National Health Sector Development Plan II (NHSDP II), NCDC Strategy and Implementation Plan 2017–2021, The Policy on Antimicrobial Use and Resistance, Nigeria National Action Plan on Antimicrobial Resistance (AMR), Infection, Prevention and Control (IPC) Action Plan, Nigeria Strategy on Immunization and Primary Health Care Systems Strengthening, among others.

The NAPHS covers all the 19 technical areas required to effectively prevent, detect, and respond to public health threats. Detailed plans for each technical area were developed by multi-sectoral working groups, to cover the period 2018–2022. The estimated cost to implement all planned activities during 2018–2022 is **134 billion Naira** (\$439 million USD; Annex 1). The major cost driver in the plan is the immunizations plan under the Nigeria Strategy on Immunization and Primary Health Care Systems Strengthening (NSIPSS) is 81 billion Naira (\$265 million USD; 60% of total cost). The NSIPSS was developed in parallel with the NAPHS and has its own funding source, obviating the need to create a separate immunizations strategic plan for health security.

The remaining 18 NAPHS technical areas cost during 2018–2022 is approximately **53 billion Naira** (\$174 million USD), or approximately 18 cents per capita (56 Naira) per year (Figure 1). The major cost drivers of the NAPHS come from the laboratory, emergency preparedness, surveillance, and workforce

development technical areas, reflecting major initiatives to improve health security in these three areas (Box 1).

Figure 1: Cost in Naira of NAPHS Activities by Technical Area (excluding immunizations), 2018–2022



Box 1: Major Cost Drivers and Initiatives, 2018–2022

Technical Area	Major Initiatives (2018–2022)
Surveillance: Disease Detection and Tracking	Digital Surveillance in Every LGA: Rollout of a digital surveillance tool (SORMAS), combined with IDSR training and frontline FETP training in all 774 LGAs. 6,664,214,440 N (21,849,883 USD)
Laboratory: Disease Testing and Confirmation	Establishing a Strong National Laboratory Network: Build a network of human and animal health laboratories with capacity to test for priority zoonotic and epidemic-prone diseases, including specimen transportation and digital information system. 10,758,995,676 N (35,275,395 USD)
Workforce: Disease Detectives to Investigate and Response to Outbreaks	Build an Epidemiology Workforce at Every Level and Implement a National Public Health Workforce Strategy: Train frontline and advanced disease detectives and establish a new intermediate FELTP program. 11,353,998,829 N (37,226,225 USD)
Preparedness: Emergency Systems and Supplies for Public Health Emergencies	Prepare for Likely and High-Risk Emergencies: Develop an all-hazards preparedness plan and procure and position the medicines, equipment, and other resources that will be needed for the most likely and highest-risk threats. 11,265,414,006 N (36,972,150 USD)

Because the five-year NAPHS plan requires financing by the Nigerian government and by partners, leads from each of the 19 technical areas prioritized activities in 2018–2019 that could be implemented with either identified or few resources:

- **National Legislation, Policy and Financing** seeks immediately to pass the NCDC Bill, providing the NCDC with its legal mandate for disease control and prevention and IHR focal point, with its own budget line. With additional funds, guidelines can be established for state and local government participation in public health activities through the Basic Health Provision Fund.
- **IHR Coordination, Communication and Advocacy** plans to establish an information exchange system for all parties involved in IHR implementation, using modern electronic communications routinely for the first time. They will also organize a biannual stakeholders meeting. With additional funds, further activities to integrate human, animal, and food sectors will be initiated.
- **Antimicrobial Resistance (AMR)** will establish a multisector steering committee to coordinate activities and set up an electronic data exchange system. With additional funds, they will train and operationalize biosafety committees in tertiary hospitals and in veterinary practices.
- **Zoonotic Diseases** will focus on establishing a surveillance system for priority conditions. With additional funds, they will train additional animal health workforce and develop a system for coordinated response to outbreaks.
- **Food Safety** will focus on improving surveillance of foodborne diseases. With additional funds, they will also build human capacity to conduct and lead outbreak investigations.
- **Biosafety and Biosecurity** will draft legislation and establish a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens. They will begin an audit of institutions with dangerous pathogens and toxins. With additional funds, they will complete the audit, and develop guidelines for handling these substances.
- **Immunization** is already a mature and funded program in human health; its information systems need to be integrated into those for other human and animal health conditions.
- **National Laboratory System** needs extensive development, some of which is already funded, to expand lab capacity of a national reference lab network able to conduct 6 of 10 WHO core tests. A system for transport of specimens is now under development. Further funds will facilitate the development of one common lab information system.
- **Real Time Surveillance** will integrate priority zoonotic diseases into routine human and animal surveillance and roll-out a digital surveillance platform for immediate reporting, task management, and integration of surveillance and laboratory data for all LGAs.
- **Reporting** intends to expand its reporting system to 80% of public and private health facilities by 2021 in human and animal sectors. With additional funds, they will involve these personnel in table-top exercises.
- **Workforce Development** will develop a new Integrated Training for Surveillance Officers in Nigeria (ITSON) curriculum and roll-out the training to Disease Surveillance and Notification Officers (DSNOs) in all LGAs. The plan will sustain the advanced FELTP program and develop a national public health workforce strategy. With additional funds, an intermediate FETP program to support state and local activities will be established, with 72 trainees per year.
- **Preparedness** will establish an all-hazards public health emergency preparedness and response plan and conduct a national public health risk assessment and resource mapping.

- **Emergency Response Operations** plans to establish standard response procedures for national and state level EOCs, including electronic information systems. State-level EOCs will be established to increase subnational capacity for emergency response. With additional funds further training, equipping, and coordination of EOCs will become possible.
- **Linking Public Health with Security Authorities** plans to establish an interagency secretariat and collect statutory documents from each agency. With additional funds, joint training and simulations will be carried out.
- **Medical Countermeasures and Personnel Deployment** will establish a One Health strategic national stockpiling system of medical commodities for use in public health emergencies by 2021. With additional funds, further training and exercises will become possible.
- **Risk Communication** intends to create a multisector working group and produce IEC materials. They then will cascade training to states to prepare communication officers. With further funds, it will be possible to engage 774 LGA social mobilizers.
- **Points of Entry** will designate four entry points and begin to equip and train personnel at these sites. With further funds, they will develop contingency plans in coordination with Medical Countermeasures and review and revise legislation.
- **Chemical Events** will establish a national chemical surveillance and response system and work on improving legal instruments for enforcement. With additional funds it will become possible to map toxicology labs and assess their abilities. They intend to respond to five events in the country each year in coordination with the EOCs.
- **Radiation Emergencies** will build national detection and response capabilities for radiation and nuclear emergencies by 2021. With further funds, they will procure personal protection equipment, and improve monitoring by the implementation of systematic information exchanges between stakeholders including health by improving coordination with the IHR national focal point.

This document provides a summary of implementation activities during 2018–2019 for each technical area. However, all technical areas contributed to the completion of a costed, 5-year strategic plan. Domestic MDAs and development partners can use the costed 5-year activities as the basis to inform future efforts, revise workplans, and identify possible partnerships or investments.

When implementation begins, leads from all 19 technical areas, regardless of MDA, will track implementation progress using an electronic platform. The multi-sectoral IHR working group, composed of all relevant MDAs, will meet twice a year to review implementation progress and share lessons learned. The Nigeria NAPHS represents an integration of multiple plans and a true multi-sectoral collaborative effort. The plan represents a joint platform for strategic planning, implementation, advocacy, and financing to protect Nigerians from health emergencies.

Background and Context

Preparedness for Prosperity

Nigeria is the most populous nation in Africa with a 2018 projected population of 195,875,000¹ and accounts for 47% of West Africa's population. Nigeria is Africa's biggest oil exporter and driven by an expansion in oil output and continued steady growth in agriculture, emerged from recession in 2017.² The National Health Act was signed into law in 2014, however, the act is yet to be implemented with the establishment of a basic health care provision fund (BHCDF). In 2016, Nigeria spent 0.6% on health as a share of GDP (or USD \$11 per capita) — less than nearly every country in the world.³

Infectious disease outbreaks have been increasing over time,⁴ and have the potential to threaten global GDP and economic gains in developing countries. Pandemics have the potential to destroy over 1% of global GDP. For instance, the 2003 SARS epidemic was estimated to have cost between \$40–80bn.⁵ There is a large return on investing in health security. One dollar is estimated to return \$2–7 USD in economic benefits, an economic gain among the same order of magnitude as other “best buy” public health interventions like malaria control.⁶ Financing preparedness might cost less than \$1 per person per year.⁷ Meanwhile, the International Working Group on Financing Preparedness estimated that, based on Nigeria's 2015 GDP of \$487bn, the expected annual loss due to a “full-blown” influenza pandemic could be \$9.6bn, or ~2% of annual GDP.⁷

The West African Ebola outbreak is a high-impact example of the human and economic devastation that can result from an infectious disease outbreak. The World Bank estimates that the overall impact of the Ebola crisis on Guinea, Liberia, and Sierra Leone was \$2.8 billion USD, which was worsened by the large decline in the world price of iron ore and other commodities, and specifically for Sierra Leone, corporate governance issues in mining. Real GDP growth in all 3 countries affected slowed substantially, from 8.7% in 2013 to 0.7% in Liberia and from 20.7% in Sierra Leone in 2013 to 4.6% in 2014.⁸

Nigeria is not only a giant of Africa, but also a gateway. In a single week in August 2018, there were 177 global destinations originating from either Lagos or Abuja international airports (LOS and ABV). On 20 July 2014, a sick traveler flew from Liberia and landed in Lagos. The passenger was ultimately diagnosed with Ebola and expired, after potentially exposing 72 persons at the airport and the hospital. The Ebola cluster resulted in 20 confirmed or probable Ebola cases, of which 12 were exposed in health facilities.⁹ The successful containment of Ebola in Nigeria is credited to several factors: the Nigeria Center for Disease Control's (NCDC) experience with surveillance and outbreak investigation, the repurposing of polio eradication emergency operations to establish a national emergency operations center (EOC) which coordinated the efforts of all partner organizations, donors, and response teams, virologic laboratory testing capacity at Lagos University Teaching Hospital (LUTH), and a trained epidemiology workforce comprised of graduates from Nigeria's Field Epidemiology and Laboratory Training Program (FELTP).⁹ These “core 4” public health functions are summarized in Figure 2.

Figure 2: Core 4 Health Security Capacities and their Application to the 2014 Ebola Response in Lagos

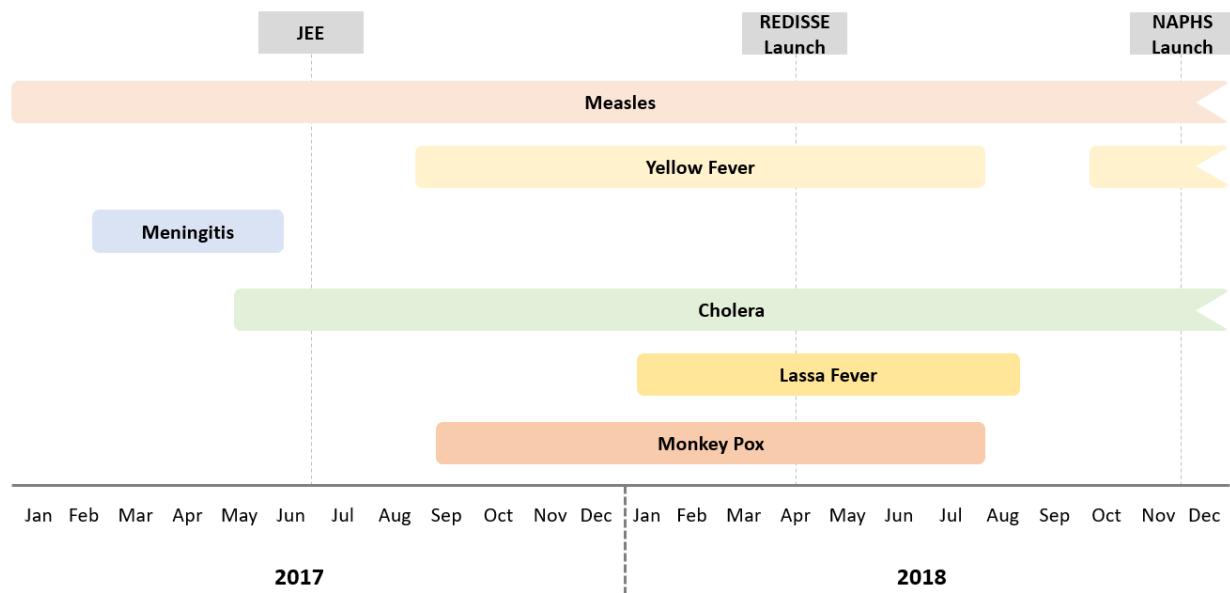
“Core 4” Health Security Capacity	Application to Ebola Response (2014)
 <p>Surveillance: Disease Detection and Tracking</p>	<p>NCDC (est. 2011) integrated the units of the Federal Ministry of Health Epidemiology Division, the Avian Influenza project and its laboratories, and the NFELTP program; developed capacity to track and control disease outbreaks.</p>
 <p>Laboratory: Disease Testing and Confirmation</p>	<p>LUTH had Ebola virus disease testing capacity, which allowed for rapid confirmation of Ebola and escalation of the response.</p>
 <p>Emergency Operations: Rapid Response Teams and Coordination</p>	<p>A national emergency operations center (EOC) was developed as part of the new national emergency plan for the global polio eradication initiative; it was repurposed to coordinate the response across all levels</p>
 <p>Workforce: Disease Detectives to Investigate and Response to Outbreaks</p>	<p>Nigeria’s Field Epidemiology and Laboratory Training Program (NFELTP) (est. 2008) trained disease detectives that could rapidly investigate and control outbreaks.</p>

The arrival of Ebola in Lagos created serious concerns to the global health community and it was thus considered a pivotal event during the 2014 West African Ebola epidemic preventing a global crisis.¹⁰ Nigeria spent approximately \$13m USD responding to the 2014 Ebola response and preventing a large outbreak; a 2% reduction in Nigeria’s 2014 GDP would have translated to an economic loss of nearly \$12b USD.

Public Health Risks

Over the past 2 years, Nigeria has been confronted with several outbreaks of epidemic-prone diseases, including measles, yellow fever, cerebrospinal meningitis, cholera, Lassa fever, and monkeypox (Figure 3). In response to some of these disease outbreaks, public health workers have conducted vaccination campaigns, while also provided infection prevention and control training to health workers, established new laboratory testing capacity, and conducted communication and engagement activities to communities. NCDC, which serves as the National Focal Point for the International Health Regulations (2005) (IHR NFP), is responsible for surveillance and response to these outbreaks, and works closely with the National Primary Healthcare Development Agency (NPHCDA) when a vaccination response is needed.

Figure 3: Timeline of Emergency Activation for Epidemic-Prone Diseases — Nigeria, 2017–2018



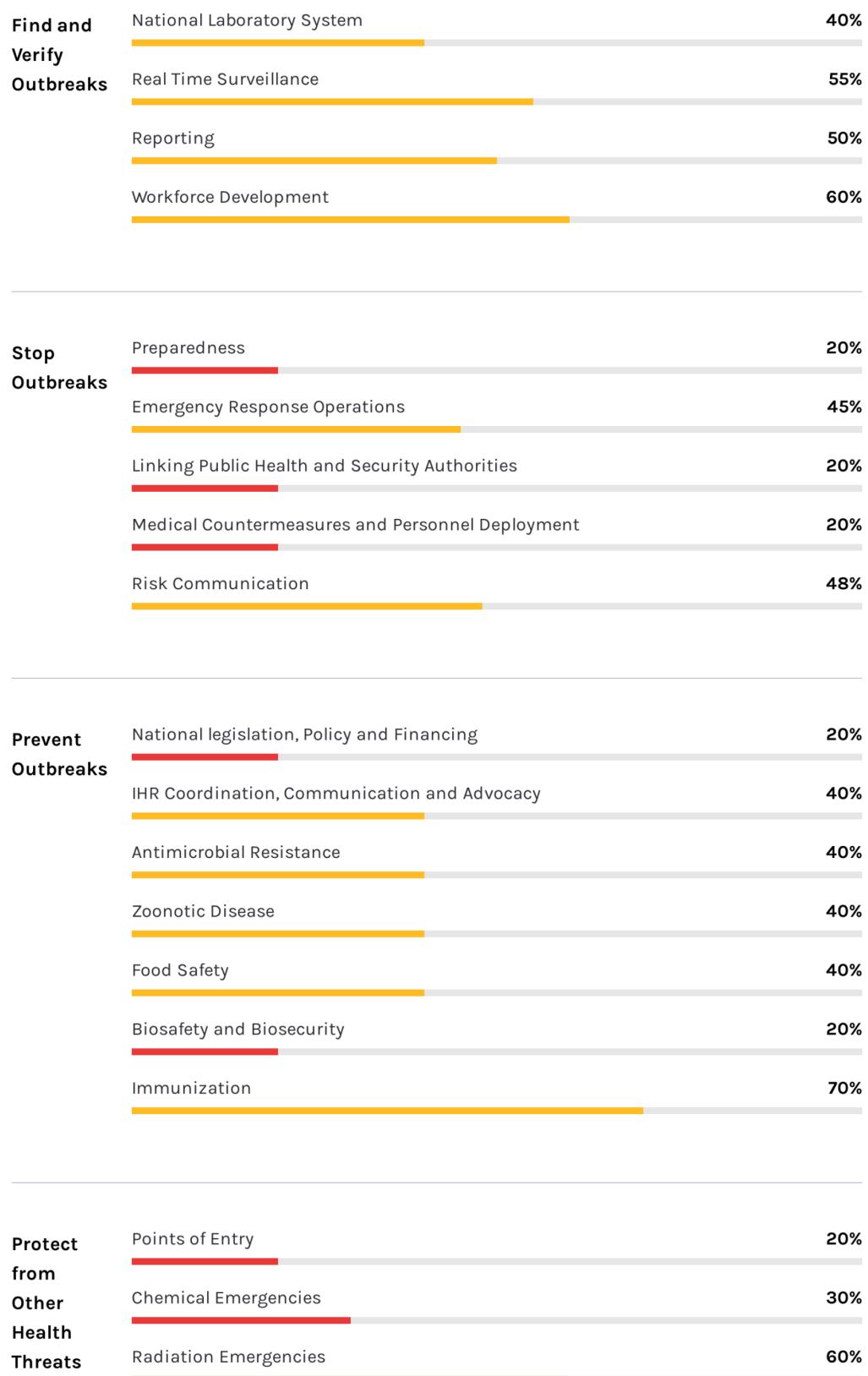
Unfortunately, the number of zoonotic and epidemic-prone disease outbreaks is unlikely to subside. A recent modeling study of risk for viral hemorrhagic fevers identified LGAs in Nigeria have a high risk for having an index case for Ebola virus disease, Crimean-Congo hemorrhagic fever, and Lassa fever. Furthermore, models of epidemic and pandemic potential based on local and international connectivity showed that LGAs in Nigeria are some of the highest potential in Africa for the global spread of viral hemorrhagic fevers.¹¹ A recent strategic risk assessment conducted by Nigeria and facilitated by the WHO identified the risk of meningitis, cholera, yellow fever, Lassa fever, and terrorism as both “almost certain” in likelihood with a critical impact.

An assessment of Nigeria’s capacity to prevent, detect, and respond to these public health threats, called the Joint External Evaluation (JEE), was conducted in June 2017 (Annex 2), in addition to recommendations from the 2010 Performance of Veterinary Services (PVS) assessment (Annex 3). The JEE identified that Nigeria has substantial room to develop its health security capacities (Figure 4). Priorities identified in the JEE Executive Summary included:

- Passage and implementation of the NCDC Bill;
- Establishment of a multi-sectoral One Health coordination mechanism at Federal, State, and LGA levels;
- Strengthening of laboratory capacity;
- Scale up implementation of the integrated disease surveillance and response (IDSR) program;
- Development and implementation of a comprehensive public health workforce strategy
- Enhancing the EOC/incident management system at the federal level and strengthening sub-national rapid response teams
- Designation of points of entry

Figure 4: Overview of Nigeria's Capacities — Joint External Evaluation, 2017

39
Not Ready



From Crisis to Opportunity: Alignment of Planning Processes

The external evaluation team lauded Nigeria's progress in surveillance for vertical diseases such as polio, TB, and HIV/AIDS, but highlighted that further efforts must be developed to strengthen horizontal disease surveillance programs, improve transportation of laboratory specimens, and implement a clear public health workforce strategy.

A financed multi-sectoral plan for health security can help to develop critical capacities to prevent, detect, and respond to public health threats, utilizing resources and capacities that Nigeria has already developed. For instance, Nigeria is one of only three countries in the world, including Pakistan and Afghanistan, with endemic wild poliovirus (WPV). Security challenges in the North East have compromised the ability to immunize children and conduct routine acute flaccid paralysis (AFP) surveillance.¹² However, there have been no documented WPV cases since September 2016, and planning for the transition of polio resources has begun. The role of polio resources (human and otherwise) in surveillance capacity and outbreak response in Nigeria cannot be understated. The polio program alone funds approximately 23,000 public health personnel in Nigeria at an estimated annual cost of \$90m USD.¹³

Disease surveillance and notification officers who investigate disease outbreaks and collect specimens utilize funds from polio eradication efforts to ensure that other epidemic-prone disease specimens are transported to the correct facilities. In addition to the scaling down of polio activities, the Nigerian public health system faces a double threat, as Nigeria has begun the Gavi graduation process (cutoff: per capita gross national income [GNI] >\$1,850). Gavi will transition resources away from Nigeria and its co-financing requirements will increase over the next 5-7 years. It is critical that the polio and Gavi transition strategies are planned and leveraged to ensure sustainable capacity is developed for communicable diseases in general.

Development of the National Action Plan for Health Security (NAPHS)

With crisis comes opportunity. In 2018, Nigeria developed a National Action Plan for Health Security (NAPHS). The NAPHS describes objectives, strategic activities, costs, and focal points for filling in the gaps identified by the JEE. The activities were prioritized based on the country-specific risks, the potential or existing resources available, and the strategic plans of the participating MDAs.

The NAPHS was developed by linking existing national plans, including the National Health Sector Development Plan II (NHSDP II), NCDC Strategy and Implementation Plan 2017–2021, Nigeria National Action Plan on Antimicrobial Resistance (AMR), Infection, Prevention, and Control (IPC) Action Plan, and NSIPSS as they pertained to health security.

The planning process was coordinated by NCDC as the IHR NFP and included stakeholders from many relevant sectors. The full list of participants is available in Annex 4:

- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of the Environment
- Federal Ministry of Finance
- Federal Ministry of Health
- Federal Ministry of Mines and Steel Development
- Ministry of Defence
- Federal Ministry of Transport

- Federal Ministry of Science and Technology
- Federal Ministry of Justice
- Federal Ministry of Information
- Ministry of Interior
- Office of the National Security Adviser
- National Emergency Management Agency

Prioritization for Implementation

Rather than prioritize one technical area over another, the technical working groups prioritized strategic actions during the NAPHS preparatory workshop (February 2018), NAPHS validation and costing workshop (July 2018), and the NAPHS finalization meeting (September 2018).

- During the preparatory workshop, the technical area groups identified activities that were already ongoing, areas that were critical for capacity development, which activities had known advocates, and which were “low hanging fruits”
- During the NAPHS validation and costing workshop, with a sense of the resources needed for implementing those activities, the technical area groups were asked to identify activities they could realistically implement during 2018–2019 with existing or few additional resources
- During the NAPHS finalization workshop, the technical area groups pulled out specific activities for implementation in 2018–2019, identified individual focal points for those activities, target start and end dates, and specific monitoring and evaluation indicators for each activity

Structure of the NAPHS

To maximize the benefit of the NAPHS document for implementing activities by multi-sectoral actors, this document provides an overview of implementation plans for activities prioritized for 2018–2019.

To guide planning and anticipatory resource mobilization, and for use by development partners to select key activities to support, a comprehensive list of all desired activities during 2018–2022 was generated (Annex 5). The NAPHS is intended to provide:

- a clear roadmap for implementation over a 1–2-year period, allowing for annual revisions to the plan based on capacities gained and activities implemented, and
- b) a menu of costed activities for future years, which can easily be incorporated into annual implementation plans and integrated into partner activities

Some activities in the 2018–2019 require immediate resource mobilization, and many of the activities during 2020–2022 require resources to support implementation.

Next Steps

The Nigeria NAPHS provides a bold roadmap to increase Nigeria's capacity to protect its citizens through a whole of government approach. The next steps include:

IHR Coordination and Governance for Implementation

Considering that the leads of the technical areas are primarily staff of the various MDAs whose involvement is essential in implementation of the NAPHS, and usually hold the budget line for activities in the technical areas, their involvement, oversight and leadership in the planning, implementation, monitoring, and evaluation is essential for successful implementation.

The IHR NFP (NCDC) will provide stewardship and coordination for NAPHS implementation using a One Health approach through involvement of the leadership and members of the 19 technical area groups. The NCDC will serve as the Secretariat for the IHR technical working group, which consists of leads of all technical areas representing the various MDAs relevant for health security efforts. The Secretariat will provide logistical and technical support for implementation reviews and monitoring.

The implementation and monitoring of the NAPHS will use a One Health approach, to ensure that all relevant stakeholders are represented and coordinated. Fiduciary controls will be guided by the public service guidelines in addition to any specific requirements from development partners. The commitment of state governments will be sought to sustain all investments made through the implementation of the NAPHS, which will require advocacy by stakeholders. Similar structures will be utilized at the state and LGA levels where appropriate to engage the states in the planning and implementation of the NAPHS.

The NAPHS plan should be endorsed and approved by the Federal Executive Committee (FEC) and presented to bilateral and multilateral partners to align workplans and obtain funding commitments to fill gaps that are not financed by REDISSE and existing commitments. State-level collaboration and commitments to sustain the frontline public health workforce will be critical. Partnerships between states and synergistic programs, particularly with regards to state-level EOCs and specimen transportation and referral systems, will improve Nigeria's ability to prevent, detect, and respond to the next public health threat before it becomes an epidemic.

Linkages

Specific linkages at policy and operational levels to connect NAPHS with sectoral plans, such as the National Health Sector Strategic Development Plan and the Mid Term Expenditure Framework (MTEF) should be identified and strengthened to align the NAPHS with the national budgeting, planning and implementation cycle. These activities are critical to ensuring that domestic financing is made available for health security.

Implementation

The NAPHS is unique in its comprehensive scope and multi-sectoral nature. An overall approach to track, monitor and evaluate the status of NAPHS implementation using project management staff, software, and quarterly/monthly review by the technical areas and biannual review of the plan to enable appraisal and

definition of better approaches to implementation. A robust project management structure will be established to fast-track effective implementation.

Monitoring and Evaluation

Technical working groups for each of the 19 technical areas covered by the NAPHS developed their own output and process indicators for each activity. At the NAPHS finalization meeting, conducted at the NCDC administrative headquarters in September 2018, the technical leads agreed on the need to have a shared platform to monitor progress on implementation of activities for mutual accountability. As a result, the NCDC Secretariat is working with partners to establish such a monitoring platform.

The outcomes and impacts of the NAPHS will be measured using the IHR Monitoring and Evaluation Framework (IHR MEF). The revised JEE tool (JEE 2.0) will be used as an instrument to periodically review capacities with external evaluators, whereas the State Party Annual Reporting (SPAR) tool will be completed annually. Simulation exercises will be used both to develop capacities, assess performance, and identify additional priority actions. After action reviews (AARs) will be conducted after major events to identify existing country capacity, areas in need of strengthening, and revise the NAPHS implementation plans.

Biannual Review and Annual Plan Revision

In addition to real-time implementation tracking, the technical leads also identified a need for a formal biannual review process, to assess implementation progress and address bottlenecks. A mid-year review of implementation of planned activities, with anticipatory re-assessment and redirection of activities and resources will be carried out in February of each year.

The annual review meeting, to be conducted in August of each year, will allow technical leads to revise costed workplans and establish an implementation plan for the following year. This annual review can be aligned with similar requirements under the conditions of REDISSE. The NAPHS will be reviewed periodically to ensure alignment with the Nigeria's Health System Development Plan (NHSDP) as well as the NCDC and other agencies' strategic plans.

Implementation Plans for 2018-2019, by Technical Area

This section describes high-level “strategic actions” selected by technical area groups for implementation during 2018–2019, based on the prioritization process described earlier. The activities included in this section include those with funding identified and those with outstanding resource needs. Each of these high-level actions consists of more detailed activities, which are provided in full in Annex 5. The Annex also indicates which detailed activities have existing resources. The lead MDA is indicated for high-level actions, although multiple MDAs might cooperate on a given activity.

National Legislation, Policy, and Financing

Background and Objective: Working towards ensuring that adequate statutory and administrative provisions for the implementation of IHR are in place by December 2019, including completing pending legislative actions for NCDC Bill.

JEE Indicators

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)

JEE 2017 Capacity Level: 1

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)

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations
2. Advocate for revision of legal instruments and policies to address existing gaps and challenges within the national administrative environment
3. Completion of pending legislative actions (NCDC Bill, 2017; Public Health Bill, 2013) to give key public health institutions (e.g. Nigeria Centers for Disease Control) the legal mandate needed to accomplish national goals
4. National government should articulate specific policies, guidance, and guidelines to States and Local Governorate Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014)
5. Streamline roles and responsibilities in the various Ministries and Agencies that have responsibilities in IHR implementation to minimize duplication within their respective mandates

Short Term Goals (2018–2019):

- Expand public awareness on health accountability
- Increase CSOs involvement in the NCDC Bill and Review of National Health Act (2014)
- Expand States funding of Health
- Implement protocols, processes, regulations and legislation governing Health Financing and Funds

Strengths	Limitations
<ul style="list-style-type: none"> • Present throughout state health institutions • Legal precedent • Expertise, especially in identifying and developing relevant policies framework for health sector gaps that impend compliance with IHR • Budget line exists in several key agencies, but not sufficient funding for health, and not sufficient health funding participation by all the States and LGAs, due to weak political will 	<ul style="list-style-type: none"> • Low coverage of legislative and financing gaps implementation at the States and LGAs • Poor health funding mostly at the State levels • Lack of IHR Focal Persons and Desk Officers in MDAs due to MDAs pooling system • Poor inter-sectoral coordination in information sharing on new policies

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals.	NCDC						
Review of the “National Health Act of 2014” to define roles/responsibilities of key public health institutions across the three tiers of government.	NCDC						
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	NCDC						
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	NCDC						
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014)	NCDC						
Review the existing animal health laws, regulations, and policies	FMARD						
Conduct sensitization workshop for the updated PVS with the animal health officers in DVPCS and state DVS	FMARD						

Important Considerations:

- To avoid delay of the NCDC Bill, increase public relations and CSOs pressure on Senate Committee on health
- Reward States that participant in IHR to increase commitment of state government, and States participation will be sought to sustain all investments made through the implementation of the NAPHS
- Support key meetings as stated in the Costing Budget to facilitate the LP&F process

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Finance
- Federal Ministry of Justice
- National Assembly
- Federal Ministry of Agriculture and Rural Development

IHR Coordination

Background and Objective: Strengthen IHR NFP for effective coordination, communication and advocacy for IHR implementation. There will be establishment of information exchange system for the parties involved in IHR, using modern electronic communications, as well as a biannual stakeholders meeting. With additional funds, further activities to integrate human, animal, and food sectors will be initiated.

JEE Indicators

P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Establish legislative foundation for NCDC as National Focal Point
2. Establishment of a national One Health platform for intersectoral collaboration of outbreak responses that involve the human health, animal health and environmental sectors
3. Develop all hazard standard operational procedures for IHR coordination between IHR NFP and stakeholders

Short Term Goals (2018–2019):

- Establish multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and responsive systems for effective implementation of the IHR (2005)
- Establish a national One Health platform
- Coordinate nationwide resources, including sustainable functioning of a national IHR focal point – a National Centre for IHR (2005) communications which is a key requisite for IHR (2005) implementation – that is accessible at all times

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none">• National IHR focal points responsible designated and accessible 24/7• Multisectoral stakeholders identified across all hazards• SOP exists to guide coordination between the IHR NFP and relevant sectors• Submission of annual report on the status of the IHR implementation	<ul style="list-style-type: none">• Delay in presidential assent to the bill establishing NCDC• Information exchange system for communication between the relevant stakeholders has not been developed• There is an interaction between human and animal sectors but not optimal. Therefore, there is a need to establish one Health multi-sectoral group for IHR.

• Nigeria NFP is a recognized leader in West Africa						
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals. (See National Legislation)	NCDC						
Establish One Health platform at the national level, state level, and LGAs	NCDC						
Develop All-hazards Standard Operating Procedures (SOPs) and guidelines for IHR coordination between IHR NFP and stakeholders	NCDC						
Conduct biannual and annual IHR review meetings	NCDC						
Conduct Performance of Veterinary Services (PVS) gap analysis assessment	FMARD						

Important Considerations:

- Development of a concept note that provides a model for communication between various MDAs under IHR coordination, and identifies stakeholders
- IHR NFP to write the stakeholder agencies and ask them to identify focal persons for IHR coordination
- Convene the technical working group on One Health and meet bi-annually
- IHR-related stakeholders to identify existing SOPs pertinent to IHR coordination and communication (IHR NFP already has SOPs available for coordination, communication between IHR NFP and other stakeholders, and notification); SOPs on the side of the other stakeholders need to be developed

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Finance
- Federal Ministry of Environment

Antimicrobial Resistance

Background and Objective: Antimicrobial Resistance (AMR) has recently gained worldwide recognition as the World health assembly endorsed global action plan to tackle AMR. The AMR Coordinating Body was established at Nigeria Centre for Disease Control by Honourable Minister of Health. The One Health AMR Technical Working Group was formally inaugurated at NCDC to conduct situation analysis and develop a National Action Plan for AMR. The TWG comprises of key members representing animal health, food and animal production, human health and environment sector.

JEE Indicators

- P.3.1 Antimicrobial resistance detection
- P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens
- P.3.3 Health care-associated infection (HCAI) prevention and control programmes
- P.3.4 Antimicrobial stewardship activities

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Implement the Nigeria NAP on AMR
2. Strengthen the "One Health" components in the Nigeria NAP on AMR
3. Strengthen stewardship on antimicrobial use in humans and food animals

Short Term Goals (2018–2019):

- Report human health AMR data to GLASS before 2019
- Identify priority organisms, set up a national surveillance system for AMR and commence surveillance in animals
- Standardize AST guidelines for AMR surveillance in Nigeria
- Implement protocols, processes, regulations and legislation governing AMR and AMU data reporting
- Conduct a nationwide baseline behavioural study on AMR awareness and use findings to develop and disseminate an AMR communication among One-health stakeholders
- Train human and animal health workers on how to detect antibiotic resistant pathogens, use antibiotics rationally and improve biosecurity in animal production

Strengths	Limitations
<ul style="list-style-type: none"> • Conducted Situation Analysis and developed National Action Plan • Designation of UCH, Ibadan as AMR National Reference Laboratory for Human Health • Enrollment of the AMR National Reference Laboratory for Human Health and 2 human health surveillance sites to GLASS and reporting of data nationally to NCDC and GLASS • Procurement of EQA for AMR National Reference Laboratory and 2 human health AMR surveillance sites • Development of AMR surveillance guidelines for human health • Revised Standard Treatment Guidelines and Drug Policy for human health to include AMR • NCDC coordinated the quarterly meeting of the National One-health AMR TWG meeting and commenced process for inaugurating the National AMR Steering Committee • NVRI designated as AMR National Reference Lab and has an antimicrobial working group constituted to coordinate AMR work • Reporting AMU to the OIE Global database using option one • AMR issues have been captured in the amended Animal Disease Control Act in the National Assembly • Recently revised Veterinary Formulary now available for use in the country • National Animal Disease Information and Surveillance system in place and can report to AU-IBAR on the ARIS 2 platform • National Residue Monitoring Program for aquaculture in Nigeria and diagnosis is carried out at Department of Veterinary Public Health and Preventive Medicine, University of Ibadan 	<ul style="list-style-type: none"> • Non-availability of dedicated funding for AMR implementation and control activities in one-health sector • Paucity of personnel for AMU/AMR Surveillance in One-health sector and available personnel requires retraining on AMR/AMU Surveillance • Absence of AMR/AMU Surveillance protocols and guidelines in the One-health sector • Poor public awareness and weak coordination of AMR awareness activities in One-health sector • Lack of National data on AMR that can be easily accessed • No existing channel for information sharing among stakeholders • Lack of appropriate data capture, equipment and audit • Absence of studies on economic impact of AMR in Nigeria and poor coordination of research on antibiotic use • Paucity of infrastructure for AMR tracking and audit

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Establish a national steering committee to advise the Honourable Ministers	NCDC						
Convene regular meeting with all Departments/parastatals to discuss the report, the quarterly AMR activity mapping meeting and areas of integration between partners and agencies	NCDC						
Strengthen the “One Health” components in the Nigeria National Action Plan on AMR.	FMARD						
Establish and implement a Monitoring & Evaluation framework for AMR surveillance	NCDC						
Create a database for AMR and AMU Surveillance from human health facilities, farms, feed mills, vet clinics and environment	FMARD NCDC						
Establish and integrate national surveillance system on AMR across human, animal and environment	NCDC						
Conduct AMR diagnostic capacity assessment of laboratories to selected sentinel sites for reporting into GLASS across human, animal and environmental health institutions and designate AMR National Reference Laboratory for human and animal health	NCDC						
Establish an AMR Reference Laboratory and network system for animal and environmental health laboratories	FMARD						
Strengthen HCAI surveillance and prevention programs	NCDC						
Assess infection prevention and control facilities and advocate for resources to support IPC nationally and in all healthcare facilities	NCDC						
Introduce IPC programme in veterinary practice at the veterinary hospitals/clinics and biosecurity at farm level in aquatic and terrestrial animal husbandry.	FMARD						
Improve hand hygiene, food hygiene and waste disposal across all sectors	MoEnv						
Develop and Implement antimicrobial stewardship programs across human, animal and environmental health	NCDC						
Promote optimal prescribing and dispensing of antimicrobials in humans and animals and support participation of tertiary health facilities in Nigeria in AMS point prevalence survey	FMARD						
Conduct Assessment (Survey) of current practices of AMU in humans and animals	NCDC						
One-day advocacy visit to policy makers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation)	NCDC						
Conduct a nationwide baseline behavioural study on AMR awareness, KAPP. Use baseline findings to develop and disseminate AMR SBCC materials in English, Pidgin Hausa, Igbo and Yoruba	NCDC						
Develop and print risk communication tools for AMR awareness in Humans and animals	NCDC						
Organise seminars and trainings for relevant stakeholders such as media, PPMV, animal health inspectors, clinical veterinarians, livestock producers, aquaculture farmers, toll milers, feed manufacturers, etc.	NCDC						

Incorporate AMR activities into existing WASH programs within NPHCDA and Family health and other agencies	NCDC						
Conduct nationwide active surveillance for AMR in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops	FMARD						

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural development
- Federal Ministry of Environment
- Professional societies
- Regulatory bodies

Zoonotic Diseases

Background and Objective: The increase and expansion in the human population globally has significantly impacted on the interconnection of people, animals, and the environment by increasing the contact between humans and wild animal habitats. This ultimately increases the risk of exposure to new pathogens. Most of emerging diseases in human are zoonotic. It is likely that zoonotic diseases will continue to be threats to public health especially in areas where human population is dense, and bio-diversity is high, as in many parts of Nigeria. To detect, prevent and response timely, improvement in animal disease surveillance system will require developing the list of national priority zoonotic diseases, building the technical capacities of animal health workforce in surveillance and laboratory diagnosis with a multi-sectoral approach to coordinate the response of outbreaks of zoonotic diseases.

JEE Indicators

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens

JEE 2017 Capacity Level: 2

P.4.2 Veterinary or animal health workforce

JEE 2017 Capacity Level: 3

P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Enhance collaboration between Ministry of Health and Ministry of Agriculture at the national, state and district levels
2. Strengthen linkage between public health and animal health laboratories
3. Enhance surveillance of zoonotic diseases (including consensus building meetings of appropriate stakeholders to identify the top priority zoonotic diseases to include in zoonotic disease surveillance system)

Short Term Goals (2018–2019):

- Surveillance system in place for priority zoonotic diseases/pathogens
- Increase animal health workforce capacity at national level and at least 50% of states
- Establish a multi-sectorial mechanism for coordinated response to outbreaks of zoonotic diseases by human, and animal sectors at national and state levels

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> The willingness of major stakeholders to collaborate in line with the 'One Health' approach Existing collaboration between human and animal sectors on control of certain zoonotic diseases Skilled professionals Public health training of veterinarians by FELTP, McArthur Foundation and Veterinary Council of Nigeria A policy document and guidelines for response to some key zoonosis exist 	<ul style="list-style-type: none"> Poor intersectoral mechanism in place for coordinated response to zoonotic diseases by human and animal health sectors in the national and states Undeveloped national surveillance plan for priority zoonotic diseases A robust surveillance system for the highest priority zoonotic diseases in animals is lacking in the Ministry of Agriculture Inadequate technical capacity among stakeholders Lack of a dedicated budget line for One Health activities Low level of public awareness, resulting in reluctance to accept necessary behavioural or cultural changes that will improve health

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop integrated zoonotic disease surveillance system	FMARD						
Develop risk mapping for four priority zoonotic diseases using one health approach	FMARD						
Advocate for the recruitment and deployment of animal health epidemiologists into the Public Health sector at the State and national levels	FMARD						
Strengthen of laboratory capacity for detection for priority zoonotic diseases/pathogens	FMARD						
Strengthening of technical capacity of animal health workforce (zoonotic disease control, communications, RDTs, etc)	FMARD						
Build technical capacity for zoonotic disease of Disease Surveillance and Notification Officers and Animal Surveillance Officers at LGA level	FMARD						
Update list of top priority zoonotic diseases through a "One Health" deliberation process (<i>last reviewed 2017</i>)	FMARD						

What will it take to do this:

- Increased collaboration and cooperation between key stakeholders through high level advocacy and political commitment
- The establishment of a One Health Technical working group
- Creation of a budget line for control of priority zoonotic diseases
- Incorporating or harmonising the funding and implementation of activities into the on-going efforts of the various ministries and parastatal.
- Improved information sharing between human and animal health

Key Participating Agencies:

- Nigeria Centre for Disease Control (Co-Lead)
- Federal Ministry of Agriculture and Rural Development (Co-Lead)
- Federal Ministry of Health
- Federal Ministry of Environment

Food Safety

Background and Objective: The National Policy on Food Safety & its Implementation Strategy (NPFSIS) was developed in 2014 to modernise the food safety system and structure in the country, reduce the incidence of foodborne diseases, and improve economic productivity. The National Food Safety Management Committee (NFSMC) was inaugurated to coordinate all food safety related programs in the country. Further strengthening these mechanisms will enhance food safety, detection, and response efforts.

JEE Indicators

P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease
2. Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response
3. Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels

Short Term Goals (2018–2019):

- Establish a functional Foodborne Illness Detection and Response Collaborative team by March 2019
- Development and validation of National Drug Residue Monitoring Plan by end of June 2020
- Enhance the NADIS through the development and validation of checklists, SOPs and guidelines to ensure proper surveillance of foodborne diseases of animal origin by 2020
- Development of a fully functional interactive food safety website by December 2019
- Begin a nationwide assessment of Laboratory capacity in detection of foodborne diseases by September 2019

Strengths	Limitations
<ul style="list-style-type: none">• Presence of a coordinating National Food Safety Management Committee• Presence of a National Food Safety & Quality Bill at the National Assembly	<ul style="list-style-type: none">• Poor/weak coordination, collaboration and communication between MDAs involved with food safety

<ul style="list-style-type: none"> Presence of INFOSAN Emergency Contact Point and Focal Points across MDAs Investigation of outbreaks are usually timely Presence of a regional diagnostic vet laboratory (NVRI) 	<ul style="list-style-type: none"> Inadequate technical capacity among food safety regulators, food handlers, and laboratory technicians on foodborne investigations Ineffective risk management capacity for food safety Lack of a multisectoral investigation and response to food safety emergencies Non-allocation or poor allocation of funds to existing budget lines in key MDAs
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease	FMARD FMOH						
Develop a food safety website	FMOH						
Conduct a national assessment of food safety laboratory capacity	FMOH						
Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response	FMOH FMARD						

What will it take to do this:

- Regular meetings of NFSMC to better coordinate food safety system and structure effectively and adequately
- Improving the effectiveness of National Animal Disease Information System (NADIS) as well as a fully established and functional Foodborne Illness Detection and Response Collaborative team
- Improved capacity of foodborne disease detection through the development of relevant SOPs for sample collection and analysis
- Support of line MDAs and in having a harmonised, effective and efficient food safety system and structure
- Support for development partners and the Organised Private Sector (OPS) will be essential to improving the Food Safety System
- The commitment of State Governments will be sought to sustain all investments made through the implementation of the NAPHS

Key Participating Agencies:

1. Federal Ministry of Health (Lead)

2. Federal Ministry of Agriculture and Rural development
3. Federal Ministry of Environment
4. Federal Ministry of Science & Technology
5. National Agency for Food and Drug Administration and Control – (INFOSAN FP)
6. Nigeria Centre for Disease Control
7. Standards Organisation of Nigeria

Biosafety and Biosecurity

Background and Objective: With the frequent occurrence of insurgency and terrorism all around which might prompt the use of biological agents put public health systems in check to develop robust surveillance systems and disease notification systems for early detection reducing mortality and morbidity. Biosafety refers to the implementation of laboratory practices and procedures; specific construction features of laboratory facilities, safety equipment, and appropriate occupational health programs when working with potentially infectious microorganisms and has other biological hazards. Effective biosecurity measures require the cooperation of a wide range of experts such as scientists, policy makers, security engineers and law enforcement.

JEE Indicators

P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities

JEE 2017 Capacity Level: 1

P.6.2 Biosafety and biosecurity training and practices

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Biosecurity Legislation needs to be enacted
2. Development of a multi-sectoral, national coordination, oversight and enforcement mechanism for response to and control of dangerous pathogens
3. Adequate funding and training be provided for Biosafety and Biosecurity programs
4. Perform an audit of institutions and locations with dangerous pathogens; and toxin control in order to develop a plan for consolidation

Short Term Goals (2018–2019):

- Transmit a draft legislative bill on laboratory biosafety and biosecurity, including sustainable funding mechanisms before the end of 2019
- Initiate a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens
- Perform an audit of institutions and locations with dangerous pathogens and toxin control in order to develop a plan for consolidation as well as gaps in current biosafety and biosecurity training

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> • Availability of biosafety regulation and regulatory authority • Established biosafety policies for the human and agricultural sectors • Institutional biosafety officers and manuals in some of the facilities • Availability of Biosafety Level-2 laboratories in the country 	<ul style="list-style-type: none"> • Lack of biosecurity policies and programmes with dedicated funding • Absence of emergency response plan and monitoring system for biosafety and biosecurity involving dangerous pathogens • Consolidation of institutions and locations with dangerous pathogens and toxin control with training support to reduce the risk of theft or release of dangerous pathogens. • Sub-optimal institutional biosecurity programmes and national coordination of biosecurity activities • Depleted storage and inadequate logistic mechanisms for biosafety and biosecurity

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop multisectoral legislation and regulations on biosafety and biosecurity, including sustainable funding mechanisms	ONSA						
Establish a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens	ONSA						

Important Considerations:

- Relevant agencies should synergize their activities to avoid overlapping functions; responsibilities of collaborating agencies should be clarified
- Relevant agencies should input funding component of activities into their agencies annual budget to fund the above activities as well as capacity development of their workforce in order to attain global standard for disease monitoring and safety

Key Participating Agencies:

- Ministry of Defence (Lead)
- Federal Ministry of Science and Technology
- National Biotechnology Development Agency (Co-Lead)
- Federal Ministry of Health

- Nigeria Centre for Disease Control
- Office of the National Security Adviser
- National Biosafety and Management Agency

Immunizations

Background: The Expanded Programme on Immunisation (EPI) has been operational in Nigeria since 1979 and has incrementally increased the number of vaccines on the routine schedule. The programme is responsible for the purchase, distribution and retrieval of vaccines across the country, in addition to oversight of the routine immunization programme and supplemental immunization activities and reactive vaccination campaigns. Immunizations, including outbreak response immunizations, are overseen by the National Primary Health Care Development Agency (NPHCDA), whereas surveillance for vaccine-preventable diseases is overseen by the Nigeria Centre for Disease Control (NCDC).

The immunizations programme differs somewhat in implementation when compared to other IHR technical areas. A fully costed strategic plan, the Nigeria Strategy on Immunization and Primary Health Care Systems Strengthening (NSIPSS) has been developed, and its activities and objectives have been carried forward directly in the NAPHS. Efforts to strengthen surveillance and laboratory confirmation of vaccine-preventable diseases including measles, rubella, and yellow fever are captured under the surveillance and laboratory plans.

NSIPPS 2018–2019 Objectives:

1. Reduce Measles incidence to 5 cases per million by reaching at least 82% RI and 95% SIA National Coverage by 2023
2. Reduce Measles incidence to less than 1 case per million by reaching at least 91% RI and 95% SIA National Coverage by 2028
3. Ensure vaccines/commodities are transported in good quality to zonal stores, states, and ultimately healthcare facilities nationwide on time the right quantity
4. Distribution and transport management (national to states)
5. Put in place mechanism for the procurement of the vaccines
6. Improve the availability and functionality of cold chain at LGA and ward levels

JEE Indicators

- P.7.1 Vaccine coverage (measles) as part of national programme
P.7.2 National vaccine access and delivery

JEE 2017 Capacity Level: 3

JEE 2017 Capacity Level: 4

JEE Priority Actions

1. Dedicate resources to information management system for vaccine data, in order, to ultimately improve data quality (completeness, timeliness and reliability of administrative data)
2. Develop strategies to improve national coverage, especially focusing on historically low coverage areas
3. Include vaccines for zoonotic disease, particularly in special populations such as health care workers and veterinarians

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> • Use of the primary healthcare structure to deliver vaccines to every part of the country including outreach services, mass/nationwide vaccination campaigns and outbreak response • A laid down structure through the Interagency Coordinating Committee (ICC) and the respective technical working groups to coordinate the activities off all stakeholders working in the Immunization space • Dedicated RI (NERRIC) and SIAs (NMTCC) technical committees to address immunization coverages and gaps • Budget line present in key agencies and National Health Act • Expertise, especially in polio eradication system 	<ul style="list-style-type: none"> • Low immunization coverage especially in hard to reach and security compromised areas • Vaccine hesitancy/non-compliance. • Poor attitude and inadequate capacity of health care workers • Poor implementation of Primary Health Care Under One Roof (PHCUOR) strategy • Inadequate cold chain capacity at all (national, zonal, state LGA and ward) levels

NSIPSS Strategic Actions for 2018–2028

1. Strengthen immunization data systems and build capacity of health care workers at all levels to use and interpret analytics from NAVISION software platform to address stock challenges
2. Increase demand for immunization using demand creation strategies
3. Improve service delivery at PHC and outreach sites
4. Conduct follow-up Measles Vaccination campaign targeting children 9–59 months in accordance with the National Measles Elimination strategy (2019–2028)
5. Dedicate resources to information management system for vaccine data to ultimately improve data quality (completeness, timeliness and reliability)
6. Distribute quarterly allocation of vaccines and devices to zones and states (for routine immunization)
7. Improve forecasting and demand planning for vaccines
8. Improve Cold chain management and temperature monitoring and control, including curative maintenance of cold rooms in NCSC and zonal stores
9. Develop a harmonized, multi-sectoral, interconnected, surveillance system.

Important Considerations:

- Improve collaboration between government, partners, and private sector actors to harmonize efforts and reduce duplication of activities
- Increase advocacy and resource mobilization efforts to get sustainable funding for activities
- Establish and Implement a strong monitoring, evaluation and accountability framework to track progress of activities
- Encourage the use of PHCUOR guidelines to improve planning and delivery for health services

Key Participating Ministries, Department and Agencies:

- Federal Ministry of Health
- Nigeria Center for Disease Control
- National Primary Health Care Development Agency (Lead)

National Laboratory System

Background: The laboratory was introduced into the Nigeria's Integrated Disease Surveillance and Response (IDSR) Strategy in 2001 as a veritable component to support care and management of cases as well as mitigate impact through appropriate screening, identification and confirmation of agents of diseases of public health importance as well as monitor disease trends, changes in pathogen profile and evaluate progress of intervention among others. There is increasing need of the public health laboratories to fulfil its other responsibilities of protecting the health of the nation through ensuring food and environmental safety as well as collaborating and communicating with the animal health component to prevent/reduce zoonotic transmission through appropriate diagnosis.

Expanding laboratory capacity is important for an effective response network which, in turn, enhances the efficiency of operation and geopolitical zone coverage. Prompt diagnosis of specimens is predicated not only on meeting up with the turn-around-time (TAT) but also ensuring that quality specimens are collected, promptly transported under biosafety and biosecurity conditions and tested using competent hands and appropriate procedures that guarantee accuracy and reproducibility. These qualities form the basis of the operation of the National Reference Laboratory under the NCDC while also striving to integrate other components (animal health, environment health and food safety) that make up one health response to achieve total health and well-being of the population.

JEE Indicators

- D.1.1 Laboratory testing for detection of priority diseases
- D.1.2 Specimen referral and transport system
- D.1.3 Effective modern point-of-care and laboratory-based diagnostics
- D.1.4 Laboratory quality system

JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Enhance the laboratory infrastructure and resources available to sustain an integrated national laboratory network
2. Implement Strengthening Laboratory Management Toward Accreditation (SLMTA) Program for the national laboratory network with a focus on biosafety, biosecurity and quality assurance
3. Develop a robust sample and specimen transportation system which ensures an effective cold chain
4. To adopt basic laboratory information sharing system among the relevant stakeholders

Short Term Goals (2018–2019):

- Expand/maintain lab capacity at the national reference lab network to be able to conduct 6 of 10 WHO core tests, activate testing on food safety and strengthen diagnostic capacity of veterinary laboratory
- Institute an effective system for collection, packaging and transport of biological specimens
- Adopt and implement one Laboratory Information sharing system by all laboratories

Strengths	Limitations
<ul style="list-style-type: none"> • Existence of three-tiered laboratory structure • Availability of specialized laboratories across the country with capability to render public health care services • Existence of a National Reference Laboratory positioned to coordinate National Public Health Laboratory response • Existence of a national network of laboratories and collaborating centers with capacity for horizontal and vertical expansion • Existence of laboratories for diagnosis of animal specimens (e.g. National Veterinary Research Institute, Vom) with capacity and readiness for collaboration • Ready availability of human resources for laboratory with basic laboratory knowledge and improvable skill • Collaboration and support from national and international partners to promote good laboratory practices, accreditation, quality management and training 	<ul style="list-style-type: none"> • Inadequate laboratory participation in the referral system embodied in the current laboratory network • Anomalous supply of laboratory reagents and consumables often leading to stock-outs • Weak national public health laboratory information management system • Ineffective system for collection, packaging and transport of biological specimens • Lack of skill in modern diagnostic technique among laboratory specialists in some facilities • Few laboratory facilities participating in External Quality Assurance programmes • Weak collaboration on food safety issues and on zoonotic disease diagnosis and information sharing with the animal sector • The non-accreditation of existing public health laboratories

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Identify public health Laboratories that constitute the network and create database	NCDC						
Develop plan with FMOH, FMARD, and other stakeholders for developing the capacity needed to meet diagnostic and confirmatory requirements for priority diseases in human and animal health laboratories	NCDC						
Develop strategy to set up a central Repository and coordinated dissemination/distribution of core reagents and consumables of the priority diseases to the laboratory network to improve existing supply chain	NCDC						
Adopt and implement one Laboratory Information sharing system by all laboratories	NCDC						

Establish a comprehensive, integrated National policy, guidelines, and SOPs on sample management for human, animal, food, and environmental	NCDC						
Establish a specimen transportation system at all levels	NCDC						
Build sample management capacity for public health network laboratories for priority diseases	NCDC						
Establish monitoring and evaluation mechanism for collection, packaging, and transport of specimens	NCDC						
Provide refresher training for network labs to develop technical competency	NCDC						
Implement SLMTA in all labs in the public health laboratory network	NCDC						
Register NCDC & VTH labs in the MLSCN EQA program.	FMARD						
Laboratory infrastructure upgrades and procurement	FMARD						
Establish a mechanism for biological specimen transportation and disposal for VTH and NVRI	FMARD						

Important Considerations:

- The recognition of the National Reference Laboratory as the coordinating arm of all national public health laboratories and collaborating centers by the laboratory stakeholders
- A strong understanding and collaboration between human, animal and environmental laboratories
- Pooling of resources of NCDC and partners together to achieve holistic strategy at specimen transportation
- Work with regulatory agencies to provide framework for the accreditation of laboratories within the network
- Collaboration with EQA-providing institutions to launch EQA in the network

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Health (Co-Lead)
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Environment
- Medical Laboratory Science Council of Nigeria
- Nigerian Institute for Medical Research
- National Veterinary Research Institute
- National Institute for Pharmaceutical Research
- State Ministries of Health
- All Local Government Areas

Surveillance and Reporting (Combined Technical Areas)

Background and Objective: The Integrated Disease Surveillance and Response (IDSR) strategy was adopted in 2006 in Nigeria. The system was key in Nigeria's control of the 2014 Ebola outbreak while Animal Disease Information and Surveillance (NADIS) is a strategy adopted in 2006 for the surveillance/reporting of major trans-boundary animal diseases and zoonosis through the Animal Resources Information System-ARIS platform. It was the main system used in the eradication of Rinderpest 2005 and the control of highly pathogenic avian influenza outbreak in 2010. The NAPHS provides an opportunity to plan for surveillance system strengthening, including integration and expansion of animal and human health surveillance systems and strengthening IDSR implementation.

JEE Indicators

- D.1.1 Indicator- and event-based surveillance systems
- D.2.2 Interoperable, interconnected, electronic real-time reporting system
- D.2.3 Integration and analysis of surveillance data
- D.2.4 Syndromic surveillance systems
- D.3.1 System for efficient reporting to FAO, OIE and WHO
- D.3.2 Reporting network and protocols in country

JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Systematically build capacity for surveillance at all levels (HF, LGA, state and national), expanding surveillance to all health facilities including private facilities for both human and animal health
2. Develop real-time surveillance capability for animal health and promote a ONE-Health approach.
3. Establish linkage between the surveillance and public health laboratory systems
4. Establish an electronic reporting system that is inter-operable and integrated to other systems and also linked to DHIS2
5. Enhance monitoring and evaluation capacity for IDSR, including supportive supervision and data quality assessment
6. Strengthen and improve consistency, completeness (including from private sector) and timeliness in reporting from the local and state levels
7. Establish a framework for multi sectoral coordination in reporting and communication that will enable information sharing
8. Establishment of central data base that integrates data from all sectors for all 41 priority diseases under IDSR
9. Instituting monitoring and evaluation of reporting against set IDSR and IHR indicators

Short Term Goals (2018–2019):

- Expand existing human and animal health surveillance systems to 80% of private health facilities/private Vet. Clinics and 80% of public health facilities/Vet. Tech. Hospitals by 2021 (100% States, 80% LGAs, 80% health facilities)
- Implement human and animal health surveillance system at health facility level in 100% of states, 80% of LGAs, and 80% of public health facilities by 2021
- Link human health and animal health surveillance systems to DHIS 2 by December 2020
- Enhance the performance of the IDSR/ARIS and technical capacity of the workforce by 2021
- Implement protocols, processes, regulations and legislation governing reporting

Strengths	Limitations
<ul style="list-style-type: none"> • IDSR is present throughout state health institutions while NADIS has 37 State Field Epidemiology officers and more than 600 surveillance points nationwide • Legal precedent • Reports are received electronically on weekly and monthly • Expertise, especially in Polio eradication system • Budget line exists in several key agencies • Central diagnostic lab for the key agencies 	<ul style="list-style-type: none"> • Low coverage for surveillance especially in private health care facilities, private Veterinary clinics / Veterinary Teaching Hospitals • Inadequate technical capacity among health care workers, • Lack of interoperability of surveillance systems • Poor inter-sectoral coordination using one health approach • Lack of integration of the wildlife surveillance into ARIS

Important Considerations:

- To avoid duplication and ensure synergy of efforts, the funding and implementation of these activities will be harmonized with on-going efforts
- Support from all partners will be harmonized to provide synergy and where necessary, aspects of the plan will be implemented using private and non-governmental organization with expertise in the areas
- Where data is unavailable, well-designed assessments will be conducted to generate data to establish a base-line to guide implementation
- To enable expansion of the surveillance system to private facilities, linkages with other agencies and related organizations will be used to ensure that reporting is a condition to government support for infection prevention and control, and health insurance funding, among others
- The commitment of state government will be sought to sustain all investments made through the implementation of the NAPHS

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Assess the baseline proportion of reporting public and private health facilities in all states	NCDC						
Expand the number of reporting health facilities	NCDC FMARD FMoH						
Build capacity for surveillance among human and animal health workers in both public and private sectors	NCDC FMARD						
Integrate priority zoonotic diseases into routine human and animal surveillance	FMARD						
Adapt the WHO AFRO IDSR guidelines as soon as concluded	NCDC						
Enhance monitoring and evaluation capacity for IDSR	NCDC						
Develop a system for routine simulation exercise (3) annually for rare diseases to build capacity for case detection and reporting	NCDC						
Enhance utilization of ARIS Platform in all states	FMARD						
Capacity building of notification officers from the relevant sector on IHR	FMARD						
Scale up and training of Animal Disease Surveillance Agents (DSA) from 591 to 1,000	FMARD						
Rehabilitate the state veterinary public health/epidemiology offices	FMARD						
Conduct gap analysis of the existing surveillance system for Transboundary Animal Diseases and zoonotic diseases	FMARD						
Procurement of logistics, including vehicles, for human and animal surveillance	FMARD NCDC						
Conduct step-down training on disease reporting for private veterinary clinics and develop a database of all public and private veterinary clinics	FMARD						
Review and develop animal disease reporting tools for animal health clinics	FMARD						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Agriculture and Rural Development (Co-Lead)
- State Ministries of Agriculture and Rural Development
- Federal Ministry of Health
- State Ministries of Health

Workforce Development

Background and Objective: The Nigeria Field Epidemiology and Laboratory Training Programme is a two-year advanced training established in 2008. It has trained more than 400 field epidemiologists spread across the country. They provide a robust workforce for various public health programs in the country and were a useful resource utilized to control the 2014 Ebola outbreak. A shorter training for frontline health workers have been established for more than two years training frontline workers at local government levels. The frontline training has recently been reviewed to capture as many aspects of the health workers training requirements as possible and was harmonized into the Integrated Training for Surveillance Officers in Nigeria (ITSON). The need for a comprehensive workforce strategy that ensure continuous training and even distribution of healthcare workers as well as establishing an incentivised career path for public health workforce is an urgent need identified by the recently concluded joint external evaluation (JEE).

JEE Indicators

- D.4.1 Human resources available to implement IHR core capacity requirements
- D.4.2 FETP or other applied epidemiology training programme in place
- D.4.3 Workforce strategy

JEE 2017 Capacity Level: 3

JEE 2017 Capacity Level: 4

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Develop a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce in order to reach the goal of one trained field epidemiologist (or equivalent) per 200,000 population
2. Launch the Intermediate FETP and fully implement Frontline FETP so that there is an ‘appropriately’ trained field epidemiologist in every Local Government Area
3. Define career path for specialized public health expertise within the Nigerian civil service structure

Short Term Goals (2018–2019):

- Sustain on-going Advanced and Frontline FETPs
- Commence the development of workforce strategy
- Commence the development of career path for specialized public health workforce

Strengths	Limitations
<ul style="list-style-type: none"> Strong NFELTP programme with ability to contribute to rapid control of outbreaks Frontline FETP providing trained personnel at the Local Government Area (LGA) level Strong NFELTP alumni to support training at various levels within and outside the country Strong advanced public health fellowship programme for senior physicians NFETLP residents working in all 36 States and the Federal Capital Territory National workforce strategy exists for most health care cadres, including laboratory scientists, technicians, physicians, and nurses 	<ul style="list-style-type: none"> Limited worker incentive to retain trained personnel Limited long-term career development pathways for public health professionals Geographic distribution of workers within the country may not be adequate to address workforce shortages Lack of an intermediate-level FETP to address other cadre of healthcare workers

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop career path for specialized public health expertise within the Nigerian civil service structure	NCDC						
Increase national workforce of epidemiologists through sustainment of the Advanced FETP	NCDC						
Develop Integrated Training for Surveillance Officers in Nigeria (ITSON) curriculum for frontline public health workforce	NCDC						
Rollout ITSON training package for LGA DSNOs in all states	NCDC						
Establish Intermediate FETP in Nigeria or through an agreement with another country	NCDC						
Develop and implement a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce	NCDC						
Define public health workforce roles, and map human resources at state and LGA levels	NCDC						
Conduct advocacy to employ additional veterinarians at the state level	FMARD						
Develop an in-service training program for staff of Department of Veterinary and Pest Control Services (DVPCS) and leadership training of veterinary officers in managerial cadre	FMARD						
Support <i>ad hoc</i> Animal Health Officer in states with inadequate human resources	FMARD						
Support animal health sector coordination	FMARD						

Important Considerations:

- Establish institutionalization and sustainability of the training programmes for epidemiologists, specifically by transitioning the training programs to the NCDC based on global standard and establishing a budget line for the training and establishing a training unit within the NCDC
- Establishment of an intermediate program will cater for other healthcare professionals ineligible for advanced FETP, this will address their training needs, ensure wider coverage and better distribution of the workforce, and enable the country to achieve the set target of an epidemiologist per 200,000 population
- Harmonize all frontline epidemiology trainings to address the primary competencies required of the various levels of the trainings through curriculum review and emerging global trends
- Develop a comprehensive workforce strategy and career path for specialized public health workforce by engaging stakeholders by use of seasoned career path technocrats to ensure buy-in for developed policies

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Nigeria Field Epidemiology and Laboratory Training Programme
- Federal Ministry of Agriculture and Rural development
- Federal Ministry of Health
- Ahmadu Bello University, Zaria
- University of Ibadan
- State and Local Governments

Preparedness

Background and Objective: Preparedness involves the development and maintenance of national, intermediate and community/primary response level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards, the identification and maintenance of available resources, including national stockpiles and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency. The plan will ensure that resource deployment is based on thorough risk assessment and hazard mapping so that surge personnel are drawn from diverse sectors, adequately trained, and work towards a shared evidence-based all-hazards preparedness plan. It will help in ensuring the availability of health commodities.

JEE Indicators

- R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented
R.1.2 Priority public health risks and resources are mapped and utilized

JEE 2017 Capacity Level: 1

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Develop an all-hazards multi-sectoral PH emergency preparedness plan, linking existing agency-specific and disease-specific plans
2. Where indicated NCDC should lead in preparation of memoranda of understanding between response agencies in different sectors
3. Strengthen the technical and administrative capabilities of NCDC and Nigeria Emergency Management Agency to develop national vulnerability maps that involve military, media, wildlife and animal health sectors to address zoonotic and emerging infections
4. Pre-position equipment and other resources to strategic locations consistent with vulnerability maps (e.g. remote hard-to-access areas)

Short Term Goals (2018–2019):

- Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan November 2018
- Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP) by February 2019
- Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas) meeting annually need by 70%.

Strengths	Limitations
<ul style="list-style-type: none"> Surge capacity (Nigeria Field Epidemiology and Laboratory Training Program residents) has been identified and effectively utilized during recent public health crises Strategic stockpiles have been identified and disseminated to the intermediate health tiers Information gathered from IDSR – based surveillance has been used to determine priorities for resource stockpiling and distribution Expertise, especially in State SMOH Budget line exists in several key agencies like NEMA, SEMA, SMOH and NCDC 	<ul style="list-style-type: none"> Fragmented planning - several draft documents and plans (either event-based or administrative), without clear coordination or linkage between sectors Public health concerns are not adequately addressed in existing national emergency and disaster response plans There are no memoranda or agreements between agencies for coordination and collaboration in response to public health emergencies Inadequate technical capacity among health care workers Poor inter-sectoral coordination using one health approach

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP), linking existing agency-specific and disease-specific plans.	NCDC						
Develop memoranda of understanding with relevant MDAs (Preparedness and response)	NCDC						
Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan	NCDC						
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	NCDC						
Develop plans for surge capacity to respond to public health emergencies of national and international concern	NCDC						
Capacity development for technical and administrative staff of Nigeria CDC and relevant MDAs	NCDC						
Develop and maintain database of Subject Matter Experts for preparedness and response	NCDC						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- National Emergency Management Agency
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development

- Federal Ministry of Environment
- Ministry of Water Resources
- Ministry of Information
- Ministry of Education
- State Emergency Management Agency
- National Medical Stores
- Nigeria Civil Aviation Authority
- Office of the National Security Adviser
- Security Agencies - Nigerian Army, Nigerian Air force, Nigerian Navy, Nigerian Police, NSCDC
- National Supply Chain Integration Programme
- National Animal Disease Information Service

Emergency Response Operations

Background and Objective: A public health emergency operations centre is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. Emergency operations centres provide communication and information tools and services, and a management system during a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration. The emergency response operations plan intends to strengthen inter-sectoral collaboration for emergency response, establish SOPs for activation and operations, and train personnel.

JEE Indicators

- R.2.1 Capacity to activate emergency operations
- R.2.2 EOC operating procedures and plans
- R.2.3 Emergency operations programme
- R.2.4 Case management procedures implemented for IHR relevant hazards

JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)
2. Establish standard operative procedures for EOC activation and operation
3. Establish standard training protocols for EOC operation and for emergency response
4. Enhance the NCDC EOC physical space, equipment, and logistic support

Short Term Goals (2018–2019):

- Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach) by 2019
- Establish standard operative procedures for EOC activation and operation by 2018–2019
- Establish standard training for EOC operation and for emergency response by 2018–2019
- Enhance the NCDC EOC physical space, equipment, and logistic support by 2019

Strengths	Limitations
<ul style="list-style-type: none"> NCDC EOC has activated several times and has been an important contributor to the successful control of the several public health emergencies NCDC conducts routine public health surveillance and situational analysis and is prepared to respond to public health emergencies, including activating the EOC, 24-hours a day, 7-days a week The polio EOC has been critically important in the successful progress towards polio elimination and has provided important lessons learned to the NCDC EOC EOC plans and procedures are drafted and have been utilized during EOC activations EOC training has been conducted, although it was conducted during EOC activations Table-top exercise for emergency response and EOC activation have been conducted NCDC EOC has coordinated several successful responses to public health emergencies Procedures have been developed, and were followed during the Ebola response, to safely transport infectious substances to public health laboratories Case management guidelines are available for patient management of priority infectious diseases 	<ul style="list-style-type: none"> NCDC EOC is limited by physical space and equipment Standard operating procedures for emergency response and EOC activation have not been fully developed. Response to public health emergencies that require a one-health response is limited EOC procedures need to be more fully developed Operating the EOC is limited by available resources Emergency responses resulting in activation of the NCDC EOC have not involved coordinated responses with agriculture or animal sectors Procedures need to be standardized to enable more rapid activation Case management guidelines are needed for transport of patients with infectious diseases

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)	NCDC						
Enhance the NCDC EOC physical space, equipment, and logistic support	NCDC						
Purchase of hardware health informatics input and output devices	NCDC						
Strengthen procedures and plans for EOC emergency operations function	NCDC						
Development of MOU between National and State levels	NCDC						

Develop missions, mandates, capabilities, and capacities of participating agencies for PHEOC functioning and response	NCDC						
Strengthen capacity for emergency response among EOC staff and surge personnel by developing standard training, simulation exercises, and after-action reviews	NCDC						
Joint outbreak response to strengthen one health	NCDC						
Hire core public health emergency management staff	NCDC						
Develop national case management guidelines for priority diseases, SOPs for the management and transport of potentially infected persons and improve infection prevention and control at the national and state levels	NCDC						
Improve infection prevention and control at the national and state levels	NCDC						
Support for emergency response activities, stockpiles, and equipping an animal crisis management center	FMARD						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- National Emergency Management Agency
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Environment
- Ministry of Water Resources
- Ministry of Information
- Ministry of Education
- State Emergency Management Agency
- National Medical Stores
- Nigeria Civil Aviation Authority
- Office of the National Security Adviser
- Security Agencies - Nigerian Army, Nigerian Air force, Nigerian Navy, Nigerian Police, NSCDC
- National Supply Chain Integration Programme
- National Animal Disease Information Service

Linking Public Health and Security Authorities

Background: Linking public Health with security authorities is considered vital in the overall global health security agenda. Before now, public health emergencies appear limited to pure civil agencies and authorities in Nigeria with exclusion of a core component from the military and security agencies. However, public health emergencies pose special challenges whether man made or naturally occurring. The involvement of the military in the 2014 Ebola crisis bring to fore the need for synergy between civil and security agencies authorities during public health emergencies. Therefore, it has become imperative for a coordinated approach by linking public health practice with security authorities.

JEE Indicators

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Review, revise and seek assent to old or existing laws (or bills) relating to health security
2. Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms
3. Integrated and continuous capacity development on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements.
4. Development and harmonization of appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response.
5. Reporting and information sharing mechanisms including cross border collaboration

Short Term Goals (2018–2019):

- Establish a national TWG for linking public health and security authorities
- Engage wider stakeholders for simulation exercises
- Carry out table top and ground simulation exercises

Strengths	Limitations
<ul style="list-style-type: none"> Awakened interest in collaboration between public health institutions and security agencies Experience of security agencies in the Ebola outbreak of 2014 The military is actively engaged in providing assistance to ensure that all children are immunized against the poliovirus in order to eradicate polio in Nigeria The ongoing crises in the Northeast Nigeria have seen Involvement of various military formations in responding to outbreaks 	<ul style="list-style-type: none"> Conservative nature of military command and internal control mechanisms Absence of common operation plans across the armed forces and paramilitary services Shortage of skill manpower across the agencies and services Constant and rapid changes in leaderships across the services in political dispensation High cost of simulation exercises across services Getting endorsement of ALL heads of agencies

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Establish a national TWG for linking public health and security authorities	ONSA						
Update old statutory instruments to make them compliant with IHR.	ONSA						
Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms	ONSA						
Integrate and continuously develop capacity on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements	ONSA						
Implement appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response.	ONSA						
Improve reporting and information sharing mechanisms including cross border collaboration	ONSA						

Important Considerations:

- The TWG to be set up will work with all stakeholders for early buy-in
- Table top and real time simulation exercises would be carried out to build on skills and develop relationships among agencies
- Conduct advocacy to have health issues discussed at national security meetings, FEC and ECOWAS levels

Key Participating Agencies:

- Office of the National Security Adviser (Lead)

- Nigeria Centre for Disease Control
- Federal Ministry of Health
- States' Ministry of Health
- Ministry of Defense
- Intelligence Agencies
- Paramilitary Services
- Nigerian Police Force
- Federal Ministry of Agriculture and Rural Development
- National Emergency Management Agency

Medical Countermeasures and Personnel Deployment

Background and Objective: Medical countermeasures are vital to national security and protect nations from potentially catastrophic public health threats. Investments in medical countermeasures create opportunities to improve overall public health. On the other hand, recent pandemics have shown the importance of trained personnel who can be deployed in case of a public health emergency for response. Countries need to have a process in place to receive/send both medical countermeasure assets and health care personnel in the event of public health events of international concern.

JEE Indicators

- R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency
R.4.2 System in place for sending and receiving health personnel during a public health emergency

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Development of a national framework for deployment and receipt of medical countermeasures and HWs during emergencies
2. Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures
3. Including MOUs with regional and international players (countries, manufacturers)
4. Development of the national capacity for production of vaccines and antibiotics

Short Term Goals (2018–2019):

- Development of a national framework for deployment and receipt of medical countermeasures and HWs during public health emergencies by 2018
- Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures 2018–2019
- Identify key regional and international partners (countries, manufacturers) to establish partnerships for the procurement and supply of medical countermeasures by 2019

Strengths	Limitations
<ul style="list-style-type: none">• NEMA, a dedicated agency solely created for response to emergencies has successfully coordinated response to man-made and natural disasters in Nigeria; most states also have State Emergency Management Authority (NEMA).	<ul style="list-style-type: none">• The country needs to develop a comprehensive medical countermeasures and personnel deployment plan• Establishing pre-negotiated agreements and other efficient procurement mechanisms with manufacturers or

<ul style="list-style-type: none"> • The Federal Ministry of Health, through the Nigeria Centre for Disease Control has improved the coordination of national and state public health response to infectious disease outbreaks. • The country has a regulatory body (NAFDAC) that provides guidelines to importation of drugs, consumables and other medical countermeasures in the country. • There is a national supply chain system which has been developed to support health commodities (primarily for reproductive health, AIDS, TB and malaria) which can be leveraged for stockpiling MCMs for PHEICs. • There are nationally developed guidelines that are used by the central medical stores to manage medical commodities that are donated to the country. • An influenza pandemic preparedness plan initially prepared for response to pandemic influenza can be adapted for other pandemic diseases • There is a national plan being developed to manage the logistics for managing medical countermeasures imported into the country. • Nigeria has had rich experience with deploying her technical experts to support outbreaks in other countries such as the EVD response in Liberia and Sierra Leone • The country has a pool of human resources exists that may be mobilized during local and international emergencies • The health professional regulatory bodies that regulate multi professional practice have procedures in place for health professionals who wish to work in the country, these need to be streamlined for receiving external experts during emergencies. 	<ul style="list-style-type: none"> distributors for procuring medical countermeasures during public emergencies will better prepare the country • Engagement in regional and international mechanisms for medical countermeasure procurement, sharing and distributions agreements by the country • A critical list of essential drugs and commodities are needed to stockpile medical commodities for public health emergencies • Agreements for logistics and security for medical countermeasures should be established based on the needs and peculiarities of conflict prone areas across the country • The development of a personnel deployment plan, in collaboration with the professional regulatory authorities to guide future receiving or sending of technical personnel • Minimum competencies for Development of a training curriculum for use in emergencies by deployed personnel • An inventory of technical personnel should be developed. The identified personnel should be appropriately trained, accredited and insured for future deployment to other countries
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Conduct a small table top simulation exercise to clarify roles and responsibilities of stakeholders and finalize the MCM plan	NCDC						
Develop a national framework for procurement, deployment and receipt of medical countermeasures during public health emergencies	NCDC						
Support the development of MOUs with international suppliers of medical countermeasures for public health emergencies	NCDC NAFDAC						
Conduct table top simulation exercise to test the medical countermeasures plan							
Promote the adherence to the national pharmaceutical assurance policy by local manufacturers for items required for MCM that can be procured in country	NCDC						
Develop a personnel deployment plan and legal and regulatory framework for personnel deployment, including sector roles and responsibilities to identify barriers to receiving health personnel during public health emergencies	NCDC						
Review and establish standards of care including the competencies required - including SOPs, domesticate guidelines etc.	NCDC						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agricultural and Rural Development
- National Agency for Food and Drug Administration and Control
- Nigeria Customs Service
- Nigeria Emergency Management Agency
- National Primary Healthcare Development Agency
- Office of National Security Adviser
- Ministry of Interior
- National Supply Chain Integration Programme (NSCIP)
- National Animal Disease Information Service
- Medical and Dental Council of Nigeria
- Nursing and Midwifery Council of Nigeria
- Medical Laboratory Council of Nigeria

- Veterinary Council of Nigeria
- Pharmaceutical Council of Nigeria

Risk Communication

Background and Objective: Will develop a multi-sectoral and all-hazards risk communication strategy and plan with a built-in monitoring and evaluation process. Thus, it will create a multisector working group, develop capacity of communication officers, carry out community engagement/social mobilization, and produce IEC materials. The training will be cascaded to states to prepare communication officers. With further funds, it will be possible to engage 774 LGA social mobilizers, develop video clips and IEC materials on disease reporting for health care workers, and publicize video clips and IEC materials via traditional and social media.

JEE Indicators

- R.5.1 Risk communication systems (plans, mechanisms, etc.)
- R.5.2 Internal and partner communication and coordination
- R.5.3 Public communication
- R.5.4 Communication engagement with affected communities
- R.5.5 Dynamic listening and rumour management

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3

JEE Priority Actions

1. Coordination: Develop a multi-sector and multi-hazard risk communication and emergency plan and implement the communication strategy
2. Capacity Building: Conduct training on multi-sector and multi-hazard risk communication which should include social science.
3. Establish continuous monitoring and evaluation of risk communication activities

Short Term Goals (2018–2019):

- Strengthen capacity of risk communication systems at the national level
- Implement and sustain coordinated event monitoring systems
- Build capacity for public communication at the national and State level
- Strengthen health care reporting system using both the traditional and social media

Strengths	Limitations
<ul style="list-style-type: none"> Communication officers in the Ministry, Department and Agency Public Communication officers at the states and LGAs Legal framework for public communication Budget line for communication in the different MDAs 	<ul style="list-style-type: none"> No holistic approach for risk communication in Nigeria Inadequate communication officers at the National, states and LGAs, Lack of collaboration between MDA Poor inter-sectoral coordination using one health approach Ineffective resource mobilization Poor reporting system at facility level

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop a multi-sectoral and all-hazards risk communication strategy and emergency plan	NCDC						
Develop a Monitoring and Evaluation process to provide feedback into the programme for improvement	NCDC						
Build capacity for risk communication among human, environmental, and animal health workers	NCDC						
Build capacity for coordinated public communication at the National and State level	NCDC						
Establish community outreach programs and regularly conduct information education communication (IEC) materials testing with members of the target audience	NCDC						
Develop strategic framework to integrate fragmented event monitoring at the community level	NCDC						
Develop/strengthen National and State systems to consider communication feedback—including rumors and misinformation from the public—in decision making processes to improve communication response	NCDC						

Important Considerations:

- Effective risk communication and early warning system needs collaborative and participatory approaches within the different levels (especially local level) and actors in outbreak response and control during planning and decision making, and these planned activities are geared towards ensuring this

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health

- Federal Ministry of Agriculture and Rural Development
- National Orientation Agency
- Federal Ministry of Environment
- National Primary Healthcare Development Agency
- Federal Ministry of Information
- Nigeria Police Force
- Nigeria Security and civil Defense Commission
- State Ministry of Health/ social mobilization committees
- Local Government Authorities and LGA mobilization committees

Points of Entry

Background: The Port Health Services Division in the Public Health Department, Federal Ministry of Health, was established in 1925 in response to the outbreak of Plague which began in Europe, and later spread to West Africa to the then Gold Coast (now Ghana) and then Lagos. Port Health Services is charged with the responsibility to prevent the cross-border/ international spread of disease in compliance with the World Health Organization (WHO) International Health Regulations (IHR 2005) through the implementation and application of health measures under the IHR (2005).

JEE Indicators

- PoE.1 Routine capacities established at points of entry
- PoE.2 Effective public health response at points of entry

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Designation of PoEs within the prescription of the IHR (2005)
2. Review the legislation and policies on PoEs and advocate for revision of appropriate legislation e.g. Quarantine law
3. Build/sustain IHR capacities as set forth in Annex 1a and 1b of the IHR (2005)
4. Build technical capacity for port health service
5. Develop the national public health emergency Contingency plan for PoEs

Short Term Goals (2018–2019):

- Designate points of entry by end of December 2018
- Implement protocols, processes, regulations and legislation governing IHR implementation at POE for improved public health preparedness & response
- Improve inter-sectoral coordination using One Health approach
- Convene Stakeholder review meeting to review National PHECP for POE
- Finalize legislation; finalize draft policy & national PHECP

Strengths	Limitations
<ul style="list-style-type: none"> • Nationwide presence • Derive core mandate from the IHR (2005) • Other relevant legislation in place, including ICAO SARPS, CAPSCA, IMO, public health laws, Quarantine Act • Availability of Draft National Port Health Policy • Availability of Draft National PHECP for PoE 	<ul style="list-style-type: none"> • Inadequate resources (human resources, materials, and funds) • Low coverage for surveillance • Inadequate technical capacity among staff • Inadequate number of qualified staff • Weak interoperability of surveillance systems (not all PoE have IDSR in place) • Poor inter-sectoral collaboration and coordination using One Health approach • Outdated national legislation i.e. Quarantine Act (1926) and Nigeria Public Health Law (1986) • National policy not finalized

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Designate PoEs as guided by IHR (2005) Articles 20 and 21	FMoH						
Conduct IHR assessment for core capacity requirements at designated airports and ports (40-50 persons/site) - Site visits	FMoH						
Build/sustain infrastructure for routine services at identified target ports/airports/ground crossings	FMoH						
Review the legislation and policies on PoEs and advocate for revision of appropriate legislation to develop PoE capacities specified in Annex 1 of the IHR e.g. Quarantine law	FMoH						
Develop a National public health emergency contingency plan for PoEs which includes coordinated, multisectoral response actions for access to treatment, isolation, and diagnostics facilities, quarantine of suspect travelers and animals, infection prevention and control, and international alert and response for ill or suspect travelers on board.	FMoH						
Build technical capacity for port health service	FMoH						
Integrate public health emergency contingency plan with other public health response plans at the local/intermediate/national levels and other emergency operational plans at PoE, and disseminated to IHR NFP, relevant sectors, and key stakeholders.	PHS						
Develop triggers and formal communications processes to communicate information on public health threats or other incidents of concern (e.g., chemical, radiological) to IHR NFP, PoE authorities, relevant multisectoral agencies, and stakeholders.	PHS						

Important Considerations:

- Engender & sustain multi-stakeholder collaboration & participation
- Advocacy to governments & partners for requisite support & funding
- Strengthen existing linkages with IDSR
- Advocacy to Human resource, Budget office, Ministry of Finance for increase human capacity at PoE
- Harness existing resources and partnerships for effective coordination & collaboration
- Plan & implement stakeholder review meeting & workshop
- Initiate legislation review process

Key Participating Agencies:

- Federal Ministry of Health (Lead)
- Federal Ministry of Agriculture and Rural development
- Nigeria Center for Disease Control
- National Animal Disease Information Service
- Nigeria Immigration Service
- National Assembly
- Nigeria Agriculture Quarantine Services
- Nigeria Customs Service
- Nigeria Civil Aviation Authority
- Federal Airport Authority of Nigeria
- Federal Ministry of Justice
- Nigeria Airspace Management Agency
- National Emergency Management Agency

Chemical Events

Background and Objective: The chemical event programme was put in place to address health issues related to chemical risk and poison in air, water, waste water, soil sediment, human, plant and animal specimens and products. This plan seeks to further strengthen inter-agency capacity to monitor and respond to chemical events.

JEE Indicators

CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies

JEE 2017 Capacity Level: 1

CE.2 Enabling environment in place for management of chemical events

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Establishment of Poison Information Control and Management Centres (PICMC) in the Country
2. Collaboratively map risk and implement routine surveillance for Chemical events
3. Develop guidelines and protocols for Chemical surveillance with relevant stakeholders
4. Establish required multi-sector capacity for Chemical response
5. Perform an inventory of chemicals with the Toxicology Laboratory of Nigeria in collaboration with INTOX

Short Term Goals (2018–2019):

- Strengthening inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control.
- Strengthen the capacity to monitor chemicals in air, water, waste water, soil, sediments, human and Plant specimen and products for purposes of compliance promotion, research, and enforcement
- Develop risk assessment and management framework for pollution and chemical hazard
- Establish required multi-sector capacity for response to chemical events
- Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX

Strengths	Limitations
<ul style="list-style-type: none"> • The Country has National Guidelines for establishment of poison Information control and management centres in the country. • The National Policy on Chemicals Management determines the roles and responsibilities of ministries, departments and agencies during chemical emergencies. • There is a Chemical Legislation domiciled in relevant agencies such as NAFDAC and National Environmental Standards and Regulations Enforcement Agency. • There is a National Chemical Profile for chemical management in the Country 	<ul style="list-style-type: none"> • Non-existence of Poison Information Control and Management Centre in the Country • Low coverage of data collection on Poison Incidences/Chemical Poisoning inventory of Chemical events in the Primary, Secondary and Tertiary Health Care Facilities. • Chemical emergency guidelines and manuals for control of chemical emergencies should be developed and implemented. • Poor inter-sectoral coordination using One Health approach • A weak multisectoral coordination mechanism in relation to chemical events and response. • Lack of up to date chemical emergency guidelines and manuals for surveillance, assessment and management of chemical events, intoxication and poisoning. • Insufficient fund allocation to address chemical risk mitigation and response for Nigeria. • No inter-agency emergency response squad/team on chemical event • No Chemical Information Exchange Network (CIEN) and chemical database • Legislative and policy mechanisms relating to chemical issues need to be established and updated. • National chemical and surveillance and response system is poor • No budget line for chemical management activities

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control	FMoH						
Strengthen the capacity to monitor chemicals in air, water, waste water, soil, sediments, human, animal and Plant specimen and products for purposes of compliance promotion, research, and enforcement by 2020	FMoH						
Develop risk assessment and management framework for pollution and chemical hazard	FMoH						
Establish required multi-sector capacity for response to chemical events	FMoH Ministry of Mines and Steel Dev.						
Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX	FMoH						
Conduct a study tour of chemical toxicology laboratory in a developed country	FMoH						

Important Considerations:

- Allocation of budget line for chemical events activities
- Synergy among the MDAs implementing Chemical Management activities
- Technical and financial support from WHO and development partners to implement chemical management activities
- Engagement of National consultants to draft chemical events Manuals Establishment of Database for chemical events.
- Put in place effective intersectoral surveillance system on Chemical Events to be put in place

Key Participating Agencies:

- National Environmental Standard and Regulation Enforcement Agency (Lead)
- Federal Ministry of Environment
- Federal Ministry of Health
- Ministry of Mines and Steel Development
- Federal Ministry of Environment
- National Centre for Disease Control
- Federal Ministry of Agriculture
- National Agency for Food and Drug Administration and Control

Radiation Emergencies

Background and Objective: To respond to nuclear and radiological emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies requires collaboration with sectors responsible for radiation emergencies management in Nigeria. Nigeria has a well-developed legislative framework for the control of radiation sources and emergencies. The designated responsible authority for implementation of these regulations in Nigeria is the Nigerian Nuclear Regulatory Authority (NNRA). NNRA works in partnership with the National Emergency Management Agency (NEMA) to coordinate the response to radiation emergencies. A large number of multi-sectoral stakeholders with responsibilities in the preparedness and response to radiation events have been identified and response is coordinated through a National Nuclear and Radiological Emergency Plan (NNREP). The Plan was developed by the National Nuclear and Radiological Emergency Committee set-up by the NNRA in 2004 and it was completed in 2005 and circulated to Stakeholders for comments and inputs. The Plan assigns to NEMA overall co-ordination and to NNRA technical support functions, which begin at the initial notification of a nuclear and or radiological emergency and end when all government agencies have terminated their response activities. Although this plan is regularly reviewed and updated, testing has been limited to internal drills within licensed premises and the plan has never been tested through planned multi-agency exercises or in response to an actual radiation incident.

JEE Indicators

- | | |
|--|-----------------------------------|
| RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies | JEE 2017 Capacity Level: 3 |
| RE.2 Enabling environment in place for management of radiation emergencies | JEE 2017 Capacity Level: 3 |

JEE Priority Actions

1. Test the National Nuclear and Radiological Emergency Plan (NNREP)
2. Improve detection and response capability by training staff, equipping & training designated hospitals and enhancing detection capabilities with radiation monitors and other detection equipment
3. Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point

Short Term Goals (2018–2019):

- Establish and test drills/exercises EPR framework
- Establishment of a high-level policy framework
- Drafting of National Radiation Emergency Plan and implementing procedures (NREP) and/or other plans

- Implementing of EPREV mission recommendations

Strengths	Limitations
<ul style="list-style-type: none"> • Party to various international legal instruments for nuclear and radiological emergency preparedness and response (EPR) • Nigeria has registered its capabilities and functional areas under the IAEA Response Assistance Network (RANET) • A well-developed Legislative Framework for the control of radiation sources, prevention and detection of radiation and nuclear emergencies and other related matters with clear legislation covering licensed applications, transport, disposal and use in specific industries • The Nuclear Safety and Radiation Protection Act 19 of 1995 • Nigerian Nuclear and Radiological Emergency Preparedness and Response • Regulations (draft) • National Nuclear and Radiological Emergency Plan (NNREP). • Institutional framework and stakeholder base in terms of nuclear and radiation • emergency preparedness and response. • Establishment of a competent authority (The NNRA) with the prime responsibility for nuclear safety and radiological protection regulations in Nigeria • Research Centres • National Emergency Management Agency • Enforcement of Emergency Drills/Exercise at Facility levels • National Policies, Strategies, Guidelines and SOPs are developed and regularly • updated for the management of emergencies 	<ul style="list-style-type: none"> • Financial resources (Emergency Fund) to meet the needs for nuclear safety and radiation protection • Lack of equipped laboratories for detection and systematic analysis of radiation emergency situations. • Inadequate public awareness, education and information on ionizing radiation • Lack of motivation and commitment from decision makers/participating organizations to attend meetings for effective coordination and collaboration mechanism. • Lack of systematic programmes for national training course for first responders and for the conduct, evaluation of drills and exercises • Human resource capabilities of relevant stakeholders in emergency response. • Emergency drills/exercises at national level • Upgrading of laboratories for treating/conditioning of waste radioactive sources • Lack of reference healthcare facilities or centers with full capacity to address or treat radiation injuries • Inclusion of radiation basics in medical school's curriculum • Effective National Radiation Emergency Response System • Equipment and capabilities for decontamination • Involvement of the national IHR focal point as a stakeholder in radiation emergencies.

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Test the National Nuclear and Radiological Emergency Plan	NNRA						
Build capacity for radiation and nuclear detection and response among human health workers	FMOH NNRA						
Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point.	NNRA						

Key Participating Agencies:

- Nigerian Nuclear Regulatory Authority (Lead)
- Federal Ministry of Science and Technology
- National Emergency Management Agency (NEMA)
- Nigeria Atomic Energy Commission (NAEC)
- MDAs
- Military and paramilitary Services
- Security Agencies
- Research Centres in Zaria, Gwagwalada-Sheda, Ile-Ife and Ibadan
- Designated Teaching Hospitals

Annex 1: Costed NAPHS (2018–2022)

TECHNICAL AREA	2018	2019	2020	2021	2022	TOTAL (NAIRA)	TOTAL (USD)
National Legislation and Financing	23,466,000	254,974,050	47,648,000	47,648,000	47,648,000	406,134,050	1,332,898
IHR Coordination and National IHR Focal Point Functions	61,461,410	300,717,534	120,422,970	120,422,970	120,422,970	723,447,854	2,374,296
Antimicrobial Resistance (AMR)	140,225,500	343,203,400	287,999,000	253,291,800	183,432,800	1,208,152,500	3,965,056
Zoonotic events and the human-animal interface	40,598,284	584,256,400	27,183,000	6,725,000	6,725,000	665,487,684	2,184,075
Food safety	15,356,000	255,343,450	122,085,200	372,648,400	33,740,000	799,173,050	2,622,819
Biosafety and biosecurity	-	172,687,728	1,710,682,228	40,067,428	59,415,228	1,982,852,612	6,507,557
Immunization	13,100,796,656	34,941,010,214	12,001,822,276	10,700,605,629	9,866,215,056	80,610,449,830	264,556,777
National Laboratory System	1,229,120,090	3,846,410,232	1,707,648,454	1,935,568,050	1,859,048,850	10,758,995,676	35,310,127
Surveillance	184,696,400	3,074,573,240	2,173,540,800	640,702,000	590,702,000	6,664,214,440	21,871,396
Reporting	154,691,200	1,784,058,028	157,343,000	102,847,000	102,847,000	2,249,936,228	7,384,103
Human Resources/Workforce Development	1,009,135,607	5,717,063,801	1,535,827,307	1,556,144,807	1,535,827,307	11,353,998,829	37,262,878
Preparedness	11,873,800	3,245,888,206	3,002,384,000	3,002,884,000	2,002,384,000	11,265,414,006	36,972,150
Linking Public Health and Security Authorities	33,845,200	45,985,200	31,446,000	31,446,000	31,446,000	174,168,400	571,606
Emergency Response Operations	365,810,990	1,317,717,300	201,202,400	201,202,400	16,800,000	2,102,733,090	6,900,995
Medical Countermeasures and Personnel Deployment	5,665,000	82,811,600	23,543,050	57,632,000	15,784,000	184,715,650	606,221
Risk Communication	14,832,000	263,355,561	148,371,100	80,830,400	14,019,200	521,408,261	1,711,218
Points of Entry (PoE)	21,617,600	742,177,100	274,872,400	264,582,400	-	1,303,249,500	4,277,156
Chemical events	-	320,870,800	98,877,700	108,526,600	96,346,800	624,621,900	2,049,957
Radiation emergencies	-	58,973,200	105,783,000	18,486,000	18,486,000	201,728,200	662,055
TOTAL	16,413,191,737	57,352,077,043	23,778,681,885	19,542,260,884	16,601,290,211	133,800,881,760	439,123,340

Implementation Plans for 2018-2019, by Technical Area

This section describes high-level “strategic actions” selected by technical area groups for implementation during 2018–2019, based on the prioritization process described earlier. The activities included in this section include those with funding identified and those with outstanding resource needs. Each of these high-level actions consists of more detailed activities, which are provided in full in Annex 5. The Annex also indicates which detailed activities have existing resources. The lead MDA is indicated for high-level actions, although multiple MDAs might cooperate on a given activity.

National Legislation, Policy, and Financing

Background and Objective: Working towards ensuring that adequate statutory and administrative provisions for the implementation of IHR are in place by December 2019, including completing pending legislative actions for NCDC Bill.

JEE Indicators

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)

JEE 2017 Capacity Level: 1

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)

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations
2. Advocate for revision of legal instruments and policies to address existing gaps and challenges within the national administrative environment
3. Completion of pending legislative actions (NCDC Bill, 2017; Public Health Bill, 2013) to give key public health institutions (e.g. Nigeria Centers for Disease Control) the legal mandate needed to accomplish national goals
4. National government should articulate specific policies, guidance, and guidelines to States and Local Governorate Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014)
5. Streamline roles and responsibilities in the various Ministries and Agencies that have responsibilities in IHR implementation to minimize duplication within their respective mandates

Short Term Goals (2018–2019):

- Expand public awareness on health accountability
- Increase CSOs involvement in the NCDC Bill and Review of National Health Act (2014)
- Expand States funding of Health
- Implement protocols, processes, regulations and legislation governing Health Financing and Funds

Strengths	Limitations
<ul style="list-style-type: none"> • Present throughout state health institutions • Legal precedent • Expertise, especially in identifying and developing relevant policies framework for health sector gaps that impend compliance with IHR • Budget line exists in several key agencies, but not sufficient funding for health, and not sufficient health funding participation by all the States and LGAs, due to weak political will 	<ul style="list-style-type: none"> • Low coverage of legislative and financing gaps implementation at the States and LGAs • Poor health funding mostly at the State levels • Lack of IHR Focal Persons and Desk Officers in MDAs due to MDAs pooling system • Poor inter-sectoral coordination in information sharing on new policies

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals.	NCDC						
Review of the “National Health Act of 2014” to define roles/responsibilities of key public health institutions across the three tiers of government.	NCDC						
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	NCDC						
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	NCDC						
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014)	NCDC						
Review the existing animal health laws, regulations, and policies	FMARD						
Conduct sensitization workshop for the updated PVS with the animal health officers in DVPCS and state DVS	FMARD						

Important Considerations:

- To avoid delay of the NCDC Bill, increase public relations and CSOs pressure on Senate Committee on health
- Reward States that participant in IHR to increase commitment of state government, and States participation will be sought to sustain all investments made through the implementation of the NAPHS
- Support key meetings as stated in the Costing Budget to facilitate the LP&F process

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Finance
- Federal Ministry of Justice
- National Assembly
- Federal Ministry of Agriculture and Rural Development

IHR Coordination

Background and Objective: Strengthen IHR NFP for effective coordination, communication and advocacy for IHR implementation. There will be establishment of information exchange system for the parties involved in IHR, using modern electronic communications, as well as a biannual stakeholders meeting. With additional funds, further activities to integrate human, animal, and food sectors will be initiated.

JEE Indicators

P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Establish legislative foundation for NCDC as National Focal Point
2. Establishment of a national One Health platform for intersectoral collaboration of outbreak responses that involve the human health, animal health and environmental sectors
3. Develop all hazard standard operational procedures for IHR coordination between IHR NFP and stakeholders

Short Term Goals (2018–2019):

- Establish multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and responsive systems for effective implementation of the IHR (2005)
- Establish a national One Health platform
- Coordinate nationwide resources, including sustainable functioning of a national IHR focal point – a National Centre for IHR (2005) communications which is a key requisite for IHR (2005) implementation – that is accessible at all times

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none">• National IHR focal points responsible designated and accessible 24/7• Multisectoral stakeholders identified across all hazards• SOP exists to guide coordination between the IHR NFP and relevant sectors• Submission of annual report on the status of the IHR implementation	<ul style="list-style-type: none">• Delay in presidential assent to the bill establishing NCDC• Information exchange system for communication between the relevant stakeholders has not been developed• There is an interaction between human and animal sectors but not optimal. Therefore, there is a need to establish one Health multi-sectoral group for IHR.

• Nigeria NFP is a recognized leader in West Africa						
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals. (See National Legislation)	NCDC						
Establish One Health platform at the national level, state level, and LGAs	NCDC						
Develop All-hazards Standard Operating Procedures (SOPs) and guidelines for IHR coordination between IHR NFP and stakeholders	NCDC						
Conduct biannual and annual IHR review meetings	NCDC						
Conduct Performance of Veterinary Services (PVS) gap analysis assessment	FMARD						

Important Considerations:

- Development of a concept note that provides a model for communication between various MDAs under IHR coordination, and identifies stakeholders
- IHR NFP to write the stakeholder agencies and ask them to identify focal persons for IHR coordination
- Convene the technical working group on One Health and meet bi-annually
- IHR-related stakeholders to identify existing SOPs pertinent to IHR coordination and communication (IHR NFP already has SOPs available for coordination, communication between IHR NFP and other stakeholders, and notification); SOPs on the side of the other stakeholders need to be developed

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Finance
- Federal Ministry of Environment

Antimicrobial Resistance

Background and Objective: Antimicrobial Resistance (AMR) has recently gained worldwide recognition as the World health assembly endorsed global action plan to tackle AMR. The AMR Coordinating Body was established at Nigeria Centre for Disease Control by Honourable Minister of Health. The One Health AMR Technical Working Group was formally inaugurated at NCDC to conduct situation analysis and develop a National Action Plan for AMR. The TWG comprises of key members representing animal health, food and animal production, human health and environment sector.

JEE Indicators

- P.3.1 Antimicrobial resistance detection
- P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens
- P.3.3 Health care-associated infection (HCAI) prevention and control programmes
- P.3.4 Antimicrobial stewardship activities

JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Implement the Nigeria NAP on AMR
2. Strengthen the "One Health" components in the Nigeria NAP on AMR
3. Strengthen stewardship on antimicrobial use in humans and food animals

Short Term Goals (2018–2019):

- Report human health AMR data to GLASS before 2019
- Identify priority organisms, set up a national surveillance system for AMR and commence surveillance in animals
- Standardize AST guidelines for AMR surveillance in Nigeria
- Implement protocols, processes, regulations and legislation governing AMR and AMU data reporting
- Conduct a nationwide baseline behavioural study on AMR awareness and use findings to develop and disseminate an AMR communication among One-health stakeholders
- Train human and animal health workers on how to detect antibiotic resistant pathogens, use antibiotics rationally and improve biosecurity in animal production

Strengths	Limitations
<ul style="list-style-type: none"> • Conducted Situation Analysis and developed National Action Plan • Designation of UCH, Ibadan as AMR National Reference Laboratory for Human Health • Enrollment of the AMR National Reference Laboratory for Human Health and 2 human health surveillance sites to GLASS and reporting of data nationally to NCDC and GLASS • Procurement of EQA for AMR National Reference Laboratory and 2 human health AMR surveillance sites • Development of AMR surveillance guidelines for human health • Revised Standard Treatment Guidelines and Drug Policy for human health to include AMR • NCDC coordinated the quarterly meeting of the National One-health AMR TWG meeting and commenced process for inaugurating the National AMR Steering Committee • NVRI designated as AMR National Reference Lab and has an antimicrobial working group constituted to coordinate AMR work • Reporting AMU to the OIE Global database using option one • AMR issues have been captured in the amended Animal Disease Control Act in the National Assembly • Recently revised Veterinary Formulary now available for use in the country • National Animal Disease Information and Surveillance system in place and can report to AU-IBAR on the ARIS 2 platform • National Residue Monitoring Program for aquaculture in Nigeria and diagnosis is carried out at Department of Veterinary Public Health and Preventive Medicine, University of Ibadan 	<ul style="list-style-type: none"> • Non-availability of dedicated funding for AMR implementation and control activities in one-health sector • Paucity of personnel for AMU/AMR Surveillance in One-health sector and available personnel requires retraining on AMR/AMU Surveillance • Absence of AMR/AMU Surveillance protocols and guidelines in the One-health sector • Poor public awareness and weak coordination of AMR awareness activities in One-health sector • Lack of National data on AMR that can be easily accessed • No existing channel for information sharing among stakeholders • Lack of appropriate data capture, equipment and audit • Absence of studies on economic impact of AMR in Nigeria and poor coordination of research on antibiotic use • Paucity of infrastructure for AMR tracking and audit

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Establish a national steering committee to advise the Honourable Ministers	NCDC						
Convene regular meeting with all Departments/parastatals to discuss the report, the quarterly AMR activity mapping meeting and areas of integration between partners and agencies	NCDC						
Strengthen the “One Health” components in the Nigeria National Action Plan on AMR.	FMARD						
Establish and implement a Monitoring & Evaluation framework for AMR surveillance	NCDC						
Create a database for AMR and AMU Surveillance from human health facilities, farms, feed mills, vet clinics and environment	FMARD NCDC						
Establish and integrate national surveillance system on AMR across human, animal and environment	NCDC						
Conduct AMR diagnostic capacity assessment of laboratories to selected sentinel sites for reporting into GLASS across human, animal and environmental health institutions and designate AMR National Reference Laboratory for human and animal health	NCDC						
Establish an AMR Reference Laboratory and network system for animal and environmental health laboratories	FMARD						
Strengthen HCAI surveillance and prevention programs	NCDC						
Assess infection prevention and control facilities and advocate for resources to support IPC nationally and in all healthcare facilities	NCDC						
Introduce IPC programme in veterinary practice at the veterinary hospitals/clinics and biosecurity at farm level in aquatic and terrestrial animal husbandry.	FMARD						
Improve hand hygiene, food hygiene and waste disposal across all sectors	MoEnv						
Develop and Implement antimicrobial stewardship programs across human, animal and environmental health	NCDC						
Promote optimal prescribing and dispensing of antimicrobials in humans and animals and support participation of tertiary health facilities in Nigeria in AMS point prevalence survey	FMARD						
Conduct Assessment (Survey) of current practices of AMU in humans and animals	NCDC						
One-day advocacy visit to policy makers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation)	NCDC						
Conduct a nationwide baseline behavioural study on AMR awareness, KAPP. Use baseline findings to develop and disseminate AMR SBCC materials in English, Pidgin Hausa, Igbo and Yoruba	NCDC						
Develop and print risk communication tools for AMR awareness in Humans and animals	NCDC						
Organise seminars and trainings for relevant stakeholders such as media, PPMV, animal health inspectors, clinical veterinarians, livestock producers, aquaculture farmers, toll milers, feed manufacturers, etc.	NCDC						

Incorporate AMR activities into existing WASH programs within NPHCDA and Family health and other agencies	NCDC							
Conduct nationwide active surveillance for AMR in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops	FMARD							

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural development
- Federal Ministry of Environment
- Professional societies
- Regulatory bodies

Zoonotic Diseases

Background and Objective: The increase and expansion in the human population globally has significantly impacted on the interconnection of people, animals, and the environment by increasing the contact between humans and wild animal habitats. This ultimately increases the risk of exposure to new pathogens. Most of emerging diseases in human are zoonotic. It is likely that zoonotic diseases will continue to be threats to public health especially in areas where human population is dense, and bio-diversity is high, as in many parts of Nigeria. To detect, prevent and response timely, improvement in animal disease surveillance system will require developing the list of national priority zoonotic diseases, building the technical capacities of animal health workforce in surveillance and laboratory diagnosis with a multi-sectoral approach to coordinate the response of outbreaks of zoonotic diseases.

JEE Indicators

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens

JEE 2017 Capacity Level: 2

P.4.2 Veterinary or animal health workforce

JEE 2017 Capacity Level: 3

P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Enhance collaboration between Ministry of Health and Ministry of Agriculture at the national, state and district levels
2. Strengthen linkage between public health and animal health laboratories
3. Enhance surveillance of zoonotic diseases (including consensus building meetings of appropriate stakeholders to identify the top priority zoonotic diseases to include in zoonotic disease surveillance system)

Short Term Goals (2018–2019):

- Surveillance system in place for priority zoonotic diseases/pathogens
- Increase animal health workforce capacity at national level and at least 50% of states
- Establish a multi-sectorial mechanism for coordinated response to outbreaks of zoonotic diseases by human, and animal sectors at national and state levels

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> The willingness of major stakeholders to collaborate in line with the 'One Health' approach Existing collaboration between human and animal sectors on control of certain zoonotic diseases Skilled professionals Public health training of veterinarians by FELTP, McArthur Foundation and Veterinary Council of Nigeria A policy document and guidelines for response to some key zoonosis exist 	<ul style="list-style-type: none"> Poor intersectoral mechanism in place for coordinated response to zoonotic diseases by human and animal health sectors in the national and states Undeveloped national surveillance plan for priority zoonotic diseases A robust surveillance system for the highest priority zoonotic diseases in animals is lacking in the Ministry of Agriculture Inadequate technical capacity among stakeholders Lack of a dedicated budget line for One Health activities Low level of public awareness, resulting in reluctance to accept necessary behavioural or cultural changes that will improve health

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop integrated zoonotic disease surveillance system	FMARD						
Develop risk mapping for four priority zoonotic diseases using one health approach	FMARD						
Advocate for the recruitment and deployment of animal health epidemiologists into the Public Health sector at the State and national levels	FMARD						
Strengthen of laboratory capacity for detection for priority zoonotic diseases/pathogens	FMARD						
Strengthening of technical capacity of animal health workforce (zoonotic disease control, communications, RDTs, etc)	FMARD						
Build technical capacity for zoonotic disease of Disease Surveillance and Notification Officers and Animal Surveillance Officers at LGA level	FMARD						
Update list of top priority zoonotic diseases through a "One Health" deliberation process (<i>last reviewed 2017</i>)	FMARD						

What will it take to do this:

- Increased collaboration and cooperation between key stakeholders through high level advocacy and political commitment
- The establishment of a One Health Technical working group
- Creation of a budget line for control of priority zoonotic diseases
- Incorporating or harmonising the funding and implementation of activities into the on-going efforts of the various ministries and parastatal.
- Improved information sharing between human and animal health

Key Participating Agencies:

- Nigeria Centre for Disease Control (Co-Lead)
- Federal Ministry of Agriculture and Rural Development (Co-Lead)
- Federal Ministry of Health
- Federal Ministry of Environment

Food Safety

Background and Objective: The National Policy on Food Safety & its Implementation Strategy (NPFSIS) was developed in 2014 to modernise the food safety system and structure in the country, reduce the incidence of foodborne diseases, and improve economic productivity. The National Food Safety Management Committee (NFSMC) was inaugurated to coordinate all food safety related programs in the country. Further strengthening these mechanisms will enhance food safety, detection, and response efforts.

JEE Indicators

P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease
2. Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response
3. Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels

Short Term Goals (2018–2019):

- Establish a functional Foodborne Illness Detection and Response Collaborative team by March 2019
- Development and validation of National Drug Residue Monitoring Plan by end of June 2020
- Enhance the NADIS through the development and validation of checklists, SOPs and guidelines to ensure proper surveillance of foodborne diseases of animal origin by 2020
- Development of a fully functional interactive food safety website by December 2019
- Begin a nationwide assessment of Laboratory capacity in detection of foodborne diseases by September 2019

Strengths	Limitations
<ul style="list-style-type: none">• Presence of a coordinating National Food Safety Management Committee• Presence of a National Food Safety & Quality Bill at the National Assembly	<ul style="list-style-type: none">• Poor/weak coordination, collaboration and communication between MDAs involved with food safety

<ul style="list-style-type: none"> Presence of INFOSAN Emergency Contact Point and Focal Points across MDAs Investigation of outbreaks are usually timely Presence of a regional diagnostic vet laboratory (NVRI) 	<ul style="list-style-type: none"> Inadequate technical capacity among food safety regulators, food handlers, and laboratory technicians on foodborne investigations Ineffective risk management capacity for food safety Lack of a multisectoral investigation and response to food safety emergencies Non-allocation or poor allocation of funds to existing budget lines in key MDAs
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease	FMARD FMOH						
Develop a food safety website	FMOH						
Conduct a national assessment of food safety laboratory capacity	FMOH						
Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response	FMOH FMARD						

What will it take to do this:

- Regular meetings of NFSMC to better coordinate food safety system and structure effectively and adequately
- Improving the effectiveness of National Animal Disease Information System (NADIS) as well as a fully established and functional Foodborne Illness Detection and Response Collaborative team
- Improved capacity of foodborne disease detection through the development of relevant SOPs for sample collection and analysis
- Support of line MDAs and in having a harmonised, effective and efficient food safety system and structure
- Support for development partners and the Organised Private Sector (OPS) will be essential to improving the Food Safety System
- The commitment of State Governments will be sought to sustain all investments made through the implementation of the NAPHS

Key Participating Agencies:

1. Federal Ministry of Health (Lead)

2. Federal Ministry of Agriculture and Rural development
3. Federal Ministry of Environment
4. Federal Ministry of Science & Technology
5. National Agency for Food and Drug Administration and Control – (INFOSAN FP)
6. Nigeria Centre for Disease Control
7. Standards Organisation of Nigeria

Biosafety and Biosecurity

Background and Objective: With the frequent occurrence of insurgency and terrorism all around which might prompt the use of biological agents put public health systems in check to develop robust surveillance systems and disease notification systems for early detection reducing mortality and morbidity. Biosafety refers to the implementation of laboratory practices and procedures; specific construction features of laboratory facilities, safety equipment, and appropriate occupational health programs when working with potentially infectious microorganisms and has other biological hazards. Effective biosecurity measures require the cooperation of a wide range of experts such as scientists, policy makers, security engineers and law enforcement.

JEE Indicators

P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities

JEE 2017 Capacity Level: 1

P.6.2 Biosafety and biosecurity training and practices

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Biosecurity Legislation needs to be enacted
2. Development of a multi-sectoral, national coordination, oversight and enforcement mechanism for response to and control of dangerous pathogens
3. Adequate funding and training be provided for Biosafety and Biosecurity programs
4. Perform an audit of institutions and locations with dangerous pathogens; and toxin control in order to develop a plan for consolidation

Short Term Goals (2018–2019):

- Transmit a draft legislative bill on laboratory biosafety and biosecurity, including sustainable funding mechanisms before the end of 2019
- Initiate a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens
- Perform an audit of institutions and locations with dangerous pathogens and toxin control in order to develop a plan for consolidation as well as gaps in current biosafety and biosecurity training

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> • Availability of biosafety regulation and regulatory authority • Established biosafety policies for the human and agricultural sectors • Institutional biosafety officers and manuals in some of the facilities • Availability of Biosafety Level-2 laboratories in the country 	<ul style="list-style-type: none"> • Lack of biosecurity policies and programmes with dedicated funding • Absence of emergency response plan and monitoring system for biosafety and biosecurity involving dangerous pathogens • Consolidation of institutions and locations with dangerous pathogens and toxin control with training support to reduce the risk of theft or release of dangerous pathogens. • Sub-optimal institutional biosecurity programmes and national coordination of biosecurity activities • Depleted storage and inadequate logistic mechanisms for biosafety and biosecurity

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop multisectoral legislation and regulations on biosafety and biosecurity, including sustainable funding mechanisms	ONSA						
Establish a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens	ONSA						

Important Considerations:

- Relevant agencies should synergize their activities to avoid overlapping functions; responsibilities of collaborating agencies should be clarified
- Relevant agencies should input funding component of activities into their agencies annual budget to fund the above activities as well as capacity development of their workforce in order to attain global standard for disease monitoring and safety

Key Participating Agencies:

- Ministry of Defence (Lead)
- Federal Ministry of Science and Technology
- National Biotechnology Development Agency (Co-Lead)
- Federal Ministry of Health

- Nigeria Centre for Disease Control
- Office of the National Security Adviser
- National Biosafety and Management Agency

Immunizations

Background: The Expanded Programme on Immunisation (EPI) has been operational in Nigeria since 1979 and has incrementally increased the number of vaccines on the routine schedule. The programme is responsible for the purchase, distribution and retrieval of vaccines across the country, in addition to oversight of the routine immunization programme and supplemental immunization activities and reactive vaccination campaigns. Immunizations, including outbreak response immunizations, are overseen by the National Primary Health Care Development Agency (NPHCDA), whereas surveillance for vaccine-preventable diseases is overseen by the Nigeria Centre for Disease Control (NCDC).

The immunizations programme differs somewhat in implementation when compared to other IHR technical areas. A fully costed strategic plan, the Nigeria Strategy on Immunization and Primary Health Care Systems Strengthening (NSIPSS) has been developed, and its activities and objectives have been carried forward directly in the NAPHS. Efforts to strengthen surveillance and laboratory confirmation of vaccine-preventable diseases including measles, rubella, and yellow fever are captured under the surveillance and laboratory plans.

NSIPPS 2018–2019 Objectives:

1. Reduce Measles incidence to 5 cases per million by reaching at least 82% RI and 95% SIA National Coverage by 2023
2. Reduce Measles incidence to less than 1 case per million by reaching at least 91% RI and 95% SIA National Coverage by 2028
3. Ensure vaccines/commodities are transported in good quality to zonal stores, states, and ultimately healthcare facilities nationwide on time the right quantity
4. Distribution and transport management (national to states)
5. Put in place mechanism for the procurement of the vaccines
6. Improve the availability and functionality of cold chain at LGA and ward levels

JEE Indicators

- P.7.1 Vaccine coverage (measles) as part of national programme
P.7.2 National vaccine access and delivery

JEE 2017 Capacity Level: 3

JEE 2017 Capacity Level: 4

JEE Priority Actions

1. Dedicate resources to information management system for vaccine data, in order, to ultimately improve data quality (completeness, timeliness and reliability of administrative data)
2. Develop strategies to improve national coverage, especially focusing on historically low coverage areas
3. Include vaccines for zoonotic disease, particularly in special populations such as health care workers and veterinarians

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> • Use of the primary healthcare structure to deliver vaccines to every part of the country including outreach services, mass/nationwide vaccination campaigns and outbreak response • A laid down structure through the Interagency Coordinating Committee (ICC) and the respective technical working groups to coordinate the activities off all stakeholders working in the Immunization space • Dedicated RI (NERRIC) and SIAs (NMTCC) technical committees to address immunization coverages and gaps • Budget line present in key agencies and National Health Act • Expertise, especially in polio eradication system 	<ul style="list-style-type: none"> • Low immunization coverage especially in hard to reach and security compromised areas • Vaccine hesitancy/non-compliance. • Poor attitude and inadequate capacity of health care workers • Poor implementation of Primary Health Care Under One Roof (PHCUOR) strategy • Inadequate cold chain capacity at all (national, zonal, state LGA and ward) levels

NSIPSS Strategic Actions for 2018–2028

1. Strengthen immunization data systems and build capacity of health care workers at all levels to use and interpret analytics from NAVISION software platform to address stock challenges
2. Increase demand for immunization using demand creation strategies
3. Improve service delivery at PHC and outreach sites
4. Conduct follow-up Measles Vaccination campaign targeting children 9–59 months in accordance with the National Measles Elimination strategy (2019–2028)
5. Dedicate resources to information management system for vaccine data to ultimately improve data quality (completeness, timeliness and reliability)
6. Distribute quarterly allocation of vaccines and devices to zones and states (for routine immunization)
7. Improve forecasting and demand planning for vaccines
8. Improve Cold chain management and temperature monitoring and control, including curative maintenance of cold rooms in NCSC and zonal stores
9. Develop a harmonized, multi-sectoral, interconnected, surveillance system.

Important Considerations:

- Improve collaboration between government, partners, and private sector actors to harmonize efforts and reduce duplication of activities
- Increase advocacy and resource mobilization efforts to get sustainable funding for activities
- Establish and Implement a strong monitoring, evaluation and accountability framework to track progress of activities
- Encourage the use of PHCUOR guidelines to improve planning and delivery for health services

Key Participating Ministries, Department and Agencies:

- Federal Ministry of Health
- Nigeria Center for Disease Control
- National Primary Health Care Development Agency (Lead)

National Laboratory System

Background: The laboratory was introduced into the Nigeria's Integrated Disease Surveillance and Response (IDSR) Strategy in 2001 as a veritable component to support care and management of cases as well as mitigate impact through appropriate screening, identification and confirmation of agents of diseases of public health importance as well as monitor disease trends, changes in pathogen profile and evaluate progress of intervention among others. There is increasing need of the public health laboratories to fulfil its other responsibilities of protecting the health of the nation through ensuring food and environmental safety as well as collaborating and communicating with the animal health component to prevent/reduce zoonotic transmission through appropriate diagnosis.

Expanding laboratory capacity is important for an effective response network which, in turn, enhances the efficiency of operation and geopolitical zone coverage. Prompt diagnosis of specimens is predicated not only on meeting up with the turn-around-time (TAT) but also ensuring that quality specimens are collected, promptly transported under biosafety and biosecurity conditions and tested using competent hands and appropriate procedures that guarantee accuracy and reproducibility. These qualities form the basis of the operation of the National Reference Laboratory under the NCDC while also striving to integrate other components (animal health, environment health and food safety) that make up one health response to achieve total health and well-being of the population.

JEE Indicators

- D.1.1 Laboratory testing for detection of priority diseases
- D.1.2 Specimen referral and transport system
- D.1.3 Effective modern point-of-care and laboratory-based diagnostics
- D.1.4 Laboratory quality system

JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Enhance the laboratory infrastructure and resources available to sustain an integrated national laboratory network
2. Implement Strengthening Laboratory Management Toward Accreditation (SLMTA) Program for the national laboratory network with a focus on biosafety, biosecurity and quality assurance
3. Develop a robust sample and specimen transportation system which ensures an effective cold chain
4. To adopt basic laboratory information sharing system among the relevant stakeholders

Short Term Goals (2018–2019):

- Expand/maintain lab capacity at the national reference lab network to be able to conduct 6 of 10 WHO core tests, activate testing on food safety and strengthen diagnostic capacity of veterinary laboratory
- Institute an effective system for collection, packaging and transport of biological specimens
- Adopt and implement one Laboratory Information sharing system by all laboratories

Strengths	Limitations
<ul style="list-style-type: none"> • Existence of three-tiered laboratory structure • Availability of specialized laboratories across the country with capability to render public health care services • Existence of a National Reference Laboratory positioned to coordinate National Public Health Laboratory response • Existence of a national network of laboratories and collaborating centers with capacity for horizontal and vertical expansion • Existence of laboratories for diagnosis of animal specimens (e.g. National Veterinary Research Institute, Vom) with capacity and readiness for collaboration • Ready availability of human resources for laboratory with basic laboratory knowledge and improvable skill • Collaboration and support from national and international partners to promote good laboratory practices, accreditation, quality management and training 	<ul style="list-style-type: none"> • Inadequate laboratory participation in the referral system embodied in the current laboratory network • Anomalous supply of laboratory reagents and consumables often leading to stock-outs • Weak national public health laboratory information management system • Ineffective system for collection, packaging and transport of biological specimens • Lack of skill in modern diagnostic technique among laboratory specialists in some facilities • Few laboratory facilities participating in External Quality Assurance programmes • Weak collaboration on food safety issues and on zoonotic disease diagnosis and information sharing with the animal sector • The non-accreditation of existing public health laboratories

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Identify public health Laboratories that constitute the network and create database	NCDC						
Develop plan with FMOH, FMARD, and other stakeholders for developing the capacity needed to meet diagnostic and confirmatory requirements for priority diseases in human and animal health laboratories	NCDC						
Develop strategy to set up a central Repository and coordinated dissemination/distribution of core reagents and consumables of the priority diseases to the laboratory network to improve existing supply chain	NCDC						
Adopt and implement one Laboratory Information sharing system by all laboratories	NCDC						

Establish a comprehensive, integrated National policy, guidelines, and SOPs on sample management for human, animal, food, and environmental	NCDC						
Establish a specimen transportation system at all levels	NCDC						
Build sample management capacity for public health network laboratories for priority diseases	NCDC						
Establish monitoring and evaluation mechanism for collection, packaging, and transport of specimens	NCDC						
Provide refresher training for network labs to develop technical competency	NCDC						
Implement SLMTA in all labs in the public health laboratory network	NCDC						
Register NCDC & VTH labs in the MLSCN EQA program.	FMARD						
Laboratory infrastructure upgrades and procurement	FMARD						
Establish a mechanism for biological specimen transportation and disposal for VTH and NVRI	FMARD						

Important Considerations:

- The recognition of the National Reference Laboratory as the coordinating arm of all national public health laboratories and collaborating centers by the laboratory stakeholders
- A strong understanding and collaboration between human, animal and environmental laboratories
- Pooling of resources of NCDC and partners together to achieve holistic strategy at specimen transportation
- Work with regulatory agencies to provide framework for the accreditation of laboratories within the network
- Collaboration with EQA-providing institutions to launch EQA in the network

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Health (Co-Lead)
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Environment
- Medical Laboratory Science Council of Nigeria
- Nigerian Institute for Medical Research
- National Veterinary Research Institute
- National Institute for Pharmaceutical Research
- State Ministries of Health
- All Local Government Areas

Surveillance and Reporting (Combined Technical Areas)

Background and Objective: The Integrated Disease Surveillance and Response (IDSR) strategy was adopted in 2006 in Nigeria. The system was key in Nigeria's control of the 2014 Ebola outbreak while Animal Disease Information and Surveillance (NADIS) is a strategy adopted in 2006 for the surveillance/reporting of major trans-boundary animal diseases and zoonosis through the Animal Resources Information System-ARIS platform. It was the main system used in the eradication of Rinderpest 2005 and the control of highly pathogenic avian influenza outbreak in 2010. The NAPHS provides an opportunity to plan for surveillance system strengthening, including integration and expansion of animal and human health surveillance systems and strengthening IDSR implementation.

JEE Indicators

- D.1.1 Indicator- and event-based surveillance systems
- D.2.2 Interoperable, interconnected, electronic real-time reporting system
- D.2.3 Integration and analysis of surveillance data
- D.2.4 Syndromic surveillance systems
- D.3.1 System for efficient reporting to FAO, OIE and WHO
- D.3.2 Reporting network and protocols in country

JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Systematically build capacity for surveillance at all levels (HF, LGA, state and national), expanding surveillance to all health facilities including private facilities for both human and animal health
2. Develop real-time surveillance capability for animal health and promote a ONE-Health approach.
3. Establish linkage between the surveillance and public health laboratory systems
4. Establish an electronic reporting system that is inter-operable and integrated to other systems and also linked to DHIS2
5. Enhance monitoring and evaluation capacity for IDSR, including supportive supervision and data quality assessment
6. Strengthen and improve consistency, completeness (including from private sector) and timeliness in reporting from the local and state levels
7. Establish a framework for multi sectoral coordination in reporting and communication that will enable information sharing
8. Establishment of central data base that integrates data from all sectors for all 41 priority diseases under IDSR
9. Instituting monitoring and evaluation of reporting against set IDSR and IHR indicators

Short Term Goals (2018–2019):

- Expand existing human and animal health surveillance systems to 80% of private health facilities/private Vet. Clinics and 80% of public health facilities/Vet. Tech. Hospitals by 2021 (100% States, 80% LGAs, 80% health facilities)
- Implement human and animal health surveillance system at health facility level in 100% of states, 80% of LGAs, and 80% of public health facilities by 2021
- Link human health and animal health surveillance systems to DHIS 2 by December 2020
- Enhance the performance of the IDSR/ARIS and technical capacity of the workforce by 2021
- Implement protocols, processes, regulations and legislation governing reporting

Strengths	Limitations
<ul style="list-style-type: none"> • IDSR is present throughout state health institutions while NADIS has 37 State Field Epidemiology officers and more than 600 surveillance points nationwide • Legal precedent • Reports are received electronically on weekly and monthly • Expertise, especially in Polio eradication system • Budget line exists in several key agencies • Central diagnostic lab for the key agencies 	<ul style="list-style-type: none"> • Low coverage for surveillance especially in private health care facilities, private Veterinary clinics / Veterinary Teaching Hospitals • Inadequate technical capacity among health care workers, • Lack of interoperability of surveillance systems • Poor inter-sectoral coordination using one health approach • Lack of integration of the wildlife surveillance into ARIS

Important Considerations:

- To avoid duplication and ensure synergy of efforts, the funding and implementation of these activities will be harmonized with on-going efforts
- Support from all partners will be harmonized to provide synergy and where necessary, aspects of the plan will be implemented using private and non-governmental organization with expertise in the areas
- Where data is unavailable, well-designed assessments will be conducted to generate data to establish a base-line to guide implementation
- To enable expansion of the surveillance system to private facilities, linkages with other agencies and related organizations will be used to ensure that reporting is a condition to government support for infection prevention and control, and health insurance funding, among others
- The commitment of state government will be sought to sustain all investments made through the implementation of the NAPHS

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Assess the baseline proportion of reporting public and private health facilities in all states	NCDC						
Expand the number of reporting health facilities	NCDC FMARD FMoH						
Build capacity for surveillance among human and animal health workers in both public and private sectors	NCDC FMARD						
Integrate priority zoonotic diseases into routine human and animal surveillance	FMARD						
Adapt the WHO AFRO IDSR guidelines as soon as concluded	NCDC						
Enhance monitoring and evaluation capacity for IDSR	NCDC						
Develop a system for routine simulation exercise (3) annually for rare diseases to build capacity for case detection and reporting	NCDC						
Enhance utilization of ARIS Platform in all states	FMARD						
Capacity building of notification officers from the relevant sector on IHR	FMARD						
Scale up and training of Animal Disease Surveillance Agents (DSA) from 591 to 1,000	FMARD						
Rehabilitate the state veterinary public health/epidemiology offices	FMARD						
Conduct gap analysis of the existing surveillance system for Transboundary Animal Diseases and zoonotic diseases	FMARD						
Procurement of logistics, including vehicles, for human and animal surveillance	FMARD NCDC						
Conduct step-down training on disease reporting for private veterinary clinics and develop a database of all public and private veterinary clinics	FMARD						
Review and develop animal disease reporting tools for animal health clinics	FMARD						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Agriculture and Rural Development (Co-Lead)
- State Ministries of Agriculture and Rural Development
- Federal Ministry of Health
- State Ministries of Health

Workforce Development

Background and Objective: The Nigeria Field Epidemiology and Laboratory Training Programme is a two-year advanced training established in 2008. It has trained more than 400 field epidemiologists spread across the country. They provide a robust workforce for various public health programs in the country and were a useful resource utilized to control the 2014 Ebola outbreak. A shorter training for frontline health workers have been established for more than two years training frontline workers at local government levels. The frontline training has recently been reviewed to capture as many aspects of the health workers training requirements as possible and was harmonized into the Integrated Training for Surveillance Officers in Nigeria (ITSON). The need for a comprehensive workforce strategy that ensure continuous training and even distribution of healthcare workers as well as establishing an incentivised career path for public health workforce is an urgent need identified by the recently concluded joint external evaluation (JEE).

JEE Indicators

- D.4.1 Human resources available to implement IHR core capacity requirements
- D.4.2 FETP or other applied epidemiology training programme in place
- D.4.3 Workforce strategy

JEE 2017 Capacity Level: 3

JEE 2017 Capacity Level: 4

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Develop a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce in order to reach the goal of one trained field epidemiologist (or equivalent) per 200,000 population
2. Launch the Intermediate FETP and fully implement Frontline FETP so that there is an ‘appropriately’ trained field epidemiologist in every Local Government Area
3. Define career path for specialized public health expertise within the Nigerian civil service structure

Short Term Goals (2018–2019):

- Sustain on-going Advanced and Frontline FETPs
- Commence the development of workforce strategy
- Commence the development of career path for specialized public health workforce

Strengths	Limitations
<ul style="list-style-type: none"> Strong NFELTP programme with ability to contribute to rapid control of outbreaks Frontline FETP providing trained personnel at the Local Government Area (LGA) level Strong NFELTP alumni to support training at various levels within and outside the country Strong advanced public health fellowship programme for senior physicians NFETLP residents working in all 36 States and the Federal Capital Territory National workforce strategy exists for most health care cadres, including laboratory scientists, technicians, physicians, and nurses 	<ul style="list-style-type: none"> Limited worker incentive to retain trained personnel Limited long-term career development pathways for public health professionals Geographic distribution of workers within the country may not be adequate to address workforce shortages Lack of an intermediate-level FETP to address other cadre of healthcare workers

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop career path for specialized public health expertise within the Nigerian civil service structure	NCDC						
Increase national workforce of epidemiologists through sustainment of the Advanced FETP	NCDC						
Develop Integrated Training for Surveillance Officers in Nigeria (ITSON) curriculum for frontline public health workforce	NCDC						
Rollout ITSON training package for LGA DSNOs in all states	NCDC						
Establish Intermediate FETP in Nigeria or through an agreement with another country	NCDC						
Develop and implement a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce	NCDC						
Define public health workforce roles, and map human resources at state and LGA levels	NCDC						
Conduct advocacy to employ additional veterinarians at the state level	FMARD						
Develop an in-service training program for staff of Department of Veterinary and Pest Control Services (DVPCS) and leadership training of veterinary officers in managerial cadre	FMARD						
Support <i>ad hoc</i> Animal Health Officer in states with inadequate human resources	FMARD						
Support animal health sector coordination	FMARD						

Important Considerations:

- Establish institutionalization and sustainability of the training programmes for epidemiologists, specifically by transitioning the training programs to the NCDC based on global standard and establishing a budget line for the training and establishing a training unit within the NCDC
- Establishment of an intermediate program will cater for other healthcare professionals ineligible for advanced FETP, this will address their training needs, ensure wider coverage and better distribution of the workforce, and enable the country to achieve the set target of an epidemiologist per 200,000 population
- Harmonize all frontline epidemiology trainings to address the primary competencies required of the various levels of the trainings through curriculum review and emerging global trends
- Develop a comprehensive workforce strategy and career path for specialized public health workforce by engaging stakeholders by use of seasoned career path technocrats to ensure buy-in for developed policies

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Nigeria Field Epidemiology and Laboratory Training Programme
- Federal Ministry of Agriculture and Rural development
- Federal Ministry of Health
- Ahmadu Bello University, Zaria
- University of Ibadan
- State and Local Governments

Preparedness

Background and Objective: Preparedness involves the development and maintenance of national, intermediate and community/primary response level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards, the identification and maintenance of available resources, including national stockpiles and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency. The plan will ensure that resource deployment is based on thorough risk assessment and hazard mapping so that surge personnel are drawn from diverse sectors, adequately trained, and work towards a shared evidence-based all-hazards preparedness plan. It will help in ensuring the availability of health commodities.

JEE Indicators

- R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented
R.1.2 Priority public health risks and resources are mapped and utilized

JEE 2017 Capacity Level: 1

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Develop an all-hazards multi-sectoral PH emergency preparedness plan, linking existing agency-specific and disease-specific plans
2. Where indicated NCDC should lead in preparation of memoranda of understanding between response agencies in different sectors
3. Strengthen the technical and administrative capabilities of NCDC and Nigeria Emergency Management Agency to develop national vulnerability maps that involve military, media, wildlife and animal health sectors to address zoonotic and emerging infections
4. Pre-position equipment and other resources to strategic locations consistent with vulnerability maps (e.g. remote hard-to-access areas)

Short Term Goals (2018–2019):

- Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan November 2018
- Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP) by February 2019
- Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas) meeting annually need by 70%.

Strengths	Limitations
<ul style="list-style-type: none"> Surge capacity (Nigeria Field Epidemiology and Laboratory Training Program residents) has been identified and effectively utilized during recent public health crises Strategic stockpiles have been identified and disseminated to the intermediate health tiers Information gathered from IDSR – based surveillance has been used to determine priorities for resource stockpiling and distribution Expertise, especially in State SMOH Budget line exists in several key agencies like NEMA, SEMA, SMOH and NCDC 	<ul style="list-style-type: none"> Fragmented planning - several draft documents and plans (either event-based or administrative), without clear coordination or linkage between sectors Public health concerns are not adequately addressed in existing national emergency and disaster response plans There are no memoranda or agreements between agencies for coordination and collaboration in response to public health emergencies Inadequate technical capacity among health care workers Poor inter-sectoral coordination using one health approach

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP), linking existing agency-specific and disease-specific plans.	NCDC						
Develop memoranda of understanding with relevant MDAs (Preparedness and response)	NCDC						
Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan	NCDC						
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	NCDC						
Develop plans for surge capacity to respond to public health emergencies of national and international concern	NCDC						
Capacity development for technical and administrative staff of Nigeria CDC and relevant MDAs	NCDC						
Develop and maintain database of Subject Matter Experts for preparedness and response	NCDC						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- National Emergency Management Agency
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development

- Federal Ministry of Environment
- Ministry of Water Resources
- Ministry of Information
- Ministry of Education
- State Emergency Management Agency
- National Medical Stores
- Nigeria Civil Aviation Authority
- Office of the National Security Adviser
- Security Agencies - Nigerian Army, Nigerian Air force, Nigerian Navy, Nigerian Police, NSCDC
- National Supply Chain Integration Programme
- National Animal Disease Information Service

Emergency Response Operations

Background and Objective: A public health emergency operations centre is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. Emergency operations centres provide communication and information tools and services, and a management system during a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration. The emergency response operations plan intends to strengthen inter-sectoral collaboration for emergency response, establish SOPs for activation and operations, and train personnel.

JEE Indicators

- R.2.1 Capacity to activate emergency operations
- R.2.2 EOC operating procedures and plans
- R.2.3 Emergency operations programme
- R.2.4 Case management procedures implemented for IHR relevant hazards

JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)
2. Establish standard operative procedures for EOC activation and operation
3. Establish standard training protocols for EOC operation and for emergency response
4. Enhance the NCDC EOC physical space, equipment, and logistic support

Short Term Goals (2018–2019):

- Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach) by 2019
- Establish standard operative procedures for EOC activation and operation by 2018–2019
- Establish standard training for EOC operation and for emergency response by 2018–2019
- Enhance the NCDC EOC physical space, equipment, and logistic support by 2019

Strengths	Limitations
<ul style="list-style-type: none"> NCDC EOC has activated several times and has been an important contributor to the successful control of the several public health emergencies NCDC conducts routine public health surveillance and situational analysis and is prepared to respond to public health emergencies, including activating the EOC, 24-hours a day, 7-days a week The polio EOC has been critically important in the successful progress towards polio elimination and has provided important lessons learned to the NCDC EOC EOC plans and procedures are drafted and have been utilized during EOC activations EOC training has been conducted, although it was conducted during EOC activations Table-top exercise for emergency response and EOC activation have been conducted NCDC EOC has coordinated several successful responses to public health emergencies Procedures have been developed, and were followed during the Ebola response, to safely transport infectious substances to public health laboratories Case management guidelines are available for patient management of priority infectious diseases 	<ul style="list-style-type: none"> NCDC EOC is limited by physical space and equipment Standard operating procedures for emergency response and EOC activation have not been fully developed. Response to public health emergencies that require a one-health response is limited EOC procedures need to be more fully developed Operating the EOC is limited by available resources Emergency responses resulting in activation of the NCDC EOC have not involved coordinated responses with agriculture or animal sectors Procedures need to be standardized to enable more rapid activation Case management guidelines are needed for transport of patients with infectious diseases

Key Activities for Implementation	MDA	2018		2019			
Q3	Q4	Q1	Q2	Q3	Q4		
Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)	NCDC						
Enhance the NCDC EOC physical space, equipment, and logistic support	NCDC						
Purchase of hardware health informatics input and output devices	NCDC						
Strengthen procedures and plans for EOC emergency operations function	NCDC						
Development of MOU between National and State levels	NCDC						

Develop missions, mandates, capabilities, and capacities of participating agencies for PHEOC functioning and response	NCDC						
Strengthen capacity for emergency response among EOC staff and surge personnel by developing standard training, simulation exercises, and after-action reviews	NCDC						
Joint outbreak response to strengthen one health	NCDC						
Hire core public health emergency management staff	NCDC						
Develop national case management guidelines for priority diseases, SOPs for the management and transport of potentially infected persons and improve infection prevention and control at the national and state levels	NCDC						
Improve infection prevention and control at the national and state levels	NCDC						
Support for emergency response activities, stockpiles, and equipping an animal crisis management center	FMARD						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- National Emergency Management Agency
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Environment
- Ministry of Water Resources
- Ministry of Information
- Ministry of Education
- State Emergency Management Agency
- National Medical Stores
- Nigeria Civil Aviation Authority
- Office of the National Security Adviser
- Security Agencies - Nigerian Army, Nigerian Air force, Nigerian Navy, Nigerian Police, NSCDC
- National Supply Chain Integration Programme
- National Animal Disease Information Service

Linking Public Health and Security Authorities

Background: Linking public Health with security authorities is considered vital in the overall global health security agenda. Before now, public health emergencies appear limited to pure civil agencies and authorities in Nigeria with exclusion of a core component from the military and security agencies. However, public health emergencies pose special challenges whether man made or naturally occurring. The involvement of the military in the 2014 Ebola crisis bring to fore the need for synergy between civil and security agencies authorities during public health emergencies. Therefore, it has become imperative for a coordinated approach by linking public health practice with security authorities.

JEE Indicators

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Review, revise and seek assent to old or existing laws (or bills) relating to health security
2. Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms
3. Integrated and continuous capacity development on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements.
4. Development and harmonization of appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response.
5. Reporting and information sharing mechanisms including cross border collaboration

Short Term Goals (2018–2019):

- Establish a national TWG for linking public health and security authorities
- Engage wider stakeholders for simulation exercises
- Carry out table top and ground simulation exercises

Strengths	Limitations
<ul style="list-style-type: none"> Awakened interest in collaboration between public health institutions and security agencies Experience of security agencies in the Ebola outbreak of 2014 The military is actively engaged in providing assistance to ensure that all children are immunized against the poliovirus in order to eradicate polio in Nigeria The ongoing crises in the Northeast Nigeria have seen Involvement of various military formations in responding to outbreaks 	<ul style="list-style-type: none"> Conservative nature of military command and internal control mechanisms Absence of common operation plans across the armed forces and paramilitary services Shortage of skill manpower across the agencies and services Constant and rapid changes in leaderships across the services in political dispensation High cost of simulation exercises across services Getting endorsement of ALL heads of agencies

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Establish a national TWG for linking public health and security authorities	ONSA						
Update old statutory instruments to make them compliant with IHR.	ONSA						
Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms	ONSA						
Integrate and continuously develop capacity on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements	ONSA						
Implement appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response.	ONSA						
Improve reporting and information sharing mechanisms including cross border collaboration	ONSA						

Important Considerations:

- The TWG to be set up will work with all stakeholders for early buy-in
- Table top and real time simulation exercises would be carried out to build on skills and develop relationships among agencies
- Conduct advocacy to have health issues discussed at national security meetings, FEC and ECOWAS levels

Key Participating Agencies:

- Office of the National Security Adviser (Lead)

- Nigeria Centre for Disease Control
- Federal Ministry of Health
- States' Ministry of Health
- Ministry of Defense
- Intelligence Agencies
- Paramilitary Services
- Nigerian Police Force
- Federal Ministry of Agriculture and Rural Development
- National Emergency Management Agency

Medical Countermeasures and Personnel Deployment

Background and Objective: Medical countermeasures are vital to national security and protect nations from potentially catastrophic public health threats. Investments in medical countermeasures create opportunities to improve overall public health. On the other hand, recent pandemics have shown the importance of trained personnel who can be deployed in case of a public health emergency for response. Countries need to have a process in place to receive/send both medical countermeasure assets and health care personnel in the event of public health events of international concern.

JEE Indicators

- R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency
R.4.2 System in place for sending and receiving health personnel during a public health emergency

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Development of a national framework for deployment and receipt of medical countermeasures and HWs during emergencies
2. Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures
3. Including MOUs with regional and international players (countries, manufacturers)
4. Development of the national capacity for production of vaccines and antibiotics

Short Term Goals (2018–2019):

- Development of a national framework for deployment and receipt of medical countermeasures and HWs during public health emergencies by 2018
- Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures 2018–2019
- Identify key regional and international partners (countries, manufacturers) to establish partnerships for the procurement and supply of medical countermeasures by 2019

Strengths	Limitations
<ul style="list-style-type: none">• NEMA, a dedicated agency solely created for response to emergencies has successfully coordinated response to man-made and natural disasters in Nigeria; most states also have State Emergency Management Authority (NEMA).	<ul style="list-style-type: none">• The country needs to develop a comprehensive medical countermeasures and personnel deployment plan• Establishing pre-negotiated agreements and other efficient procurement mechanisms with manufacturers or

<ul style="list-style-type: none"> • The Federal Ministry of Health, through the Nigeria Centre for Disease Control has improved the coordination of national and state public health response to infectious disease outbreaks. • The country has a regulatory body (NAFDAC) that provides guidelines to importation of drugs, consumables and other medical countermeasures in the country. • There is a national supply chain system which has been developed to support health commodities (primarily for reproductive health, AIDS, TB and malaria) which can be leveraged for stockpiling MCMs for PHEICs. • There are nationally developed guidelines that are used by the central medical stores to manage medical commodities that are donated to the country. • An influenza pandemic preparedness plan initially prepared for response to pandemic influenza can be adapted for other pandemic diseases • There is a national plan being developed to manage the logistics for managing medical countermeasures imported into the country. • Nigeria has had rich experience with deploying her technical experts to support outbreaks in other countries such as the EVD response in Liberia and Sierra Leone • The country has a pool of human resources exists that may be mobilized during local and international emergencies • The health professional regulatory bodies that regulate multi professional practice have procedures in place for health professionals who wish to work in the country, these need to be streamlined for receiving external experts during emergencies. 	<ul style="list-style-type: none"> distributors for procuring medical countermeasures during public emergencies will better prepare the country • Engagement in regional and international mechanisms for medical countermeasure procurement, sharing and distributions agreements by the country • A critical list of essential drugs and commodities are needed to stockpile medical commodities for public health emergencies • Agreements for logistics and security for medical countermeasures should be established based on the needs and peculiarities of conflict prone areas across the country • The development of a personnel deployment plan, in collaboration with the professional regulatory authorities to guide future receiving or sending of technical personnel • Minimum competencies for Development of a training curriculum for use in emergencies by deployed personnel • An inventory of technical personnel should be developed. The identified personnel should be appropriately trained, accredited and insured for future deployment to other countries
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Conduct a small table top simulation exercise to clarify roles and responsibilities of stakeholders and finalize the MCM plan	NCDC						
Develop a national framework for procurement, deployment and receipt of medical countermeasures during public health emergencies	NCDC						
Support the development of MOUs with international suppliers of medical countermeasures for public health emergencies	NCDC NAFDAC						
Conduct table top simulation exercise to test the medical countermeasures plan							
Promote the adherence to the national pharmaceutical assurance policy by local manufacturers for items required for MCM that can be procured in country	NCDC						
Develop a personnel deployment plan and legal and regulatory framework for personnel deployment, including sector roles and responsibilities to identify barriers to receiving health personnel during public health emergencies	NCDC						
Review and establish standards of care including the competencies required - including SOPs, domesticate guidelines etc.	NCDC						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agricultural and Rural Development
- National Agency for Food and Drug Administration and Control
- Nigeria Customs Service
- Nigeria Emergency Management Agency
- National Primary Healthcare Development Agency
- Office of National Security Adviser
- Ministry of Interior
- National Supply Chain Integration Programme (NSCIP)
- National Animal Disease Information Service
- Medical and Dental Council of Nigeria
- Nursing and Midwifery Council of Nigeria
- Medical Laboratory Council of Nigeria

- Veterinary Council of Nigeria
- Pharmaceutical Council of Nigeria

Risk Communication

Background and Objective: Will develop a multi-sectoral and all-hazards risk communication strategy and plan with a built-in monitoring and evaluation process. Thus, it will create a multisector working group, develop capacity of communication officers, carry out community engagement/social mobilization, and produce IEC materials. The training will be cascaded to states to prepare communication officers. With further funds, it will be possible to engage 774 LGA social mobilizers, develop video clips and IEC materials on disease reporting for health care workers, and publicize video clips and IEC materials via traditional and social media.

JEE Indicators

- R.5.1 Risk communication systems (plans, mechanisms, etc.)
- R.5.2 Internal and partner communication and coordination
- R.5.3 Public communication
- R.5.4 Communication engagement with affected communities
- R.5.5 Dynamic listening and rumour management

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3

JEE Priority Actions

1. Coordination: Develop a multi-sector and multi-hazard risk communication and emergency plan and implement the communication strategy
2. Capacity Building: Conduct training on multi-sector and multi-hazard risk communication which should include social science.
3. Establish continuous monitoring and evaluation of risk communication activities

Short Term Goals (2018–2019):

- Strengthen capacity of risk communication systems at the national level
- Implement and sustain coordinated event monitoring systems
- Build capacity for public communication at the national and State level
- Strengthen health care reporting system using both the traditional and social media

Strengths	Limitations
<ul style="list-style-type: none"> Communication officers in the Ministry, Department and Agency Public Communication officers at the states and LGAs Legal framework for public communication Budget line for communication in the different MDAs 	<ul style="list-style-type: none"> No holistic approach for risk communication in Nigeria Inadequate communication officers at the National, states and LGAs, Lack of collaboration between MDA Poor inter-sectoral coordination using one health approach Ineffective resource mobilization Poor reporting system at facility level

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop a multi-sectoral and all-hazards risk communication strategy and emergency plan	NCDC						
Develop a Monitoring and Evaluation process to provide feedback into the programme for improvement	NCDC						
Build capacity for risk communication among human, environmental, and animal health workers	NCDC						
Build capacity for coordinated public communication at the National and State level	NCDC						
Establish community outreach programs and regularly conduct information education communication (IEC) materials testing with members of the target audience	NCDC						
Develop strategic framework to integrate fragmented event monitoring at the community level	NCDC						
Develop/strengthen National and State systems to consider communication feedback—including rumors and misinformation from the public—in decision making processes to improve communication response	NCDC						

Important Considerations:

- Effective risk communication and early warning system needs collaborative and participatory approaches within the different levels (especially local level) and actors in outbreak response and control during planning and decision making, and these planned activities are geared towards ensuring this

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health

- Federal Ministry of Agriculture and Rural Development
- National Orientation Agency
- Federal Ministry of Environment
- National Primary Healthcare Development Agency
- Federal Ministry of Information
- Nigeria Police Force
- Nigeria Security and civil Defense Commission
- State Ministry of Health/ social mobilization committees
- Local Government Authorities and LGA mobilization committees

Points of Entry

Background: The Port Health Services Division in the Public Health Department, Federal Ministry of Health, was established in 1925 in response to the outbreak of Plague which began in Europe, and later spread to West Africa to the then Gold Coast (now Ghana) and then Lagos. Port Health Services is charged with the responsibility to prevent the cross-border/ international spread of disease in compliance with the World Health Organization (WHO) International Health Regulations (IHR 2005) through the implementation and application of health measures under the IHR (2005).

JEE Indicators

- PoE.1 Routine capacities established at points of entry
- PoE.2 Effective public health response at points of entry

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Designation of PoEs within the prescription of the IHR (2005)
2. Review the legislation and policies on PoEs and advocate for revision of appropriate legislation e.g. Quarantine law
3. Build/sustain IHR capacities as set forth in Annex 1a and 1b of the IHR (2005)
4. Build technical capacity for port health service
5. Develop the national public health emergency Contingency plan for PoEs

Short Term Goals (2018–2019):

- Designate points of entry by end of December 2018
- Implement protocols, processes, regulations and legislation governing IHR implementation at POE for improved public health preparedness & response
- Improve inter-sectoral coordination using One Health approach
- Convene Stakeholder review meeting to review National PHECP for POE
- Finalize legislation; finalize draft policy & national PHECP

Strengths	Limitations
<ul style="list-style-type: none"> • Nationwide presence • Derive core mandate from the IHR (2005) • Other relevant legislation in place, including ICAO SARPS, CAPSCA, IMO, public health laws, Quarantine Act • Availability of Draft National Port Health Policy • Availability of Draft National PHECP for PoE 	<ul style="list-style-type: none"> • Inadequate resources (human resources, materials, and funds) • Low coverage for surveillance • Inadequate technical capacity among staff • Inadequate number of qualified staff • Weak interoperability of surveillance systems (not all PoE have IDSR in place) • Poor inter-sectoral collaboration and coordination using One Health approach • Outdated national legislation i.e. Quarantine Act (1926) and Nigeria Public Health Law (1986) • National policy not finalized

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Designate PoEs as guided by IHR (2005) Articles 20 and 21	FMoH						
Conduct IHR assessment for core capacity requirements at designated airports and ports (40-50 persons/site) - Site visits	FMoH						
Build/sustain infrastructure for routine services at identified target ports/airports/ground crossings	FMoH						
Review the legislation and policies on PoEs and advocate for revision of appropriate legislation to develop PoE capacities specified in Annex 1 of the IHR e.g. Quarantine law	FMoH						
Develop a National public health emergency contingency plan for PoEs which includes coordinated, multisectoral response actions for access to treatment, isolation, and diagnostics facilities, quarantine of suspect travelers and animals, infection prevention and control, and international alert and response for ill or suspect travelers on board.	FMoH						
Build technical capacity for port health service	FMoH						
Integrate public health emergency contingency plan with other public health response plans at the local/intermediate/national levels and other emergency operational plans at PoE, and disseminated to IHR NFP, relevant sectors, and key stakeholders.	PHS						
Develop triggers and formal communications processes to communicate information on public health threats or other incidents of concern (e.g., chemical, radiological) to IHR NFP, PoE authorities, relevant multisectoral agencies, and stakeholders.	PHS						

Important Considerations:

- Engender & sustain multi-stakeholder collaboration & participation
- Advocacy to governments & partners for requisite support & funding
- Strengthen existing linkages with IDSR
- Advocacy to Human resource, Budget office, Ministry of Finance for increase human capacity at PoE
- Harness existing resources and partnerships for effective coordination & collaboration
- Plan & implement stakeholder review meeting & workshop
- Initiate legislation review process

Key Participating Agencies:

- Federal Ministry of Health (Lead)
- Federal Ministry of Agriculture and Rural development
- Nigeria Center for Disease Control
- National Animal Disease Information Service
- Nigeria Immigration Service
- National Assembly
- Nigeria Agriculture Quarantine Services
- Nigeria Customs Service
- Nigeria Civil Aviation Authority
- Federal Airport Authority of Nigeria
- Federal Ministry of Justice
- Nigeria Airspace Management Agency
- National Emergency Management Agency

Chemical Events

Background and Objective: The chemical event programme was put in place to address health issues related to chemical risk and poison in air, water, waste water, soil sediment, human, plant and animal specimens and products. This plan seeks to further strengthen inter-agency capacity to monitor and respond to chemical events.

JEE Indicators

CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies

JEE 2017 Capacity Level: 1

CE.2 Enabling environment in place for management of chemical events

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Establishment of Poison Information Control and Management Centres (PICMC) in the Country
2. Collaboratively map risk and implement routine surveillance for Chemical events
3. Develop guidelines and protocols for Chemical surveillance with relevant stakeholders
4. Establish required multi-sector capacity for Chemical response
5. Perform an inventory of chemicals with the Toxicology Laboratory of Nigeria in collaboration with INTOX

Short Term Goals (2018–2019):

- Strengthening inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control.
- Strengthen the capacity to monitor chemicals in air, water, waste water, soil, sediments, human and Plant specimen and products for purposes of compliance promotion, research, and enforcement
- Develop risk assessment and management framework for pollution and chemical hazard
- Establish required multi-sector capacity for response to chemical events
- Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX

Strengths	Limitations
<ul style="list-style-type: none"> • The Country has National Guidelines for establishment of poison Information control and management centres in the country. • The National Policy on Chemicals Management determines the roles and responsibilities of ministries, departments and agencies during chemical emergencies. • There is a Chemical Legislation domiciled in relevant agencies such as NAFDAC and National Environmental Standards and Regulations Enforcement Agency. • There is a National Chemical Profile for chemical management in the Country 	<ul style="list-style-type: none"> • Non-existence of Poison Information Control and Management Centre in the Country • Low coverage of data collection on Poison Incidences/Chemical Poisoning inventory of Chemical events in the Primary, Secondary and Tertiary Health Care Facilities. • Chemical emergency guidelines and manuals for control of chemical emergencies should be developed and implemented. • Poor inter-sectoral coordination using One Health approach • A weak multisectoral coordination mechanism in relation to chemical events and response. • Lack of up to date chemical emergency guidelines and manuals for surveillance, assessment and management of chemical events, intoxication and poisoning. • Insufficient fund allocation to address chemical risk mitigation and response for Nigeria. • No inter-agency emergency response squad/team on chemical event • No Chemical Information Exchange Network (CIEN) and chemical database • Legislative and policy mechanisms relating to chemical issues need to be established and updated. • National chemical and surveillance and response system is poor • No budget line for chemical management activities

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control	FMoH						
Strengthen the capacity to monitor chemicals in air, water, waste water, soil, sediments, human, animal and Plant specimen and products for purposes of compliance promotion, research, and enforcement by 2020	FMoH						
Develop risk assessment and management framework for pollution and chemical hazard	FMoH						
Establish required multi-sector capacity for response to chemical events	FMoH Ministry of Mines and Steel Dev.						
Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX	FMoH						
Conduct a study tour of chemical toxicology laboratory in a developed country	FMoH						

Important Considerations:

- Allocation of budget line for chemical events activities
- Synergy among the MDAs implementing Chemical Management activities
- Technical and financial support from WHO and development partners to implement chemical management activities
- Engagement of National consultants to draft chemical events Manuals Establishment of Database for chemical events.
- Put in place effective intersectoral surveillance system on Chemical Events to be put in place

Key Participating Agencies:

- National Environmental Standard and Regulation Enforcement Agency (Lead)
- Federal Ministry of Environment
- Federal Ministry of Health
- Ministry of Mines and Steel Development
- Federal Ministry of Environment
- National Centre for Disease Control
- Federal Ministry of Agriculture
- National Agency for Food and Drug Administration and Control

Radiation Emergencies

Background and Objective: To respond to nuclear and radiological emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies requires collaboration with sectors responsible for radiation emergencies management in Nigeria. Nigeria has a well-developed legislative framework for the control of radiation sources and emergencies. The designated responsible authority for implementation of these regulations in Nigeria is the Nigerian Nuclear Regulatory Authority (NNRA). NNRA works in partnership with the National Emergency Management Agency (NEMA) to coordinate the response to radiation emergencies. A large number of multi-sectoral stakeholders with responsibilities in the preparedness and response to radiation events have been identified and response is coordinated through a National Nuclear and Radiological Emergency Plan (NNREP). The Plan was developed by the National Nuclear and Radiological Emergency Committee set-up by the NNRA in 2004 and it was completed in 2005 and circulated to Stakeholders for comments and inputs. The Plan assigns to NEMA overall co-ordination and to NNRA technical support functions, which begin at the initial notification of a nuclear and or radiological emergency and end when all government agencies have terminated their response activities. Although this plan is regularly reviewed and updated, testing has been limited to internal drills within licensed premises and the plan has never been tested through planned multi-agency exercises or in response to an actual radiation incident.

JEE Indicators

- | | |
|--|-----------------------------------|
| RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies | JEE 2017 Capacity Level: 3 |
| RE.2 Enabling environment in place for management of radiation emergencies | JEE 2017 Capacity Level: 3 |

JEE Priority Actions

1. Test the National Nuclear and Radiological Emergency Plan (NNREP)
2. Improve detection and response capability by training staff, equipping & training designated hospitals and enhancing detection capabilities with radiation monitors and other detection equipment
3. Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point

Short Term Goals (2018–2019):

- Establish and test drills/exercises EPR framework
- Establishment of a high-level policy framework
- Drafting of National Radiation Emergency Plan and implementing procedures (NREP) and/or other plans

- Implementing of EPREV mission recommendations

Strengths	Limitations
<ul style="list-style-type: none"> • Party to various international legal instruments for nuclear and radiological emergency preparedness and response (EPR) • Nigeria has registered its capabilities and functional areas under the IAEA Response Assistance Network (RANET) • A well-developed Legislative Framework for the control of radiation sources, prevention and detection of radiation and nuclear emergencies and other related matters with clear legislation covering licensed applications, transport, disposal and use in specific industries • The Nuclear Safety and Radiation Protection Act 19 of 1995 • Nigerian Nuclear and Radiological Emergency Preparedness and Response • Regulations (draft) • National Nuclear and Radiological Emergency Plan (NNREP). • Institutional framework and stakeholder base in terms of nuclear and radiation • emergency preparedness and response. • Establishment of a competent authority (The NNRA) with the prime responsibility for nuclear safety and radiological protection regulations in Nigeria • Research Centres • National Emergency Management Agency • Enforcement of Emergency Drills/Exercise at Facility levels • National Policies, Strategies, Guidelines and SOPs are developed and regularly • updated for the management of emergencies 	<ul style="list-style-type: none"> • Financial resources (Emergency Fund) to meet the needs for nuclear safety and radiation protection • Lack of equipped laboratories for detection and systematic analysis of radiation emergency situations. • Inadequate public awareness, education and information on ionizing radiation • Lack of motivation and commitment from decision makers/participating organizations to attend meetings for effective coordination and collaboration mechanism. • Lack of systematic programmes for national training course for first responders and for the conduct, evaluation of drills and exercises • Human resource capabilities of relevant stakeholders in emergency response. • Emergency drills/exercises at national level • Upgrading of laboratories for treating/conditioning of waste radioactive sources • Lack of reference healthcare facilities or centers with full capacity to address or treat radiation injuries • Inclusion of radiation basics in medical school's curriculum • Effective National Radiation Emergency Response System • Equipment and capabilities for decontamination • Involvement of the national IHR focal point as a stakeholder in radiation emergencies.

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Test the National Nuclear and Radiological Emergency Plan	NNRA						
Build capacity for radiation and nuclear detection and response among human health workers	FMOH NNRA						
Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point.	NNRA						

Key Participating Agencies:

- Nigerian Nuclear Regulatory Authority (Lead)
- Federal Ministry of Science and Technology
- National Emergency Management Agency (NEMA)
- Nigeria Atomic Energy Commission (NAEC)
- MDAs
- Military and paramilitary Services
- Security Agencies
- Research Centres in Zaria, Gwagwalada-Sheda, Ile-Ife and Ibadan
- Designated Teaching Hospitals

Annex 1: Costed NAPHS (2018–2022)

TECHNICAL AREA	2018	2019	2020	2021	2022	TOTAL (NAIRA)	TOTAL (USD)
National Legislation and Financing	23,466,000	254,974,050	47,648,000	47,648,000	47,648,000	406,134,050	1,332,898
IHR Coordination and National IHR Focal Point Functions	61,461,410	300,717,534	120,422,970	120,422,970	120,422,970	723,447,854	2,374,296
Antimicrobial Resistance (AMR)	140,225,500	343,203,400	287,999,000	253,291,800	183,432,800	1,208,152,500	3,965,056
Zoonotic events and the human-animal interface	40,598,284	584,256,400	27,183,000	6,725,000	6,725,000	665,487,684	2,184,075
Food safety	15,356,000	255,343,450	122,085,200	372,648,400	33,740,000	799,173,050	2,622,819
Biosafety and biosecurity	-	172,687,728	1,710,682,228	40,067,428	59,415,228	1,982,852,612	6,507,557
Immunization	13,100,796,656	34,941,010,214	12,001,822,276	10,700,605,629	9,866,215,056	80,610,449,830	264,556,777
National Laboratory System	1,229,120,090	3,846,410,232	1,707,648,454	1,935,568,050	1,859,048,850	10,758,995,676	35,310,127
Surveillance	184,696,400	3,074,573,240	2,173,540,800	640,702,000	590,702,000	6,664,214,440	21,871,396
Reporting	154,691,200	1,784,058,028	157,343,000	102,847,000	102,847,000	2,249,936,228	7,384,103
Human Resources/Workforce Development	1,009,135,607	5,717,063,801	1,535,827,307	1,556,144,807	1,535,827,307	11,353,998,829	37,262,878
Preparedness	11,873,800	3,245,888,206	3,002,384,000	3,002,884,000	2,002,384,000	11,265,414,006	36,972,150
Linking Public Health and Security Authorities	33,845,200	45,985,200	31,446,000	31,446,000	31,446,000	174,168,400	571,606
Emergency Response Operations	365,810,990	1,317,717,300	201,202,400	201,202,400	16,800,000	2,102,733,090	6,900,995
Medical Countermeasures and Personnel Deployment	5,665,000	82,811,600	23,543,050	57,632,000	15,784,000	184,715,650	606,221
Risk Communication	14,832,000	263,355,561	148,371,100	80,830,400	14,019,200	521,408,261	1,711,218
Points of Entry (PoE)	21,617,600	742,177,100	274,872,400	264,582,400	-	1,303,249,500	4,277,156
Chemical events	-	320,870,800	98,877,700	108,526,600	96,346,800	624,621,900	2,049,957
Radiation emergencies	-	58,973,200	105,783,000	18,486,000	18,486,000	201,728,200	662,055
TOTAL	16,413,191,737	57,352,077,043	23,778,681,885	19,542,260,884	16,601,290,211	133,800,881,760	439,123,340

Annex 2: JEE Results and Priority Actions

Nigeria has made commendable progress in the broad area of prevent but will need additional investments to move to a higher level:

- A top priority is to fast track the legislation, regulatory and policy frameworks to support IHR implementation at the Federal, State, and Local Government levels
- A critical piece of legislation is the finalization of the legislative approval for the Nigeria Centre for Disease Control (NCDC)
- To support implementation of “the One health approach” there is a need to establish a multi-sectoral, multi-disciplinary coordination mechanism (political and technical) at FG, State and LGA levels

Nigeria has made tremendous progress in bio-surveillance for vertical diseases such as polio, TB, HIV/AIDs, but will need additional efforts to:

- Strengthen laboratory capacity, especially specimen shipping, transportation and referral
- Scale up, enhance and sustain the IDSR program nation-wide at all levels (FG, State, LGA, PHC facilities), capitalizing on the polio investments
- Develop and implement a comprehensive public health workforce strategy

Nigeria has made tremendous progress in response to PHEs-Ebola, Lassa Fever, Meningitis, Cholera etc. but will need additional efforts to:

- Formulate, cost, implement, monitor and evaluate a national action plan for health security that is aligned with sector strategies, addresses all hazards and is based on a comprehensive risk assessment and mapping
- Enhance the EOC/IMS system at federal level and strengthen sub-national RRTs supported by an all hazard risk communication strategy/plan
- Strengthen inter-sectoral collaboration for emergency response particularly between human and animal health, the environmental sectors and security agencies underpinned on an all hazards approach

Nigeria has several PoEs that are already doing commendable routine (screening, have holding areas) & emergency actions, etc. Major setback is not officially designating the PoE:

- Designate, before the end of 2017, a few PoEs-Airports, Ports and some ground crossings
 - Airports
 - Abuja International Airport
 - Lagos International Airport
 - Kano International Airport
 - Lagos Sea Port
 - High volume ground crossings
 - Benin border
 - Cameroun border
 - Niger border
- Finalise PH contingency plan for PoEs that is linked to the national plan for health security
- Establish and sustain capacities for routine and emergency preparedness and response for the designated PoEs

Technical area	Indicators	Indicator Description	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)	1
	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)	1
Priority Areas for action	<ul style="list-style-type: none"> Comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations Advocate for revision of legal instruments and policies to address existing gaps and challenges within the national administrative environment Completion of pending legislative actions (NCDC Bill, 2017; Public Health Bill, 2013) in order to give key public health institutions (e.g. Nigeria Centers for Disease Control) the legal mandate needed to accomplish national goals National government should articulate specific policies, guidance, and guidelines to States and Local Governorate Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014) Streamline roles and responsibilities in the various Ministries and Agencies that have responsibilities in IHR implementation to minimize duplication within their respective mandates 		
	P.2.1	A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	2
IHR coordination, communication and advocacy	<ul style="list-style-type: none"> Establish legislative foundation for NCDC as National Focal Point Establishment of a national One Health platform for intersectoral collaboration of outbreak responses that involve the human health, animal health and environmental sectors Develop all hazard standard operational procedures for IHR coordination between IHR NFP and stakeholders 		
	<ul style="list-style-type: none"> P.3.1 Antimicrobial resistance detection P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens P.3.3 Health care-associated infection (HCAI) prevention and control programmes P.3.4 Antimicrobial stewardship activities 		
Antimicrobial resistance	P.3.1	Antimicrobial resistance detection	2
	P.3.2	Surveillance of infections caused by antimicrobial-resistant pathogens	2
	P.3.3	Health care-associated infection (HCAI) prevention and control programmes	2
	P.3.4	Antimicrobial stewardship activities	2

Technical area	Indicators	Indicator Description	Score
Priority Areas for action		<ul style="list-style-type: none"> • Implement the Nigeria NAP on AMR • Strengthen the "One Health" components in the Nigeria NAP on AMR. • Strengthen stewardship on antimicrobial use in humans and food animals. 	
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	1
		<ul style="list-style-type: none"> • Enhance collaboration between Ministry of Health and Ministry of Agriculture at the national, state and district levels • Strengthen linkage between public health and animal health laboratories • Enhance surveillance of zoonotic diseases (including consensus building meetings of appropriate stakeholders to identify the top priority zoonotic diseases to include in zoonotic disease surveillance system) 	
Food safety	P.5.1	Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	2
		<ul style="list-style-type: none"> • Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease • Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response • Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels. 	
Biosafety and biosecurity	P.6.1	Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	1
	P.6.2	Biosafety and biosecurity training and practices	1
		<ul style="list-style-type: none"> • Biosecurity Legislation needs to be enacted • Development of a multi-sectoral, national coordination, oversight and enforcement mechanism for response to and control of dangerous pathogens • Adequate funding and training be provided for Biosafety and Biosecurity programs • Perform an audit of institutions and locations with dangerous pathogens; and toxin control in order to develop a plan for consolidation 	
Immunization	P.7.1	Vaccine coverage (measles) as part of national programme	3
	P.7.2	National vaccine access and delivery	4

Technical area	Indicators	Indicator Description	Score
Priority Areas for action		<ul style="list-style-type: none"> Dedicate resources to information management system for vaccine data, in order, to ultimately improve data quality (completeness, timeliness and reliability of administrative data) Develop strategies to improve national coverage, especially focusing on historically low coverage areas Include vaccines for zoonotic disease, particularly in special populations such as health care workers and veterinarians 	
National laboratory system	D.1.1	Laboratory testing for detection of priority diseases	3
	D.1.2	Specimen referral and transport system	1
	D.1.3	Effective modern point-of-care and laboratory-based diagnostics	2
	D.1.4	Laboratory quality system	2
Priority Areas for action		<ul style="list-style-type: none"> Enhance the laboratory infrastructure and resources available to sustain an integrated national laboratory network Implement Strengthening Laboratory Management Toward Accreditation (SLMTA) Program for the national laboratory network with a focus on biosafety, biosecurity and quality assurance Develop a robust sample and specimen transportation system which ensures an effective cold chain To adopt basic laboratory information sharing system among the relevant stakeholders 	
Real-time surveillance	D.2.1	Indicator- and event-based surveillance systems	3
	D.2.2	Interoperable, interconnected, electronic real-time reporting system	2
	D.2.3	Integration and analysis of surveillance data	3
	D.2.4	Syndromic surveillance systems	3
Priority Areas for action		<ul style="list-style-type: none"> Systematically build capacity for surveillance at all levels (HF, LGA, state and national), expanding surveillance to all health facilities including private facilities for both human and animal health Develop real-time surveillance capability for animal health and promote a ONE-Health approach. Establish linkage between the surveillance and public health laboratory systems Establish an electronic reporting system that is inter-operable and integrated to other systems and also linked to DHIS2 Enhance monitoring and evaluation capacity for IDSR, including supportive supervision and data quality assessment 	
Reporting	D.3.1	System for efficient reporting to FAO, OIE and WHO	3
	D.3.2	Reporting network and protocols in country	2

Technical area	Indicators	Indicator Description	Score
Priority Areas for action		<ul style="list-style-type: none"> • Strengthen and improve consistency, completeness (including from private sector) and timeliness in reporting from the local and state levels • Establish a framework for multi sectoral coordination in reporting and communication that will enable information sharing • Establishment of central data base that integrates data from all sectors for all 41 priority diseases under IDSR • Instituting monitoring and evaluation of reporting against set IDSR and IHR indicators 	
Workforce development	D.4.1	Human resources available to implement IHR core capacity requirements	3
	D.4.2	FETP ¹ or other applied epidemiology training programme in place	4
	D.4.3	Workforce strategy	2
Priority Areas for action		<ul style="list-style-type: none"> • Develop a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce in order to reach the goal of one trained field epidemiologist (or equivalent) per 200,000 population • Launch the Intermediate FETP and fully implement Frontline FETP so that there is an 'appropriately' trained field epidemiologist in every Local Government Area • Define career path for specialized public health expertise within the Nigerian civil service structure 	
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
		<ul style="list-style-type: none"> • Develop an all-hazards multi-sectoral PH emergency preparedness plan, linking existing agency-specific and disease-specific plans • Where indicated NCDC should lead in preparation of memoranda of understanding between response agencies in different sectors • Strengthen the technical and administrative capabilities of NCDC and Nigeria Emergency Management Agency to develop national vulnerability maps that involve military, media, wildlife and animal health sectors to address zoonotic and emerging infections • Pre-position equipment and other resources to strategic locations consistent with vulnerability maps (e.g. remote hard-to-access areas) 	
Emergency response operations	R.2.1	Capacity to activate emergency operations	2
	R.2.2	EOC operating procedures and plans	2

¹ FETP: Field epidemiology training programme

Technical area	Indicators	Indicator Description	Score
Priority Areas for action	R.2.3	Emergency operations programme	3
	R.2.4	Case management procedures implemented for IHR relevant hazards	2
		<ul style="list-style-type: none"> • Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach) • Establish standard operative procedures for EOC activation and operation • Establish standard training protocols for EOC operation and for emergency response • Enhance the NCDC EOC physical space, equipment, and logistic support 	
Linking public health and security authorities	R.3.1	Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	1
		<ul style="list-style-type: none"> • Review, revise and seek assent to old or existing laws (or bills) relating to health security • Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms • Integrated and continuous capacity development on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements. • Development and harmonization of appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response. • Reporting and information sharing mechanisms including cross border collaboration 	
Priority Areas for action	R.4.1	System in place for sending and receiving medical countermeasures during a public health emergency	1
	R.4.2	System in place for sending and receiving health personnel during a public health emergency	1
		<ul style="list-style-type: none"> • Development of a national framework for deployment and receipt of medical countermeasures and HWs during emergencies • Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures <ul style="list-style-type: none"> ○ Including MOUs with regional and international players (countries, manufacturers) • Development of the national capacity for production of vaccines and antibiotics 	
Risk communication	R.5.1	Risk communication systems (plans, mechanisms, etc.)	1
	R.5.2	Internal and partner communication and coordination	3
	R.5.3	Public communication	2

Technical area	Indicators	Indicator Description	Score
Priority Areas for action	R.5.4	Communication engagement with affected communities	3
	R.5.5	Dynamic listening and rumour management	3
	<ul style="list-style-type: none"> Coordination: Develop a multi-sector and multi-hazard risk communication and emergency plan and implement the communication strategy Capacity Building: Conduct training on multi-sector and multi-hazard risk communication which should include social science. Establish continuous monitoring and evaluation of risk communication activities: 		
Points of entry	PoE.1	Routine capacities established at points of entry	1
	PoE.2	Effective public health response at points of entry	1
Priority Areas for action	<ul style="list-style-type: none"> Designation of PoEs within the prescription of the IHR (2005) Review the legislation and policies on PoEs and advocate for revision of appropriate legislation e.g. Quarantine law Build/sustain IHR capacities as set forth in Annex 1a and 1b of the IHR (2005) Build technical capacity for port health service Develop the national public health emergency Contingency plan for PoEs 		
	<p>CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies</p> <p>CE.2 Enabling environment in place for management of chemical events</p> <ul style="list-style-type: none"> Establishment of Poison Information Control and Management Centres (PICMC) in the Country Collaboratively map risk and implement routine surveillance for Chemical events Develop guidelines and protocols for Chemical surveillance with relevant stakeholders Establish required multi-sector capacity for Chemical response Perform an inventory of chemicals with the Toxicology Laboratory of Nigeria in collaboration with INTOX 		
Radiation emergencies	RE.1	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	3
	RE.2	Enabling environment in place for management of radiation emergencies	3
	<ul style="list-style-type: none"> Test the National Nuclear and Radiological Emergency Plan (NNREP) Improve detection and response capability by training staff, equipping & training designated hospitals and enhancing detection capabilities with radiation monitors and other detection equipment 		

Technical area	Indicators	Indicator Description	Score
		<ul style="list-style-type: none"> • Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point 	

Annex 3: Performance of Veterinary Services (PVS) Assessment and Recommendations - 2010

Critical Competencies	Level	Priority Actions
1. Professional and technical competence of the personnel of veterinary services (VS)		
1a. Veterinary and other professionals (university qualification)	3	<ul style="list-style-type: none"> • Create at federal and state levels adequate vacancies to employ additional veterinarians and other professionals.
1b. Veterinary paraprofessional and other technical personnel	3	<ul style="list-style-type: none"> • Considering the scheme established by PACE, develop appropriate schemes to promote private veterinary practice. • Introduce “sanitary mandates” to allow private veterinarians to participate in vaccination and disease control and surveillance.
2. Continuing education	3	<ul style="list-style-type: none"> • Create adequate vacancies including remuneration to employ additional paraprofessionals in the public service to fill and to motivate staff
3. Technical independence	3	<ul style="list-style-type: none"> • Develop a legal framework for registration of paraprofessionals by the VCN
4. Stability of policies and programme	4	<ul style="list-style-type: none"> • DVPCS to develop specific training programmes for its staff and budget provision for this activity
5. Coordination capability of the sectors and institutions of the VS (public and private)	3	<ul style="list-style-type: none"> • Empower the Director of the DVPCS to take all technical decisions independently.
6. Funding	2	<ul style="list-style-type: none"> • Reinforce the capacity (staff, vehicles and adequate funding) of the DVPCS and States in the monitoring of policy implementation and supervision of field operations.
		<ul style="list-style-type: none"> • Formulate strategic and operational plans.
		<ul style="list-style-type: none"> • Allocate to livestock sector of a minimum of 30% of the 10% budgetary allocation to agriculture in conformity with the decision of the Heads of State of African Union countries of July 2003 at Maputo. • Provide vehicles for field operations.

7. Contingency funding	2	<ul style="list-style-type: none"> Establish appropriate contingency funds to be administered directly by the Director of DVPCS
8. Capacity to invest and develop	2	<ul style="list-style-type: none"> Need to provide support for the improvement and development of VS infrastructure during the formulation of strategic plan.
9. Laboratory disease diagnosis	3	<ul style="list-style-type: none"> Draft a programme for improvement of equipment, supplies and consumables at NVRI and State and Veterinary Faculties laboratories. Network NVRI and State and Veterinary Faculties laboratories. Introduce quality assurance in the laboratory procedures. Accredit NVRI as a regional/international reference laboratory e.g. for HPAI.
10. Risk analysis	2	<ul style="list-style-type: none"> Formulate and implement risk analysis programmes Create core capacity within the DVPCS for risk A will be necessary
11. Quarantine and border security	2	<ul style="list-style-type: none"> Building of quarantine facilities at all border points. Creation of additional veterinary quarantine stations Increase and train veterinary quarantine services staff on quarantine facilities and procedures and surveillance strategies. Implement of international standards for certification of animals and animal products for import and export.
12. Epidemiological surveillance	3	<ul style="list-style-type: none"> Enforce the <i>Animal Diseases (control) Act N° 10, 1988</i> regarding the disease reporting in particular by the private sector. Train more staff in epidemio-surveillance. Improve feedback to stakeholders and follow-up reports to the OIE. Need to reinforce data collection at federal, state and local government levels.
13. Early detection and emergency response	3	<ul style="list-style-type: none"> Provide vehicles and equipment for field operations to facilitate early detection and emergency response.
14. Emerging issues	2	<ul style="list-style-type: none"> Develop procedures in DVPCS in order to identify, monitor and review emerging issues.

		<ul style="list-style-type: none"> • Prepare appropriate national preparedness plans.
15. Technical innovation	1	<ul style="list-style-type: none"> • Establish a database of technical innovations and international standards. • Subscribe to scientific journals for updating knowledge of staff.
16. Veterinary medicines and veterinary biologicals	2	<ul style="list-style-type: none"> • Create capacity in the DVPCS to monitor standards and control of veterinary medicines and veterinary biologicals. • Need for NVRI to update types of vaccines and to develop capacities to carry out quality control of imported vaccines and biological products.
17. Communication	3	<ul style="list-style-type: none"> • Improve the capacity of the communication staff. • Provide up to date information via the internet • Update the DVPCS website on regular basis • Provide effective intranet and internet facilities at federal and state levels.
18. Consultation with stakeholders	2	<ul style="list-style-type: none"> • Institute formal and regular consultation and feedbacks with stakeholders. • List all existing associating stakeholders' representatives at federal and state levels and encourage their establishment where such organisations do not yet exist.
19. Official representation	2	<ul style="list-style-type: none"> • Improve consultation with stakeholders.
20. Accreditation / Authorisation / Delegation	2	<ul style="list-style-type: none"> • Establish "<i>sanitary mandates</i>".
21. Veterinary Statutory Body	4	<ul style="list-style-type: none"> • VCN to develop a legal framework to register and regulate paraprofessionals.
22. Implementation of joint programmes	2	<ul style="list-style-type: none"> • Develop joint programmes with stakeholders and partner organisations.
23. Preparation of legislation and regulations, and implementation of regulations	3	<ul style="list-style-type: none"> • Designate a multidisciplinary committee to update the main law regarding animal disease control and zoonosis. • Ensure the harmonisation of legislation and regulations regarding animal disease control and zoonosis enacted at the state level.
24. Stakeholder compliance with legislation and regulations	1	<ul style="list-style-type: none"> • Enforce existing regulations for stakeholders to comply.

		<ul style="list-style-type: none"> • Develop programme to ensure stakeholder compliance with relevant regulations
	2	<ul style="list-style-type: none"> • Designate team in charge to monitor the establishment of new and revised international standards, guidelines and periodically review national legislation, regulations and sanitary measures in order to harmonise them, as appropriate, with international standards.
25. International certification		<ul style="list-style-type: none"> • Implement international standards for certification of animals and animal products for import and export.
26. Traceability	2	<ul style="list-style-type: none"> • Create capacity to identify and trace animals and animal products at federal and state levels.
27. Transparency	3	<ul style="list-style-type: none"> • Improve on submission of follow up reports.
28. Zoning	1	<ul style="list-style-type: none"> • Improve biosecurity in traditional production system and in live animal markets.
29. Compartmentalisation	2	<ul style="list-style-type: none"> • Develop compartmentalisation strategy.

Annex 4: Participant List

Participants of either the February Preparatory Workshop or the July Costing and Validation Workshop:

Name	Organisation
Dr Patrick Nguku	AFENET
Augustine Dada	AFENET
Mahmood Dalhat	AFENET
Ajani Oyetunji G	AFENET
Muhammad Shakir Balogun	AFENET
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Ahmed Matane	FAO
Dr Zainab Abdulkareen	FMARD
Dr Maryam I. Buba	FMARD
Dr Muh'd Aligana	FMARD
Dr Mairo Kachalla	FMARD
Dr. O Alabi	FMARD
Dr Kwaghe A. V	FMARD
Vivien Idogho	FMF
Femi Stephen	FMOH
Dr Welle Sc	FMOH
Dr Alex-Okoh M.O	FMOH
Dr Bibilari Ngozika	FMOH
Fatai Olarenwaju S.	FMOH
Ogunlesi Zaynab	FMOH
Dr James Balami	FMOH
Perpetual Ezediunor	FMOH
Olaoluwa Ajoni	FMOJ
Makama Sani	FMT
Sarah Mengesha	GIZ
Dr Godswill C. Okara	MLSCN
Ajaero Chike	MMSD
Wg Cdr Jm Nalazai	MODHIP
E. M Dickson	MPR
Dr Barthlomew Ibeh	NABDA
Ogu Amoge	NABDA
Dogara Ashikeni	NAEC
Dauda D. Gimba	NAFDAC
Godwin Akwa	NAFDAC
Dr Momodu Aisha M	NAQS
Dr. Nyodee B.G	NAQS
Dr Chikwe Ihekawazu	NCDC
Akinbiyi Gbenga	NCDC

Yennan Sebastian	NCDC
Sadiq Garba	NCDC
Dim Munachimso V	NCDC
Amina Mohammed	NCDC
Ayoola Olufemi	NCDC
Nanpring D. Williams	NCDC
Safiya Musa	NCDC
Oguanuo Emeka	NCDC
Dr Igbodo Gordon	NCDC
Dr Okunromade Oyeladun	NCDC
Nwando Mba	NCDC
Olaolu Aderinola	NCDC
Dr Adesola Yinka-Ogunleye	NCDC
Chimezie Anueyiagu	NCDC
Olubunmi Ojo	NCDC
Oyeronke Oyebanji	NCDC
Oguniyi Abiodun	NCDC
Nwachukwu Williams	NCDC
Joseph Gbenga	NCDC
Emmanuel Agogo	NCDC
Chibazo Eneh	NCDC
Dr Aku Anwe Sunday	NCS
Inusa Ezra	NEMA
Cdr Bralti (Rtd)	NEMA
Aremu A. Agaka	NESREA
Obinna Kelechi C.	NESREA
Adeola Jegede	NIPRD
Dr S.O Funsho	NIS
Ali Mohammed Jidda	NNRA
Idoko Simon	NOA
Dr Abubakar I.S	NPA
Nwokolo C.R	NPA
Saudat Oluwatoyin Adeka	NPA
Dr Nonye Welle	NPF
Dr Eugene Ivase	NPHCDA
M. M Abubakar	NPHCDA
Dr L.T Damisah	ONSA
Dr Sola Aruna	PHE
Samuel Alabi O.	PHI
Christopher Lee	Resolve to Save Lives
Winifred Ukpunu	UMB
Saiki A. Musa	UMB
Daniel Stowell	US CDC
Daniel J. Duvall	US CDC
Richard Garfield	US CDC

Daniel Yota	WHO (AFRO)
Antonio Oke	WHO (AFRO)
Talisuna A.O	WHO (AFRO)

Annex 5: Inventory of Costed Activities, 2018–2022

P1: National Legislation, Policy, and Financing

P1.1: Legislation, laws, regulations, administrative requirements, policies or other government instruments in place for implementation of IHR

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals.	<ul style="list-style-type: none"> NCDC, FMoH, FMARD, MoE (Health promotion division): High powered advocacy team of e.g. perm sec, hon min. of state, head of MDAs e.g. DG NCDC on Follow-Up consultations with the Senate Committee on Primary Health at the National Assembly. Phone calls cards at =N= 15,000 SMS, and Physical Visit. Public Relation by Legal Unit at the National Assembly Senate Committee on primary Health for speedy transmission of the Bill to the Presidency for assent: Develop a ToR for a team of 3 consultants (NCDC HRM); Hire a Team of 3 Consultants, (1 Retired Judge/SAN, 1 Lawyer, 1 Political Journalist and outstanding bureaucrats); Consultants Debrief to DG NCDC and Legal Team; Documentation of these process for Institutional learning; Report on outcome and passage of Bill NCDC Legal Call cards, Internet access off work hours and out of office, 	NCDC		16,432,000	16,432,000
Review of the “National Health Act of 2014” to define roles/responsibilities of key public health institutions across the three tiers of government.	<ul style="list-style-type: none"> Develop TOR to hire 1 consultant by NCDC HR, who will review the National Health Act, 2014. 5 Working days to hold a 1-Day Stakeholders consultative meeting of 20 people to appraise and validate the Review, Develop a Policy Statement on the Health Act 2014. The Reviewed Health Act 2014 Presentation to Federal Executive Council for approval Transmission of Bill to National Assembly, by High Powered Delegation of Minister of health, Perm Sec Health, NCDC DG, Heads of Parastatal of FMoH to the national assembly for Passage of Bill Transmission of Bill to The Presidency for Presidential Assent. 	NCDC		390,000	390,000
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	<ul style="list-style-type: none"> Identify Focal Persons/ Desk officers at various MDAs and Partners Giving the Polling system in MDAs, NCDC develop an inventory of focal persons and Desk officers, for continuity and institutional learning. Managed by NCDC online for easy access by Desk officers. Review of the existing provisions on financing of various IHR Policies and statutory provisions at relevant MDAs Review the financial impediments to the implementation of the statutory provision and administrative activities on IHR in relevant MDAs Training of key stakeholders on work-plan development for IHR Policy Financing 	NCDC		1,974,000	1,974,000
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	<ul style="list-style-type: none"> Hire 2 consultants for 2 weeks each to Review Draft Document revised: Desktop review of existing Legislative, policy and Financing Laws Identify stakeholders and circulate the NHA 2014 and the IHR 2005 guidelines to stakeholders and partners Organize a 2-day workshop to analyses the NHA 2014 in line with the IHR 2005, Of 8 persons to identify gaps in NHA that its compliance with IHR 2005 Identify IHR Focal Persons and Desk officers Inform FMOH of the gaps and the need to amend the NHA 2014 in line with the HIR 2005 Disseminate document to Federal, States and Local MDAs for Review and Analyze of gaps base on needs assessments, to identify and collate existing legal structures and policy framework relevant to IHR. Reviewed Document sent back to NCDC by Email 	NCDC		1,974,000	1,974,000

	<ul style="list-style-type: none"> • Develop a report on the finding from the meeting • Identify the gaps that prevent effective compliance with IHR at all tiers of government, at Point of entry and agree on modalities to address them using the IHR as a guideline • Develop a monitoring Structure at the three tiers of Government, that does not only impose a legal duty to comply but to also enforce implementation of IHR • Create budget mechanism to support effective implementation of IHR (Policy, legislative framework and Financing). • Reward states that follow IHR in policy and funding. 			
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014).	<ul style="list-style-type: none"> • Hire 1 Health Consultant who specializes on Health Policy and Financing. 1 week to review existing Documents and research on health Financing, 1 week for preparing the meeting and the Final week to revise and present the result • Conduct 1-day stallholders review meetings of 8 persons • Develop and Disseminate guidelines and Policies 	NCDC		216,000 216,000
	<ul style="list-style-type: none"> • Technical committee not excluding Legal unit of NCDC and relevant legal MDAs (MOHD, FMARD, MoE, FMF) Related relevant agencies 	NCDC		1,380,000 1,380,000
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	<ul style="list-style-type: none"> • Technical committee not excluding Legal unit of NCDC and relevant legal MDAs (MOHD, FMARD, MoE, FMF) Related relevant agencies 	NCDC		2,119,200 2,119,200
	<ul style="list-style-type: none"> • FMOH, FMARD, Fen, FMJ, FMF, Development partners 	NCDC		1,506,800 1,506,800
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014).	<ul style="list-style-type: none"> • FMOH, FMARD, Fen, FMJ, FMF, Development partners 	NCDC		990,000 990,000

P1.2: Legislation, policies and administrative arrangements enable compliance with the IHR (2005)

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	<ul style="list-style-type: none"> • Identify Focal Persons/ Desk officers at various MDAs and Partner • Giving the Polling system in MDAs, develop a system of training and retraining of focal persons and Desk officers, for continuity and institutional learning • Call for meeting of Focal Persons to take an inventory of existing administrative and statutory provisions relevant to IHR • Review of the existing provisions on financing of various IHR Policies and statutory provisions at relevant MDAs 	NCDC		5,800,000	23,200,000

	<ul style="list-style-type: none"> Review the financial impediments to the implementation of statutory provision and administrative activities on IHR in relevant MDAs Training of key stakeholders on work-plan development for IHR Policy Financing. Development, Production and dissemination of specific policies, guidance, and guidelines. 				
Develop the strategic and operational plan for animal health policy and programmes implementation	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop the strategic and operational plan for animal health policy and programme implementation 	FMARD		690,000	690,000
	<ul style="list-style-type: none"> Conduct 2-day stakeholder meeting of 20 participants for the review and validate of the draft strategic and operational plan (non-residential) 	FMARD		0	0
	<ul style="list-style-type: none"> Print and disseminate 500 copies of validated strategic and operational plan 	FMARD		250,000	250,000
Support advocacy for budgetary allocation to livestock sector	<ul style="list-style-type: none"> Conduct 2-day state engagement workshop of 100 participants (state governors and National and state assembly committee chairman on agriculture, civil society, Press) on budgetary allocation to the livestock sector 	FMARD		6,800,000	6,800,000
Review the international standards for certification of animal and animal products	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to review the international standards for certification of animal and animal products 	FMARD		930,000	930,000
	<ul style="list-style-type: none"> Conduct 2- day stakeholder meeting of 30 persons for validation 	FMARD		2,266,000	2,266,000
	<ul style="list-style-type: none"> Conduct 5-day training for 50 participants on international standards for certification of animal and animal products 	FMARD		9,024,000	9,024,000
	<ul style="list-style-type: none"> Print 100 copies of the revised certification standards 	FMARD		150,000	150,000
Support Technical workgroups in animal health emerging issue and develop guidelines, and procedure addressing emerging issue such as ethical clearance, emerging diseases (monkey pox, rift valley ,etc.)	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop guidelines, and procedure addressing emerging issue such as ethical clearance, research etc. 			1,297,050	1,297,050
	<ul style="list-style-type: none"> Set up 15 technical working groups (TWGs)of 5 members each to identify in advance emerging issues 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct training of 15 TWGs on the procedure in identifying emerging issues advances 			5,557,000	5,557,000
	<ul style="list-style-type: none"> Support monthly meeting of the 15 TWGs 			37,884,000	151,536,000
	<ul style="list-style-type: none"> Print 500 copies of the procedure in identifying emerging issues 	FMARD		750,000	750,000
Support Biannually review and feedback of implementation of policy and programmes	<ul style="list-style-type: none"> Conduct 2-days multi-stakeholder meeting of 100 persons biannually on feedback of implementation of policy and programmes 	FMARD		9,440,000	9,440,000
Support Biannually consultative meeting to consolidate on different views from the stakeholders on animal health policies and programmes	<ul style="list-style-type: none"> Conduct 1-day consultative meeting of 40 people bi-annually to consolidate on different views from the stakeholders 	FMARD		3,964,000	15,856,000
	<ul style="list-style-type: none"> Create an e- platform email group to share updates with relevant stakeholder 	FMARD		0	0

Review the existing animal health laws, regulation and policy	<ul style="list-style-type: none"> Hire a consultant for 4 weeks to review the existing animal health laws, regulation and policy annually 	FMARD		1,770,000	1,770,000
	<ul style="list-style-type: none"> Conduct 5-day multi-stakeholder meeting of 40 persons to validate the amendment 	FMARD		7,166,000	7,166,000
	<ul style="list-style-type: none"> Printing 1000 copies of the amendment to be presented to National Assembly 	FMARD		2,000,000	2,000,000
	<ul style="list-style-type: none"> Provide support for legislative process 			0	0
	<ul style="list-style-type: none"> Printing and disseminate 50,000 copies of animal legislation 	FMARD		1,000,000	1,000,000
Conduct consultative and sensitization meetings for the revised law with the animal health policy makers	<ul style="list-style-type: none"> Conduct 3 days consultative stakeholder meeting with 40 people with the hired consultant (Residential) 	FMARD		4,666,000	4,666,000
	<ul style="list-style-type: none"> Conduct 2-days sensitization meeting of 60 participants of the revised law with animal health policy makers (Residential) 	FMARD		4,360,000	4,360,000
Conduct town hall meeting of the livestock value actors on compliance with animal laws and regulation	<ul style="list-style-type: none"> Conduct 1 day town hall meeting of 200 per state with all the livestock value actors on compliance with animal laws and regulation 	FMARD		111,370,000	111,370,000
	<ul style="list-style-type: none"> Upload the animal law and regulation to the ministry website for public domain 	FMARD		10,000	10,000
Conduct sensitization workshop for the revised law with the animal health officers in DVPCS	<ul style="list-style-type: none"> Conduct 2 -day sensitization workshop of 100 persons on the revised law with animal health relevant stakeholder (Residential) 	FMARD		9,440,000	9,440,000
Conduct sensitization workshop for the updated PVS with the animal health officers in DVPCS and state DVS	<ul style="list-style-type: none"> Conduct 2 -day sensitization workshop of 100 persons on the revised law with animal with relevant stakeholder (Residential) 	FMARD		9,624,000	9,624,000

P2: IHR Coordination, Communication, and Advocacy

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

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Complete pending legislative actions for "Nigeria Centre for Disease Control Bill" to give key public health institutions the legal mandate needed to accomplish national goals. (See National Legislation)	<ul style="list-style-type: none"> Costed in National Legislation 	NCDC, FMoH, FMARD, FMoF		0	0
Establish One Health platform at the national level, state level, and LGAs (See Zoonotic Disease)	<ul style="list-style-type: none"> Develop a concept note that provides a model for communication between various MDAs under IHR coordination, and identifies stakeholders. IHR NFP will write to the stakeholder agencies and ask them to identify focal persons for IHR coordination. 	NCDC		10,000	10,000
	<ul style="list-style-type: none"> Hold a 1-day stakeholders meeting of 30 persons to validate the concept note (10 persons from outside Abuja) and establish a new technical working group 	NCDC		2,152,000	2,152,000
	<ul style="list-style-type: none"> Convene the technical working group twice a year 	NCDC		7,084,200	21,252,600
	<ul style="list-style-type: none"> Convene the IHR stakeholders twice a year to review implementation status 	NCDC		4,173,600	12,520,800
	<ul style="list-style-type: none"> Support for IHR NFP secretariat 	NCDC		320,000	1,040,000
Develop All-hazards Standard Operating Procedures (SOPs) and guidelines for IHR coordination between IHR NFP and stakeholders	<ul style="list-style-type: none"> Within each IHR-related stakeholder identify existing SOPs pertinent to IHR coordination and communication (IHR NFP already has SOPs available for coordination, communication between IHR NFP and other stakeholders, and notification); SOPs on the side of the other stakeholders need to be developed 	NCDC		0	0
	<ul style="list-style-type: none"> Use existing biannual stakeholders meeting for each IHR stakeholder to present analysis of existing SOPs and gaps where SOPs need to be developed 	NCDC		0	0
	<ul style="list-style-type: none"> Within the IHR stakeholders, SOPs will have to be improved or developed. 			0	0
Develop database of stakeholder and partners supporting animal health programmes	<ul style="list-style-type: none"> Designate an officer in DVPCS to update and compile the list of partners and other relevant stakeholder supporting animal health activities 	FMARD		0	0
Support the multi-sectoral meeting for joint animal health programme such as AMR, Zoonotic diseases control, border security, laboratory issues	<ul style="list-style-type: none"> Conduct 1-day quarterly meeting of 30 persons with relevant MDAs on joint animal health programme such AMR, Zoonotic diseases control, border security, laboratory issues) 	FMARD		4,420,000	15,028,000
Procurement of Consultants to support Project Implementation	<ul style="list-style-type: none"> Engage 1 consultant per thematic area to develop project strategic plans and support the project implementation 	NCDC	Yes	94,080,000	376,320,000
One Health Stakeholders meeting/IHR quarterly review meeting	<ul style="list-style-type: none"> One day meeting Participants: NCDC IHR focal point (10), FMARD (5), FMOH (5), FMOE (2) IHR 19 thematic area partners (19), international Partners (5) (CDC, PHE, GIZ, WHO, RCDC): Hall, tea break, lunch, water - 45 Participants 	NCDC	Yes	1,689,400	1,689,400
Recruitment of Safeguard consultants to develop a plan for the project addressing (i) compliance	<ul style="list-style-type: none"> Consultancy to provide safeguard, waste management and grievance support to the REDISSE project 	NCDC	Yes	4,158,000	4,158,000

level required (ii) how the treatment of medical waste management					
Monthly Project Review meeting	<ul style="list-style-type: none"> Hold 2-day meeting in Abuja 20: Participants (PCU (6) NCDC each thematic area - (5), FMoH - 2, FMoE - 2, FMoF - 2, FMARD 2) 	NCDC	Yes	871,200	3,484,800
Hold quarterly National Technical Committee	<ul style="list-style-type: none"> Conduct quarterly Technical committee meetings in Abuja hall, accommodation, lunch, tea break, stationery 	NCDC	Yes	30,370,080	30,370,080
Biannual National Steering Committee Meetings	<ul style="list-style-type: none"> Hold biannual steering committee meetings 	NCDC	Yes	6,826,070	27,304,280
Performance Incentive	<ul style="list-style-type: none"> Project Consultants, Monthly communication allowances and travel support t for PCU 	NCDC	Yes	60,600,000	60,600,000
NCDC 2019 Work Plan development	<ul style="list-style-type: none"> 2-day NCDC Leadership/top management retreat to REVIEW STRATEGIC PLAN, develop the goals, objectives and activities for 2019 	NCDC	Yes	1,197,730	1,197,730
Project Management training	<ul style="list-style-type: none"> Support for in-country Project management training and procurement of PM software 	NCDC	Yes	7,635,080	7,635,080
Procurement activities and tenders board meetings	<ul style="list-style-type: none"> Conduct monthly procurement review/tenders board meeting; advertisement of procurement; 	NCDC	Yes	9,711,240	9,711,240
Procurement Consultant	<ul style="list-style-type: none"> Consultancy to support procurement activities of REDISSE 	NCDC	Yes	13,320,000	13,320,000
Support for REDISSE project logistics	<ul style="list-style-type: none"> Running costs for the project office for 12 months 	NCDC	Yes	7,364,500	29,458,000
Attendance of relevant nation and international events	<ul style="list-style-type: none"> Support to NCDC staff to attend local and international conferences and workshops 	NCDC	Yes	30,476,250	30,476,250
World Bank Project management training and project start up workshop	<ul style="list-style-type: none"> Programme start-up workshop with World Bank Team 	NCDC	Yes	16,733,690	16,733,690
Monitoring and Evaluation visits to project sites	<ul style="list-style-type: none"> Quarterly M/E visits to project sites to assess project performance and monitor activities on the field for 6 teams of 2 people 	NCDC	Yes	13,235,904	13,235,904
Establish One Health platform/coordination mechanism at the national and all states	<ul style="list-style-type: none"> Constitute a One Health TWG of 5 persons to draft MOU for the surveillance, laboratory and response including budgetary allocation for priority zoonotic disease across the relevant MDAs 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Conduct multi-stakeholder meetings to review and validate the drafted MOU with 20 participants for 1-day 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Signing of MOU by the relevant stakeholders 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Support the One Health TWG quarterly meetings with 20 participants for 1-day (n-Residential) 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Support the National One Health annual meetings with 100 participants for 3 day (Residential) 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Designate One Health focal point in the relevant MDAs 	NCDC	Yes	0	0
IHR coordination/One Health	<ul style="list-style-type: none"> Support the One Health TWG to develop the roles and responsibilities of the identified One Health focal points for 1-day (To be done at one of the TWG quarterly meetings) 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Support to the REDISSE PCU; Support in development of NAPHS 	NCDC	Yes	45,750,000	45,750,000

P3: Antimicrobial Resistance

P3.1: Antimicrobial resistance (AMR) detection system in place

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish a national steering committee to advise the Honourable Ministers	● Set up a steering secretariat at FMOH/NCDC	NCDC		0	0
	● Identify all stakeholders	NCDC		0	0
	● Develop a TOR for the steering committee: a 1-day meeting for 40 people in Abuja. Representatives will be from MDAs, Regulatory Bodies, the private sector, academia from human, animal, environmental health and food safety institutions and partners (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		5,270,000	5,270,000
	● Facilitate bi-annual 1-day meeting for 40 people (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		10,438,000	41,752,000
Convene regular meeting with all Departments/parastatals to discuss the report, the quarterly AMR activity mapping meeting and areas of integration between partners and agencies	● Advocacy visit to the deputy speaker house committee on health (6 persons will take 1-day visit to the senate; 2 would be from outside Abuja)	NCDC		865,000	1,730,000
	● Disseminate report of the WHO AMR case investment study (Print out and disseminate 1000 copies of report to all stakeholders)	NCDC		750,000	750,000
	● Workshop with 60 stakeholders discuss next steps after AMR case study report, review the ToR for the AMR technical working group via a 2-day workshop held in Lagos and review the NAP to develop operational plan for activities to be implemented in 2018 (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		9,374,000	9,374,000
	● 4-monthly AMR TWG workshop to review progress on NAP implementation (1-day residential workshop of 60 people)	NCDC		22,677,000	90,708,000
	● Virtual monthly meetings from June to September and 1 face-to-face meeting in October annually to plan for Annual National Antibiotic Awareness Week; in the third and sixth month, stakeholders from other States will be invited to Abuja (This includes cost for feeding for all and travels/per diem/accommodation for invited stakeholders etc.)	NCDC		8,051,200	20,128,000
Develop a framework for partnership on pharmaceutical research	● Meetings with NIPRD to develop a framework for partnership for pharmaceutical research convened (1-day meeting, 15 people)	NCDC		2,151,000	2,151,000
Strengthen the “One Health” components in the Nigeria National Action Plan on AMR.	● Collaborate with FMARD to establish a voluntary certification program on rational use of antibiotics in the Agriculture sector by convening annual meetings with FMARD on framework for the program and regular updates on progress made (Two meetings of 30 people from FMOH, NCDC and FMARD will be held in Abuja)	FMARD		4,794,000	19,176,000
	● Hold annual meetings with FMEvN, PMGMAN, PCN, NESREA on tracking healthcare waste and pharmaceutical effluent discharge into the environment	MOE		5,063,000	20,252,000
Establish and implement a Monitoring & Evaluation framework for AMR surveillance	● Engage 2 consultants (1 human, 1 animal) to develop M&E framework/plan for AMR response in human, animal and environmental health	NCDC		1,722,100	1,722,100
	● Hold a 1-day workshop on the validation/implementation of M&E plan for 40 AMR stakeholders (human, agriculture, environment) (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		1,675,000	1,675,000

Create a database for AMR and AMU Surveillance from human health facilities, farms, feedmills, vet clinics and environment	<ul style="list-style-type: none"> Engage an IT consultant for 10 days to set an electronic data storage and sharing system on AMR and AMU surveillance and Research in humans, creating interface for human, animal and environment Engage IT consultant to develop mobile platform and online database for data storage (3 month) for animal and environment AMR surveillance Print National AMR response and control research in high-impact journal and showcase in newspapers (Publish in newspaper twice a year in two national dailies and 5 articles per year) 	NCDC		1,796,000	2,694,000
		FMARD		898,000	1,796,000
		NCDC		1,700,000	6,800,000

P3.2: Surveillance system for infections caused by AMR pathogens

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish and integrate national surveillance system on AMR across human, animal and environment	<ul style="list-style-type: none"> Organise a 4-day training workshop with 30 stakeholders on human AMR surveillance system to provide structure, guide operations; training on antimicrobial susceptibility testing, data analysis and WHONET reporting (This includes cost for travels/per diem/feeding/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) Engage a consultant for 10 days to develop protocol/guideline/tools development for human AMR surveillance system Printing and distribution of 400 copies each (AMR surveillance for human health) of developed guidelines/protocols/tools Organise a 2-day annual workshop of 15 lab stakeholders in six geopolitical zone to review progress on the implementation of AMR surveillance integration (This includes cost for travels/per diem/feeding/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) 	NCDC		8,582,000	8,582,000
		NCDC		898,000	898,000
		NCDC		600,000	600,000
		NCDC		15,100,000	60,400,000
Conduct AMR diagnostic capacity assessment of laboratories to selected sentinel sites for reporting into GLASS across human, animal and environmental health institutions and designate AMR National Reference Laboratory for human and animal health	<ul style="list-style-type: none"> 5-person team to visit 5 human, animal and environment laboratories in 2018 and 10 laboratories from 2019 to 2022 should be assessed for AMR surveillance 	NCDC		1,374,600	4,123,800
	<ul style="list-style-type: none"> Procure equipment, materials, antibiotic panels, consumables and data reporting tools biannually, to support the 30 human health facilities, 6 labs from animal health and 2 environmental health laboratories 	NCDC		0	0
Establish internal and external Quality Assurance programs at designated laboratories	<ul style="list-style-type: none"> Procure EQAs for human health laboratories for Bloodstream, enteric and urinary infections via enrollment in EQA 	NCDC		0	0
Establish terms and concept an AMR Reference Laboratory and network system for animal and environmental health laboratories	<ul style="list-style-type: none"> Set up a 6-man task team to compile documents, develop TOR 	FMARD		0	0
	<ul style="list-style-type: none"> Engage a consultant to conduct an assessment of existing statutory instruments, to identify related gaps 	FMARD		494,000	494,000
	<ul style="list-style-type: none"> A workshop of 20 legal officers from agriculture, health and environment and other Ministries, Department and Agencies and organisations to review reports, propose an amendment, and draft new regulations where none exists 	FMARD		482,000	482,000
	<ul style="list-style-type: none"> High-level stakeholders meeting to review and approve the proposed amendment and/or new regulations with a press corps 	FMARD		450,000	450,000

	<ul style="list-style-type: none"> ● Advocacy visits and engagement with the legislature and executive arms of government for buy-in and legal backing ● Designate National Veterinary Research Institute (NVRI) as AMR reference Lab for animal health ● Engage a consultant for 10 days to develop and finalize AMR surveillance system guidelines for animal AMR surveillance system ● Organize a 4-day workshop to train 20 lab personnel in animal AMR surveillance system to provide structure, guide operations; training on antimicrobial susceptibility testing, data analysis and reporting ● Procurement of Lab equipment (2 HPLC machine, antimicrobial sensitivity discs, dispensers, reagent and other consumables) for animal health ● Procure EQAs for animal health laboratories for Blood stream, enteric and urinary infections via enrollment in EQA programs (ensure costing is captured under JEE National Lab system technical area) 	NCDC		267,000	267,000
		FMARD		0	0
		FMARD		898,000	898,000
		FMARD		6,256,000	6,256,000
		FMARD		0	0
		FMARD		0	0

P3.3: Healthcare-associated infection (HCAI) prevention and control programs

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen HCAI surveillance and prevention programmes	<ul style="list-style-type: none"> ● Inaugurate National Infection Prevention and Control (IPC) Technical Working Group across human, animal and environmental health sector and develop draft of harmonized National IPC policy and review the National IPC training manual and module for frontline human healthcare workers by holding a 3-day workshop with 20 stakeholders ● Finalise/validate harmonized National IPC policy by holding a 2-day workshop with 40 stakeholders 	NCDC		4,232,000	4,232,000
	<ul style="list-style-type: none"> ● Organise a 2-day annual workshop of 15 frontline healthcare workers (per state) in IPC committees of public hospitals to develop IPC action plan in six geopolitical zones (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) ● Train 10 frontline health workers at human hospitals on surveillance system for HCAI in 37 government hospitals for 3 days by geopolitical zones to monitor and evaluate IPC measures including surveillance for HCAI and outbreak response 	NCDC		6,222,000	6,222,000
Support, monitor and evaluate infection prevention and control programs in collaboration with National IPC focal point and stakeholders	<ul style="list-style-type: none"> ● Organise a 2-day annual workshop of 15 frontline healthcare workers (per state) in IPC committees of public hospitals to develop IPC action plan in six geopolitical zones (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) ● Train 10 frontline health workers at human hospitals on surveillance system for HCAI in 37 government hospitals for 3 days by geopolitical zones to monitor and evaluate IPC measures including surveillance for HCAI and outbreak response 	NCDC		15,376,000	15,376,000
	<ul style="list-style-type: none"> ● Train 10 frontline health workers at human hospitals on surveillance system for HCAI in 37 government hospitals for 3 days by geopolitical zones to monitor and evaluate IPC measures including surveillance for HCAI and outbreak response 	NCDC		38,814,000	77,628,000
Assess infection prevention and control facilities and advocate for resources to support IPC nationally and in all healthcare facilities	<ul style="list-style-type: none"> ● Adapt IPC assessment tool and review with assessors pre-evaluation ● Advocacy/Sensitization meeting to Director PH, State Epidemiologist, CMD, CMAC and HODs and assessment of IPC programs in 37 healthcare facilities by 2-man team for 1-day 	NCDC		3,443,000	10,329,000
	<ul style="list-style-type: none"> ● Advocacy/Sensitization meeting to Director PH, State Epidemiologist, CMD, CMAC and HODs and assessment of IPC programs in 37 healthcare facilities by 2-man team for 1-day 	NCDC		3,443,000	10,329,000
Introduce IPC programme in veterinary practice at the veterinary hospitals/clinics and biosecurity at farm level in aquatic and terrestrial animal husbandry.	<ul style="list-style-type: none"> ● Conduct sensitization on IPC and animal biosafety in veterinary practice, aquatic and terrestrial animal husbandry via a 1-day stakeholder meeting with 40 representatives in Abuja 	FMARD		1,072,000	3,216,000
	<ul style="list-style-type: none"> ● Establish/strengthening existing IPC/Biosafety committees /teams within existing committees in tertiary hospitals. Constitute IPC/Biosafety committees in each of the 9 Veterinary Teaching Hospitals (VTH). Organize a 2-day training workshop for 50 members of the committee (5 per VTH, 5 from national) 	FMARD		9,476,000	9,476,000
	<ul style="list-style-type: none"> ● To introduce IPC measures into veterinary practice and aquatic and terrestrial animal husbandry and implement biosecurity measures at all levels of animal production (terrestrial and aquatic) and feed milling. Hold a 2-day sensitization workshop on the importance of biosecurity measures on farms and feed mills at the 6 geopolitical zones (45 persons per geopolitical zone) 	FMARD		21,297,000	42,594,000

	<ul style="list-style-type: none"> Develop specific biosecurity/IPC guidelines, protocols and SOPs for terrestrial and aquatic animal husbandry, and in veterinary practice. Two 5-day workshops for 20 persons in Abuja to develop/adapt biosecurity/IPC training materials for animal health and animal production (terrestrial and aquatic). Training and re-training of Veterinarians & para-veterinary staff, feed millers, farmers, transporters, live-bird-markets, surveillance and communication agents on biosecurity/IPC measures. 2-Day training workshops for 45 persons per geopolitical zone (7 persons per State) Distribute 1000 printed bio-security and biosafety guidelines for animal health and animal production (terrestrial and aquatic) for terrestrial and aquatic animals and in veterinary practice to the 36 States and FCT Promote biosafety, personal hygiene at animal farms, Veterinary outfits and food animal processing plants and feed millers. 6 groups of a team of 3 (FMARD, NAQS, NAFDAC) to pay supervisory visits to farms and feedmills in the 6 geopolitical zones at 2-day/state Develop IPC/Biosafety program for Animal Health Clinics/ Hospitals (with the inclusion of environmental management and hospital waste management components) A) Hire a consultant to support the IPC/Biosecurity Program for Animal Health for 1 month Conduct a 5-day meeting to develop guidelines for the Biosafety/IPC Program for Veterinary Clinics/Hospitals and Vet laboratories x 15 people in Abuja A 2-days validation workshop for 40 people in Abuja (15 persons from outside Abuja) 	FMARD		7,380,000	7,380,000
Improve hand hygiene, food hygiene and waste disposal across all sectors	<ul style="list-style-type: none"> Develop guidelines and IEC materials to ensure proper waste disposal and management and guideline for wholesome and hygienic, fish, meat, dairy & dairy products, terrestrial & aquatic animal transporters, handlers and feed/feed milling. A) Conduct a 5-day workshop to develop guidelines for wholesome and hygienic, fish, meat, dairy & dairy products, terrestrial & aquatic animal transporters, handlers and feed / feed milling x 10 people in Abuja Advocacy to government to provide safe potable water for animal production & processing. A team of 5 to pay advocacy to government. Development of advocacy tools for Advocacy visit Sensitization and awareness campaigns to farming communities to provide safe potable water for animal production & processing. Organize 2-days sensitization workshops for 45 people per geopolitical zones with a 2-man team Control centers (NCDC and Ministry of Labour) organize workshops and training on occupational safety for waste collectors and tertiary hospital staff. Organize 2-days sensitization workshops for 45 people per geopolitical zones Training on occupational safety for waste collectors and their employers as well as hospital staff. 2-days Training workshops for 45 persons per geopolitical zone (7 persons per State) Print and distribute 4000 copies IEC materials annually to schools Promotion of Hand hygiene at the community and in schools. Annual sensitization of teachers. 1-day sensitization for 15 Principals per State, 2 teachers from UBE per state and 3 from National. Cost for Refreshments, DSA and local transportation 	FMARD		4,310,000	4,310,000
Improve access to safe and potable water	<ul style="list-style-type: none"> Conduct advocacy to relevant stakeholders on provision of potable water at all healthcare facilities and communities Conduct advocacy to relevant stakeholders to provide logistic support for safe healthcare waste management Provision of water quality test-kits and routine laboratory testing of water for aquatic and terrestrial animals 	MOE		13,526,000	40,578,000
		MOE		13,526,000	40,578,000
		MOE		600,000	600,000
		MOE		8,470,000	31,339,000
		MOE		0	0
		MOE		0	0
		FMARD		0	0

P3.4: Stewardship Activities

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop and Implement antimicrobial stewardship programs across human, animal and environmental health	<ul style="list-style-type: none"> Hold 5-day national workshop with 50 stakeholders to define TOR, develop AMS Policy for Nigeria to develop antimicrobial stewardship working manuals for hospitals, Vet clinics and community pharmacies in Nigeria. (This includes cost for travels/per diem/feeding/accommodation/venue for invited stakeholders etc.) 	NCDC		12,526,000	12,526,000
Promote optimal prescribing and dispensing of antimicrobials in humans and animals and Support participation of tertiary health facilities in Nigeria in AMS point prevalence survey	<ul style="list-style-type: none"> 3-day Workshop for 40 stakeholders in animal health to adapt treatment guidelines for animals in accordance with OIE terrestrial and aquatic code and develop essential veterinary antimicrobial list into the veterinary formulary. 	FMARD		3,116,000	3,116,000
	<ul style="list-style-type: none"> Printing and distribution of 1,000 updated EDL, STGs for human health workers and 1,000 updated treatment guidelines and veterinary formulary to Vet workers at all levels of care 	FMARD		3,000,000	3,000,000
Conduct Assessment (Survey) of current practices of AMU in humans and animals	<ul style="list-style-type: none"> Engage two consultants and 4 data collectors for one-month to obtain baseline data on antimicrobial consumption in 1 tertiary, 1 secondary, 1 primary health facilities, 1 Veterinary facility and 2 community pharmacies in the 6 geopolitical zones of the country. (This includes cost for travel/per diem/food/accommodation etc.) Develop and implement education and training on rational drug use for human and animal health in line with updated STGs. <ul style="list-style-type: none"> Hold a 1-day workshop meeting with 30 stakeholders from Family Health department in the FMOH to incorporate AMR prescribing competencies into the education (train the trainer) programs within Mother and Child health clinical activities, Department of Hospital services & Food and Drug Services in FMOH, NPHCDA A 2-day meeting with 50 stakeholders to develop one health training materials and manuals on Rational Drug Use Hold a 3-day Training workshop for 30 participants/State with NPHCDA for human and animal health workers are secondary and tertiary levels of care to cascade to facilities and to integrate rational antibiotic use into the PHC PAC guidelines 4-person team visit 37 states 2-days annually monitoring visits to evaluate compliance and impact, antimicrobial PPS report and conduct twice yearly evaluation visits to facilities. 	NCDC		10,236,000	10,236,000
Pilot AMS program including PPS in 12 health institutions in the 6 geo political zones (1 tertiary and 1 secondary) and scale up to 27 tertiary and secondary health facilities respectively.	<ul style="list-style-type: none"> Procure information communication devices such as computers and install required antimicrobial consumption monitoring software at the pilot facilities and scale up to the other facilities. 	NCDC		12,975,000	51,900,000
	<ul style="list-style-type: none"> Engage consultant for 10 days to develop protocol for the training of AMS Committees on data collection protocols; PPS, antimicrobial use/resistance reporting, auditing and information sharing mechanisms in humans 	NCDC		898,000	898,000
	<ul style="list-style-type: none"> Create and maintain an online continuous educational module on Antimicrobial stewardship for one health workers. 	NCDC, FMARD		0	0
Organize 2-day workshop with 30 stakeholders to develop and update relevant prescribing policies and legislative framework of VCN, PCN on antimicrobial use and AMR control.	<ul style="list-style-type: none"> Organize 2-day workshop with 30 stakeholders to develop and update relevant prescribing policies and legislative framework of VCN, PCN on antimicrobial use and AMR control. 	NCDC		4,976,000	4,976,000

1-day advocacy visit to policy makers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation)	<ul style="list-style-type: none"> 1-day advocacy visit to policymakers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation) 	NCDC		64,000	64,000
Conduct a nationwide baseline behavioural study on AMR awareness, KAPP. Use baseline findings to develop and disseminate an AMR SBCC materials in English, Pidgin haus, Igbo and Yoruba.Activity	<ul style="list-style-type: none"> Assessment of Antibiotics awareness in 10 geopolitical zone. 5 teams of 2 persons per team 	NCDC		5,280,000	10,560,000
Develop and print risk communication tools for AMR awareness in Humans and animals	<ul style="list-style-type: none"> Pretesting of SBCC materials by 2 man-team per geopolitical zone for 60 participants Development of 10000 SBCC materials on AMR in humans and animals in English, Pidgin, Igbo, Hausa and Yoruba for the community (This includes cost for pretesting, development and dissemination of 100000 copies) 	NCDC		1,344,000	1,344,000
Review of school curricula (primary, secondary and tertiary) and training guidelines for teachers and health professionals in human, animal and environment to ensure appropriate inclusion of AMR, IPC, biosecurity and antimicrobial stewardship	<ul style="list-style-type: none"> 1-days review meeting with 50 relevant stakeholders to update school curricula and training guidelines with Ministry of Education and NYSC (This includes cost for travel/per diem/ feeding/accommodation/venue for the invited stakeholders. 	NCDC		1,306,000	1,306,000
Organise seminars and training for relevant stakeholders such as media, PPMV, animal health inspectors, clinical veterinarians, livestock producers, aquaculture farmers, toll milers, feed manufacturers, etc.	<ul style="list-style-type: none"> Conduct a 1-day seminar of 120 relevant Stakeholders to raise awareness on human, animal and environment antibiotics resistance including NAFDAC focal person to discuss integration of AMR messages in TV programs and channels conducted and AMR National Behaviour Change Communication Consultative Group (NBCCCG), Sensitise drug retailers, life stock/ fish marketers and butchers on AMR 	NCDC		3,086,000	3,086,000
Incorporate AMR activities into through existing WASH programs within NPHCDA and Family health and other agencies	<ul style="list-style-type: none"> Meeting with UNICEF/GARP/WHO to plan on how WASH can be used to create awareness conducted AMR messaging integrated into the National Cholera WASH Campaign in 2018 Coordinate social media activities with other agencies to promote hand hygiene in the community during campaigns Record review of vet clinics/ hospitals for data on drug use in the treatment of animals. Quarterly sampling of animal feeds, water, meat, milk, eggs, fish, honey in 6 big farms, abattoirs, feed mills per state (2 man team for 5-days/state) 			0	0
Conduct nationwide active surveillance for AMR in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops	<ul style="list-style-type: none"> Engage a consultant to develop a surveillance protocol for AMU in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops (1 consultant to work over 10 days Training of State Ministry of Agriculture staff and LGA, veterinarians (public and private), veterinary paraprofessionals on AMR, AMU surveillance and sample collection and transportation (50 participants over 5-days each) 	FMARD		4,750,000	17,575,000
		FMARD		898,000	898,000
		FMARD		57,760,000	213,712,000

P4: Zoonotic Diseases

P4.1: Surveillance systems in place for priority zoonotic diseases/pathogens

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Update list of top priority zoonotic diseases through a "One Health" deliberation process	<ul style="list-style-type: none"> Conduct multi-stakeholders meetings of 35 participants to review key priority zoonotic diseases annually for 2-day. (Residential) 	NCDC		0	0
	<ul style="list-style-type: none"> Conduct multi-stakeholder meetings of 20 participants to validate the reviewed key priority zoonotic diseases annually for 1 day. (Residential) 	FMARD		0	0
Develop integrated zoonotic disease surveillance system	<ul style="list-style-type: none"> Engage a consultant for 4 weeks to assess the existing animal disease surveillance system (NADIS/ARIS) and to also develop the operational plan for the integration of zoonotic disease surveillance system 	FMARD, NCDC		0	0
	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop SOPs, guidelines and protocols for reporting priority zoonotic disease of PHEIC to the IHR NFP 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct multi-stakeholder's meetings of 20 participants review and validation of the draft SOPs, guidelines and protocols for reporting priority zoonotic disease of PHEIC to the IHR NFP. 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct a 2-day training of 50 animal disease reporting officers in 2 batches (37 Federal and 37state Epid officers, 10 veterinary teaching hospital staff, 2 NVRI staff, 6 Quarantine and 8 private veterinarians on the core activities of the integrated zoonotic disease surveillance system 	FMARD		0	0
	<ul style="list-style-type: none"> Procure 100 laptops for the animal disease reporting officers 	FMARD		0	0
	<ul style="list-style-type: none"> Engage one consultant for 4weeks to develop the risk mapping for priority zoonotic disease 	FMARD		1,706,000	1,706,000
Develop risk mapping for four priority zoonotic diseases using one health approach	<ul style="list-style-type: none"> Conduct expert elicitation of 40 participants workshop for 5-days to support the consultant in developing risk mapping 	FMARD		11,853,000	11,853,000
	<ul style="list-style-type: none"> 1-day stakeholder meeting with 20 participants to validate the report of the risk mapping 	FMARD		5,829,000	5,829,000
	<ul style="list-style-type: none"> Printing of 500 copies of the validated risk mapping 	FMARD		500,000	500,000
	<ul style="list-style-type: none"> Dissemination of 400 copies of the validated risk mapping 	FMARD		740,000	740,000
	<ul style="list-style-type: none"> Constitute a One Health TWG of 5 persons to draft MOU for the surveillance, laboratory and response including budgetary allocation for priority zoonotic disease across the relevant MDAs 	NCDC		0	0
Establish One Health platform/coordination mechanism at the national and all states	<ul style="list-style-type: none"> Conduct multi-stakeholder meetings to review and validate the drafted MOU with 20 participants for 1-day 	NCDC		0	0
	<ul style="list-style-type: none"> Signing of MOU by the relevant stakeholders 	NCDC		0	0
	<ul style="list-style-type: none"> Support the One Health TWG quarterly meetings with 20 participants for 1-day (n-Residential) 	NCDC		0	0
	<ul style="list-style-type: none"> Support the National One Health annual meetings with 100 participants for 3-day (Residential) 	NCDC		0	0
	<ul style="list-style-type: none"> Designate One Health focal point in the relevant MDAs 	NCDC		0	0
	<ul style="list-style-type: none"> Support the One Health TWG to develop the roles and responsibilities of the identified One Health focal points for 1-day (To be done at one of the TWG quarterly meetings) 			0	0

Strengthen laboratory detection for priority zoonotic diseases/pathogens (● Hire a consultant to conduct needs assessment for human laboratories, six VTH laboratories across the geopolitical zones for the diagnosis of zoonotic diseases	NCDC/F MARD/F MOH		0	0
	● Procurement of reagents, consumables, and equipment for the six VTHs (Reagents – 2000 RDT kits; Lassa fever, Rabies, Brucellosis and Avian Influenza; consumables – 100,000 needle and syringes, 40,000 litres of disinfectant, 10,000 vacucontainers, 20,000 test tubes, 20,000 gloves, 5000 PPEs; Equipment – 6 PCR machines, 10 bio-safety cabinets, 20 electron microscope etc.	FMARD		423,400,00 0	423,400,000
	● Conduct training of 25 laboratory personnel on detection of priority zoonotic diseases	NCDC		13,450,000	33,625,000
	● Engage a consultant for 4 weeks to develop Laboratory Information Management System (LIMS) for animal health	FMARD		1,290,000	1,290,000
	● Train 40 laboratory information officer on LIMS	FMARD		0	7,658,000
	● Provision of ICT infrastructural facilities (40 laptops, 40 modems	FMARD		0	10,400,000
	● Monthly internet subscriptions for 40	FMARD		0	2,400,000

P4.2: Animal Health and Veterinarian Workforce

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen technical capacity for animal health workforce (Zoonotic disease control, communications, RDTs, etc.)	● Engage a consultant for 1 week to conduct gap analysis on the technical capacity of the animal health work force in the area of zoonotic disease control, risk communication, diagnoses etc.	FMARD		1,438,000	1,438,000
	● Conduct multi-stakeholder meeting to validate the gap analysis report with 20 participants for 2days	FMARD		3,534,000	3,534,000
	● Training of 100 animal health workers for 5-days in 2 batches (Residential)	FMARD		29,270,000	29,270,000
Advocate/Support for the recruitment and deployment of animal health epidemiologists into the Public Health sector at the State and national levels	● Conduct multi-stakeholders meeting with the 37 state commissioners' of agriculture and 37 directors of veterinary services to discuss on the sustainability plan for the advanced and frontline FETP program, recruitment and other relevant workforce issues for 2-days (Residential)	FMARD		13,659,000	13,659,000

P4.3: Mechanisms for responding to infectious zoonoses are established and functional

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish One Health platform for responding to infectious zoonotic diseases (1 – 3 have been captured under indicator P 4.1 activity 5)	<ul style="list-style-type: none"> • Constitute a One Health TWG to draft MOU for response activities including budgetary allocation for priority zoonotic disease across the relevant MDAs • Conduct multi-stakeholder meetings to review and validate the drafted MOU with 20 participants for 1-day • The signing of MOU by the relevant stakeholders • Engage a consultant to develop One Health emergency and response plan for selected priority zoonotic diseases • Training of One Health response team (1 Medical 6) Epidemiologist, 1 Veterinarian, 2 Laboratorian, 1 environmental health officer, 1 wildlife officer and 1 communication officer) in 37 states and at federal level during outbreak situation for 5-days • Conduct simulation exercises for 20 teams to test the emergency and response plan for 2 selected zoonotic diseases • Conduction after action review for at least two major zoonotic disease outbreaks to improve the response mechanism with 40 participants for 2-days (residential) 	FMARD, NCDC, MoE		0	0
Build technical capacity for zoonotic disease of Disease Surveillance Officers and Animal Surveillance Officers at LGA level	<ul style="list-style-type: none"> • Identify and designate animal disease surveillance points/officer based on the report of the risk mapping from 591 to 1000 surveillance points • Training of 1001 existing and new vet surveillance for agents on response to infectious zoonotic diseases • Engage a consultant for 1 week to develop and design SOPs, guidelines and protocols on selected priority zoonotic disease for 1 week 	FMARD		0	0
Develop and implement a national strategy for multi-sectoral response to zoonoses	<ul style="list-style-type: none"> • See under IHR & preparedness and response 			102,943,400	102,943,400
Conduct prioritization of TADs and zoonotic diseases	<ul style="list-style-type: none"> • Engage consultants to conduct expert, elicitation exercise, review and update the list of priority zoonotic diseases and TADs for human and animal health surveillance system 2. Conduct two multi-stakeholder meetings of 50 & 65 persons for the adoption and validation of the report respectively (3 days residential) and 14. Print 2500 copies and disseminate 2000 copies of the report 	FMARD Yes		494,000	494,000
				14,748,284	14,748,284

P5: Food Safety

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

Strategic Action	Detailed Activities	MDA	Funded	Cost (N)	Cost (N)
				2018-2019	2018-2022
Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease.	● Quarterly meetings of 40-member Food Safety Committee.	FMOH		15,228,000	35,532,000
	● Bi monthly sensitization of the parliamentarians at the upper and lower house.	FMOH		288,000	288,000
	● Printing 2000 copies of Food Safety & Quality Act	FMOH		4,658,000	4,658,000
	● Dissemination of the Act to 36 states of the federation.	FMOH		131,200	393,600
	● Engage a communications consultant to develop draft SOP for Food Safety, IEC materials in English	FMOH		3,600,000	3,600,000
	● Conduct a stakeholders' meeting of 20 persons for 1-day to validate the SOP.	FMOH		1,444,000	1,444,000
	● Engage a web development consultant to develop prototype website on food safety (for publications, reports, research, interventions etc.).	FMOH		3,600,000	3,600,000
	● Consultant to work with Food Safety Programme (FMOH) to develop a draft web content	FMOH		0	0
	● Conduct stakeholders' meeting of 30 people for 2-days to validate web content and site structure.	FMOH		2,556,000	2,556,000
	● Upload files to registered domain.	FMOH		0	0
Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels.	● Engage consultant to perform baseline assessment of laboratory capacities and identify at least 1 laboratory per state (37 labs) for standardization and accreditation to ISO certification for foodborne disease detection	NCDC		0	0
	● Consultant to work with foodborne illness detection & response collaborative team to develop draft SOPs for sample collection, transportation, storage and laboratory testing requirements for food safety threats.	NCDC		0	0
	● Conduct stakeholders' meeting of 40 persons for 2-days to validate the draft SOPs	NCDC		0	0
	● Training of 2 laboratory personnel in each of the 37 laboratories to ensure capacity and adherence to protocols	FMOH		5,876,800	17,630,400
	● Engage consultant to perform baseline assessment of laboratory capacities to detect, report and survey animal samples at least 1 laboratory per state (37) for standardization and accreditation to ISO certification for foodborne disease detection	FMARD		0	0
	● Consultant develop draft SOPs for analysis of animal samples for detection, reporting and surveillance	FMARD		0	0
	● Conduct stakeholders' meeting of 40 persons for 2-days to validate the draft SOPs	FMARD		0	0
	● Biannual review of foodborne disease and animal disease laboratory by the National Food Safety Committee.	FMARD		0	0
	● Review of the laboratory assessment for food safety capacity specifically, and defining specific needs for laboratory equipment and capacity upgrades (animal health and human health)	FMOH		0	1,380,000

	<ul style="list-style-type: none"> • Equipment upgrades and procurement for food safety capacity based on the results of the above report 	FMOH		0	300,000,000
Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response.	<ul style="list-style-type: none"> • Establish a foodborne illness detection & response collaborative team • Inaugurate of the team • Conduct 1-day quarterly meetings of the 20 member committee. • Engage two consultant, in collaboration with the foodborne illness detection & response collaborative team, to develop draft reporting format and draft SOPs for: <ul style="list-style-type: none"> (a) Surveillance foodborne diseases; (b) Monitoring foodborne disease; (c) Detection of foodborne diseases; and (d) Responding to foodborne disease events • Conduct Stakeholders' meeting to validate the drafted reporting format and SOPs. • Validated documents presented to the National Council on Health • Conduct a 10-man sensitization exercise to 36 State and FCT on the use of the reporting SOP to ensure prompt response to food safety events. • Quarterly review of the foodborne disease surveillance, detection and response system by the National Food Safety Committee. • Conduct periodic training for foodborne illness detection & response collaborative team members and other key frontline officers (40 persons). • Engage a consultant to oversee the assessment of the current state of the National Animal Disease Information System (NADIS). • Consultant to work with FMARD to review and develop draft checklists, SOPs and guidelines to ensure proper surveillance of foodborne diseases of animal origin. • Conduct stakeholders' meeting of 40 persons for 2-days to validate the draft checklists, SOPs and guidelines. • Presentation and approval of the validated documents at the National Council on Agriculture & Rural Development (NCARD) • Regional ToT for 30 agricultural extension workers & veterinarians in 6 geopolitical zones (i.e. 5 per state) on the use of the approved documents • Production and Dissemination of the documents nationwide • 16. Quarterly review of the system by the National Food Safety Committee • Engage a consultant to conduct a nationwide assessment on Drug Residues in Meat, Milk, Eggs, Honey, Fish and other Agricultural products. • Consultant to work with FMARD to develop zero-draft National Drug Residue Monitoring plan • Conduct stakeholders' meeting of 40 persons for 2-days to validate the zero-draft National Drug Residue Monitoring plan • Presentation and approval of the validated plan at the National Council on Agriculture & Rural Development for nationwide implementation 	FMOH	Yes	4,800,000	4,800,000
Develop the certification protocol, guideline for the inspection of facilities to export live animal, animal byproducts and animal; and procure inspection vehicle	<ul style="list-style-type: none"> • Hire a consultant to develop the certification protocol, guideline for the inspection of facilities to export live animal, animal products and animal byproducts 	FMARD		1,297,050	1,297,050

	<ul style="list-style-type: none"> ● Procurement of 4 inspection and monitoring vehicle for certification of facility use for export of animal, animal products and animal byproducts ● Conduct periodic active surveillance for all the facilities use for export of animal, animal products and animal byproducts biannually 	FMARD		140,000,000	140,000,000
Develop animal identification and traceability system for animal and animal product as requirement for diseases control and food safety purpose	<ul style="list-style-type: none"> ● Hire a consultant for 4 weeks to develop animal identification and traceability system for animal and animal product as requirement for diseases control and food safety purpose ● High level consultative meeting with internet service provider (MTN, GLO,) to develop strategy and MOU for the implementation of animal identification and traceability ● Conduct 2-day meeting of 30 persons to validate the system ● Procurement of tools for the traceability (cyber, 2 tracker machines, 10 laptops, identification bio-chips,) ● Procurement of office facility (5 table, 10 chair, 5 cabinet) ● Procurement of band width and internet subscription) ● Conduct 5-day training of 20 persons bi-annually on animal identification and traceability 	FMARD		1,770,000	1,770,000
		FMARD		1,074,000	1,074,000
		FMARD		2,266,000	2,266,000
				0	0
		FMARD		2,300,000	2,300,000
		FMARD		15,540,000	62,160,000
		FMARD		4,458,000	4,458,000

P6: Biosafety and Biosecurity

6.1: Whole-of-government biosafety and biosecurity system is in place for human, animal, and agriculture facilities

Strategic Action	Detailed Activities	MDA	Funded	Cost (N)	Cost (N)
			2018-2019	2018-2022	2018-2022
Develop multi-sectoral legislation and regulations on biosafety and biosecurity, including sustainable funding mechanisms	<ul style="list-style-type: none"> Initiation of institutional community to support professionals working on biosecurity and laboratory biosafety and enlisting of new ones by holding a residential stakeholders meeting of 30 people for 1-day with office of the national security adviser(ONSA) as the lead organisation . Hire staff to oversee drafting of the national policy, must coordinate stakeholders between all sectors Hire an international consultant for one week to draft a laboratory Biosafety and Biosecurity bill for submission to the legislature. Submission of draft bill for legislature Hold a 2, 3-day residential expert meetings of ten(10) invited experts to review draft of B/B bill. Hold a 1-day non-residential relevant stakeholders meeting of eight (8) MDAs on identifying budgets and their complementarity for B/B 	ONSA		3,096,800	3,096,800
Establish a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens.	<ul style="list-style-type: none"> Set up a Ten(10) man multi-organisational, multidisciplinary task force on biosecurity pending the assent to proposed draft bill coordinated by ONSA who will hold a bi-monthly meeting for each year. Invite one (1) Consultant to develop indicators for an appropriate database for inventorying and tracking dangerous pathogens nationwide and to create a coordination mechanism for the sharing of information between human and animal health facilities Invite two(2) experts to guide in developing an adoptable SOP for nation-wide response procedure and prepare facility audit reporting framework Hold a1-day meeting for 20 persons to finalize and adopt the draft SOPs and the recommended software. SOPs - printing and dissemination costs 	NCDC ONSA		3,168,000	3,168,000
Perform an audit of institutions and locations with dangerous pathogens and toxin control in order to develop a plan for consolidation.	<ul style="list-style-type: none"> Organise and hold a one-day pre-takeoff workshop for six (6) audit survey teams of 3 members each, coordinated by the national task force survey team Conduct a nationwide survey by the six(6) audit survey teams on institutions/facilities that deal on highly dangerous & infectious agents in the country within 20 days; Hire an IT specialist to develop an inventory/database of all institutions and facilities that deal with dangerous pathogens and other hazardous agents. IT costs for hosting and running database Hold a1-day non-residential workshop of 15 persons to review activity and test run the inventory/database developed. Conduct an annual independent audit visit to the institutions and facilities in the 6 geopolitical zones of the country by selected team of 2 experts for 5days. Hold a 2-day residential annual meeting of all (30) stakeholders to finalize report on the audit of the facilities. 	ONSA		2,858,000	2,858,000
				28,632,000	28,632,000
				14,490,000	28,980,000
				4,674,228	18,696,912
				1,504,600	3,009,200
				22,385,000	89,540,000
				3,880,000	15,520,000

Conduct needs assessment to identify gaps in current biosafety and biosecurity training	<ul style="list-style-type: none"> Set up a sub-task force team of 6 persons on biosecurity and laboratory biosafety training programmes coordinated by the national team. 	ONSA		837,200	837,200
	<ul style="list-style-type: none"> Hire a consultant for 1 month to develop emergency response plans for events involving dangerous pathogens: use of high containment facilities, accidental exposure etc. 	ONSA		0	1,290,000
	<ul style="list-style-type: none"> Hold a 1-day multi-stakeholder meeting of 20 participants to review and validate the above (non-residential) 	ONSA		0	1,847,200
	<ul style="list-style-type: none"> Hold a 1-day meeting of sub taskforce (10 persons) to draft a guide on setting up institutional biosecurity training programs. 	ONSA		0	2,324,000
	<ul style="list-style-type: none"> Hold a 1-day multi-stakeholder meeting of 25 participants to review and validate the guide (non-residential) 	ONSA		841,000	3,364,000
	<ul style="list-style-type: none"> Hire a consultant for 24 weeks to develop online training programmes on biosecurity and biosafety and network with other developed and international institutions. 	ONSA		7,290,000	7,290,000
	<ul style="list-style-type: none"> IT needs for online training programme 	ONSA		15,250,000	30,500,000
	<ul style="list-style-type: none"> Hold a 1-day multi-stakeholder meeting of 20 participants to review and validate the assessment report (non-residential) 	ONSA		706,000	706,000
	<ul style="list-style-type: none"> Provide a 3 day training workshop of 30 participants from relevant institutions on global best practices for facilities where dangerous pathogens are handled resulting to national recommendations on continuous training and re-training.(Residential) 	ONSA		5,250,000	21,000,000
		ONSA		690,000	690,000
Establish training and oversight for personnel reliability programs and ensure compliance to biosafety and biosecurity rules and regulations.	<ul style="list-style-type: none"> Hire a consultant to develop a database of National and international experts in Biosafety and Biosecurity for training and national capacity building 	ONSA		690,000	690,000
	<ul style="list-style-type: none"> Conduct two(2) inspections and monitoring exercise (initial and midterm) by a 12 man compliance team to ensure compliance with regulations, procedures and terms and conditions. 	ONSA		0	44,770,000
	<ul style="list-style-type: none"> Set up a sub-task force team of 6 persons on biocontainment and specimen repository 	ONSA		410,000	410,000
	<ul style="list-style-type: none"> Set up a sub-task force team of 6 persons to develop certification, building and renovation standards for high containment facilities 	ONSA		0	0
	<ul style="list-style-type: none"> Procurement of equipment for facilities identified for refurbishing; freezers, HVAC system, stabilizers, UPS, converters, temperature monitoring system, LIMS system, liquid nitrogen plant, PPE, biosafety hoods, generators, water supply, restricted access control panels, 	ONSA		0	1,566,480,00

D1: National Laboratory System

D1.1: Laboratory testing for detection of priority diseases

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Identify public health Laboratories that constitute the network and create database	<ul style="list-style-type: none"> Hire a consultant to adapt existing questionnaire from JICA assessment for all public health laboratories over 5-days; Consultant to develop ODK tool for mobile data collection and M&E over a period of days; Conduct training 40 data collectors on the use of ODK and questionnaire over a period of 2-days (Residential) Conduct field visits to all public health laboratories; 40 data collectors, over 5-days nationwide Consultant to clean, analyze the data and write report over a period of 5-days; Stakeholders meeting to validate the assessment report for 1-day, 20 participants Hire a consultant to create interface for interactive database over a period of 2 weeks; Hire a consultant to create SOP with eHA for updating database annually using follow-up phone calls or questionnaire over a period of 5-days Stakeholders meeting to validate the interactive database and SOP for 1-day, 20 participants Consultant to develop minimum requirements for operating standards for laboratory diagnosis of priority diseases within the network laboratories 	NCDC		494,000	494,000
Develop plan with MoH, MoA, and other stakeholders for developing the capacity needed to meet diagnostic and confirmatory requirements for priority diseases in human and animal health laboratories.	<ul style="list-style-type: none"> Conduct Stakeholders meeting of 30 persons over 2-days (Residential) to set objectives, get buy-in and to review existing assessments of laboratory capacity for diagnostic testing of priority diseases, including JEE & PVS; Establish technical working groups in human and animal health to draft plans for capacity development for priority diseases;(two day meeting with 30 persons, non-residential) ; TWGs decide on information sharing needs between human and animal health; TWG create strategies for laboratory information sharing between human and health for priority zoonoses (one day meeting with 30 persons, non-residential for sub activities 3 and 4) TWG annual meeting (1-day residential meeting) 	NCDC		6,022,000	6,022,000
Develop strategy to set up a central Repository and coordinated dissemination/distribution of core reagents and consumables of the priority	<ul style="list-style-type: none"> Supply chain stakeholder meeting between immunizations, HIV, TB, malaria, polio to discuss existing supply store networks and determine whether existing assets can be leveraged on, or a new system needs to be developed; (2-days stakeholders meeting of 30 persons, Residential) 	NCDC		3,166,000	3,166,000

diseases to the laboratory network to improve existing supply chain					
	● Advocacy efforts to HMH to support this as a priority;	NCDC		0	0
	● Series of trainings at national and zonal levels for supply chain management on logistics, biosafety; (Conduct a National training of trainers of 40 participants over 3 days (residential),	NCDC		6,828,000	6,828,000
	● Training of 774 LGAs supply chain managers at geopolitical zone levels over a period of 3 days, Residential)	NCDC		46,873,600	46,873,600
Adopt and implement one Laboratory Information sharing system by all laboratories	● Establish routine mechanisms for procurement of reagents and consumables for NVRI & NRL/CPHL. (1-day residential Workshop of 20 persons)	NCDC		1,442,000	1,442,000
	● Review mapping assessment activity to determine which systems are used where; (Stakeholders meeting 40 persons over 2-days, Residential)	NCDC		4,196,000	4,196,000
	● Hire a consultant over 2 weeks to conduct an analysis of the existing needs and interoperability requirements [incl. with DHIS2] & costs; determine if a partner with NCDC is needed to customize solutions to domesticate;	NCDC		1,588,250	1,588,250
	● Present analysis results at stakeholder meeting of 30 persons over 2-days (residential) to select or adopt a platform for LIMS;	NCDC		3,166,000	3,166,000
	● Pilot LIMS system at national level, 1 NCDC affiliate lab, and 1 state;	NCDC		2,600,000	2,600,000
	● Training on LIMS at national & state TOT; (Training of 70 persons on LIMS over a period of 3 days, Residential)	NCDC		11,223,200	11,223,200
	● Initial rollout of LIMS at the national level NRL; Second rollout at 10 NCDC-affiliated labs;.....	NCDC		67,034,000	67,034,000
	● Progressive rollout at state labs (one lab per state, 10 state per year) includes procurement of hardware, software, and network connection	SMOH		0	225,478,000

D1.2: Specimen referral and transport system

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish a comprehensive, integrated National policy, guidelines, and SOPs on sample management for human, animal, food, and environmental	● Engage one consultant for each of these agencies (human, animal, food, environmental) to draft operational guidelines for specimen management; (4 consultants, for one week) and identify one focal person from each agency	NCDC		1,680,000	1,680,000
	● Conduct a stakeholders meetings to review the SOPs, find linkages; (2-days stakeholders Workshop of 40 participants, Residential)	NCDC		4,196,000	4,196,000
	● Finalize SOPs(1-day stakeholders meeting of 20 participants, non-residential)	NCDC		706,000	706,000

Establish a specimen transportation system at all levels	<ul style="list-style-type: none"> Conduct a national workshop reviewing subnational specimen transport systems in other African countries; 	NCDC		10,647,400	10,647,400
	<ul style="list-style-type: none"> Identify and sign contract with a private courier for specimen transportation from communities to 37 state capitals and onward to Reference laboratories 	NCDC		47,520,000	
	<ul style="list-style-type: none"> Conduct 2-day stakeholders Workshop for all states to review existing intra-state specimen transportation system and needs, and discuss possible public-private partnership for state courier services; (3-day meeting of 50 persons, Residential. NB: this addresses sub-activities 2 and 3) 	NCDC		5,070,000	5,070,000
	<ul style="list-style-type: none"> Financing assessment, advocacy, for state funds to implement courier services (Advocacy visit of 3 senior staff of NCDC and NVRI to 37 states, spending 2-days/state) 	NCDC		16,457,600	16,457,600
	<ul style="list-style-type: none"> Consultant to map existing certified international couriers for infectious substances AND the appropriate regional reference laboratories for confirmation by pathogen; develop a transportation plan for international shipments from 2 hubs (Abuja and Lagos) 	NCDC		600,000	600,000
	<ul style="list-style-type: none"> International shipments of specimens to regional referral labs 	NCDC		18,300,000	73,200,000
	<ul style="list-style-type: none"> Infectious substance training for 2 national staff 	NCDC		4,000,000	16,000,000
Establish a tracking system for specimen referral and transportation [pre-requisite is the establishment of public health network for specimen transport at state/LGA level]	<ul style="list-style-type: none"> Contract a vendor for 5-days to develop a platform or modify a platform for an ODK-based barcode tracking system that can connect to LIMS; find out from Uche 	NCDC		300,000	300,000
	<ul style="list-style-type: none"> Procure software and hardware for tracking of samples and linkage to LIMS 	NCDC		10,675,000	10,675,000
	<ul style="list-style-type: none"> Hire a consultant for 10 days to create technical guidelines for all levels (courier person, laboratory management); 	NCDC		898,000	898,000
	<ul style="list-style-type: none"> Align specimen collection and tracking system with IDSR guidelines and surveillance SOPs 	NCDC		0	0
	<ul style="list-style-type: none"> One day stakeholders meeting of 20 persons to validate the guidelines (non-residential) 	NCDC		706,000	706,000
	<ul style="list-style-type: none"> Conduct training for a pilot of the system in FCT; (Training of 20 persons over 2-days, non-residential) 	NCDC		1,392,000	1,392,000
	<ul style="list-style-type: none"> Pilot specimen tracking system in FCT; (support for 2-days field activities of 20 persons) 	NCDC		225,600	225,600
	<ul style="list-style-type: none"> Analyze implementation and evaluate effectiveness (One day stakeholders meeting of 30 persons) 	NCDC		884,000	884,000
Build sample management capacity for public health network laboratories for priority diseases	<ul style="list-style-type: none"> Conduct hands-on trainings/simulations for 40 laboratory personnel over a period of 5-days, Residential, (specimen processing, laboratory managers, laboratory scientists) for network public health laboratories, and courier services on sample management; 	NCDC		8,966,000	35,864,000
	<ul style="list-style-type: none"> Conduct hands on training for states in each geopolitical zone (6 zones) -- 2 participants per state + 2 national facilitators per meeting 	NCDC		22,668,000	90,672,000
	<ul style="list-style-type: none"> Procure and distribute sample transportation materials to NCDC network labs 	NCDC		5,000,000	12,500,000
	<ul style="list-style-type: none"> Pre-position specimen collection supplies for priority diseases at state level (in state labs) 	SMOH		7,500,000	30,000,000

	<ul style="list-style-type: none"> Hire a consultant for 10 days to develop refresher training modules for frontline health workers One day stakeholders meeting of 20 persons to validate the training modules 	NCDC		898,000	898,000
Establish monitoring and evaluation mechanism for collection, packaging, and transport of specimens	<ul style="list-style-type: none"> NRL network/referral focal point to develop M&E indicators, including specimen transport times, specimen quality/integrity at reception; specimen chain of custody; biosafety events; packaging practices for high consequence pathogens by conducting 2 meetings of 10 people from national * 3 days Hire a consultant for 2 weeks to integrate recommendations from aforementioned high level meetings and draft SOPs for specimen collection/packaging/transport M&E 	NCDC		3,128,000	3,128,000
Provide refresher training for network labs to develop technical competency	<ul style="list-style-type: none"> 1 week residential training hosted at designated national expert lab for 2 persons per network lab for 6 diseases 	NCDC		600,000	600,000
Procurement of key reagents and consumables for 6 priority diseases	<ul style="list-style-type: none"> all network labs for 6 priority diseases 	NCDC		69,294,000	277,176,000
Annual equipment maintenance for network labs	<ul style="list-style-type: none"> annual maintenance costs for hoods, PCR machines 	NCDC		365,640,000	914,099,968

D1.3: Effective modern point of care and laboratory-based diagnostics

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop an integrated syndromic and laboratory-based point of care diagnostics algorithm; Establish supply chain management system for point of care diagnostics	<ul style="list-style-type: none"> Convene a 2-day residential workshop of 15 persons to develop the algorithm; for EACH priority disease Print and disseminate 6 reports (1 report/dx) to 48 labs * 5 copies each 	NCDC		4,876,000	7,314,000
Conduct a review of novel RDTs for VHF and other priority diseases, determine which have the highest needs for RDT/POC testing	<ul style="list-style-type: none"> no cost 	NCDC		1,221,200	1,221,200
Develop protocol for national in field evaluation of selected commercial RDTs for priority diseases	<ul style="list-style-type: none"> host stakeholder meeting, 10 participants to discuss draft protocol and approve 	NCDC		1,046,000	1,046,000
Conduct laboratory-based validation at Gaduwa with QA panel, comparing the RDT with the known conventional tests (PCR, culture, ELISA) and assessing sensitivity and specificity of the RDT	<ul style="list-style-type: none"> Procure RDT kits for validation: cholera, CSM, dengue, malaria, influenza 	NCDC		14,000,000	14,000,000
Training laboratory staff on GCLP practices	<ul style="list-style-type: none"> national training 1 week with 10 staff 	NCDC		2,600,000	2,600,000

Sourcing of QA panels for validation of RDT kits & POC Technologies	● Source QA panels for validation from universities, research institutes (domestic and international); these might come from LUTH or Institute Pasteur (Dakar), Côte d'Ivoire etc.	NCDC		10,000,000	10,000,000
	● National TOT for field validation; 5-days with 15 participants, 8 away participants from network laboratories	NCDC		0	4,551,400
Conduct field validation of RDTs/POC	● Pay for shipment of the RDTs to field sites (1 field site per geopolitical zone)	NCDC		0	305,000
	● Conduct training of use of test kits at 6 field sites (trainers come from labs that were trained earlier)	NCDC		0	2,932,800
	● Monitoring and evaluation at field sites	NCDC		0	900,000
	● Conduct a review meeting of the validation process (laboratory and field); develop an algorithm	NCDC		0	3,166,000
	● Hire consultant to draft SOPs for review by NCDC laboratory staff	NCDC		0	1,200,000

D1.4: Laboratory Quality System

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Obtain accreditation for National Reference Lab - Abuja	● Register for MLSCN mentoring plan	NCDC		4,800,000	4,800,000
Implement SLMTA in all labs in the public health laboratory network	● Conduct SLMTA training	NCDC		40,476,800	121,430,400
Develop plan with MoH, MoA, and other stakeholders to support the implementation of national quality standards that are consistent with international standards.	● Conduct a 2-days stakeholder meeting of 40 persons to identify the responsible officers in FMoH, FMARD, NCDC, MLSCN and obtain agreement on the adoption of international instruments that have been domesticated by various organizations, including MLSCN;	NCDC		4,940,000	4,940,000
Implement the annual MLSCN assessment of public Health labs across all 36 States.	● Annual laboratory quality assessment overseen by MLSCN for public health laboratories (A team of 5 persons over 2-days per state for the 37 states)	NCDC		26,817,600	107,270,400
Develop (regulatory) system to license public health laboratories which includes mandatory inspections and supported by national policy.	● Policies, guidelines, tools already exist. Some funding needed to sustain ongoing activities.	NCDC		600,000	1,500,000
	● Convene awareness meetings of stakeholders (one day stakeholders meeting of 40 persons, Residential)	NCDC		1,062,000	1,062,000
	● Roll out implementation plan in 37 states (i.e., begin the licensing process in state public health laboratories) -- Field visits (NCDC network labs + state public health labs)	MLSCN		186,240,000	744,960,000
Register NCDC & VTH labs in the MLSCN EQA program.	● Expand existing national EQA program run by MLSCN from healthcare to public health laboratories; (10 NCDC affiliated laboratories, NVRI and 6 VTH labs)	MLSCN		0	7,650,000
Establish additional National EQA program for non-RDTs to address human, animal, and	● Influenza (WHO-funded EQA RNA panel @ NRL - no specific training needed); Shipping for 10 labs for WHO EQA influenza panel (influenza network labs) YF assessment (AFRO program that hasn't yet started for serology); joining an international EQA costing for 7 labs - 1 international shipment + 1 cost for buying the EQA + 6 national transportation costs	FMOH FMARD MLSCN		0	26,401,242

environmental at public health network laboratories	<p>Lassa Fever - international RNA EQA procurement for 4 labs - 1 international shipment + 1 cost for buying the EQA + 3 national transportation costs</p> <ul style="list-style-type: none"> ● CSM - budget for 20 states running a CSM EQA ● Cholera - budget for 20 states running EQA ● Dengue/Chik: 5 labs 	NCDC			
	<ul style="list-style-type: none"> ● Laboratory-based development of panels, including procurement of consumable (reagents, solutions, equipment); 4. International travel for training on panel development in countries that have domesticated EQA programs for the same pathogens; 	FMOH FMARD MLSCN NCDC	8,100,000	16,200,000	
Infrastructure Upgrades	● Procure and install solar system for National Reference Labs 20KVA(HH-CPHL,NRL)	NCDC	92,000,000	92,000,000	
	● Procurement and installation of solar system for 13 VTHs and 22 NVRI out-station labs	FMARD	805,000,000	805,000,000	
	● Procure solar power solutions for 6 regional NCDC laboratories	NCDC	138,000,000	138,000,000	
	● Maintenance contract and 3 year warranty for inverters	NCDC	17,000,000	51,000,000	
	● infrastructural upgrade at the National Reference Lab, Abuja	NCDC	20,000,000	50,000,000	
	● Lab furniture for NRL, Abuja (micro, virology, PCR suite, chemistry)	NCDC	9,000,000	9,000,000	
	● Lab furniture for CPHL, Lagos (micro. Virology, heam, chemistry)	NCDC	9,000,000	9,000,000	
	● Lab furniture for NVRI, VOM (micro. Virology, PCR, heam, chemistry)	FMARD	9,000,000	9,000,000	
	● Renovation / Remodeling of health facilities CPHL	NCDC	10,000,000	10,000,000	
	● Minor upgrades and renovation at regional laboratories for human and animal health (2 HH and 1AH per geo zone)	NCDC	18,000,000	18,000,000	
	● Procurement and installation and annual maintenance contract for fire alarms and fire retardant systems at CPHL and NRL, Guduwa including external conduct of fire drills and	NCDC	50,000,000	50,000,000	
	● Support to security charges at (HH-CPHL,NRL, 6 regional labs)	NCDC	2,400,000	9,600,000	
	● Support to security charges at (AH- NVRI and 6 ref labs)	FMARD	2,100,000	8,400,000	
	● Procurement of Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs	NCDC	200,000,000	200,000,000	
	● Procurement of Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs	FMARD	175,000,000	175,000,000	

	<ul style="list-style-type: none"> Maintenance and warranty for Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs 	NCDC		20,000,000	20,000,000
	<ul style="list-style-type: none"> Maintenance and warranty of Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs 	FMARD		17,500,000	17,500,000
	<ul style="list-style-type: none"> Maintenance of BSL3 laboratory (2020 onwards) 	NCDC		0	500,000,000
	<ul style="list-style-type: none"> Hire 10 short service staff (5x at grade 10 , 3x at grade 14, 2x at grade 8) 	NCDC		406,617,664	1,016,544,192
Maintain operations of existing mobile labs and procure additional 3 labs. Mobile facilities to be operational in 6 geopolitical zones	<ul style="list-style-type: none"> Maintenance of existing 2 mobile labs; equipment and vehicle 	NCDC		10,000,000	40,000,000
Procure 2 additional mobile labs; 1x virology and 1x bacteriology	<ul style="list-style-type: none"> bacteriology unit virology unit 	NCDC		0	69,280,000
Develop training programme for staff that cover biosafety and best practices within a mobile labs	<ul style="list-style-type: none"> TOT for 12 people on biosafety and GLP in mobile laboratory. Residential training. DTA @16,000/day X 7 nights X 12 persons = 1,344,000 + Local Travel @30% DTA = 403,200 for 12 persons.+ Air fare @ 100,000/person X12 =1,200,000 + airport taxi @ 20,000/person X12= 240,000 	NCDC		0	3,187,200
Infrastructure upgrades for specimen repository procurement Freezers	<ul style="list-style-type: none"> Infrastructure upgrade is ongoing as part of the CDC/FMOH NAIIS sample repository 	–			
LIMS system for specimen repository	<ul style="list-style-type: none"> Procure additional 12 pcs -80 degrees freezer @ 5,673,600 each 	NCDC		22,694,400	68,083,200
Running costs (liquid nitrogen, electricity)	<ul style="list-style-type: none"> Set up a 20-cubic meter liquid nitrogen plant 	NCDC		0	3,600,000
Procure equipment, materials, antibiotic panels, consumables and data reporting tools biannually, to support the 30 human health facilities, 6 labs from animal health and 2 environmental health laboratories	<ul style="list-style-type: none"> Procure sample collection materials (sample bottles, swap sticks, transport media, cold boxes) (774 cold boxes, 10,000 sample bottles, triple packaging kit, Procure laboratory consumables (gloves, cotton wool, methylated spirits for 774 LGAs) 			0	0

D2: Real-Time Surveillance

D2.1: Indicator and Event-Based Surveillance

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Asses the baseline proportion of reporting public and private health facility private health facilities in all states	<ul style="list-style-type: none"> Designate NCDC officer to contact SMOH and FMoH planning department for needed data (denominator of the total number of private and public health facilities), and numerator (states should have the data on how many health facilities report, on average, weekly to IDSR) 	NCDC		40,000	100,000
	<ul style="list-style-type: none"> Analysis of data to determine reporting heath facilities (public and private) 	NCDC		0	0
Develop IDSR training curriculum incorporating training on all the existing surveillance tools and system	<ul style="list-style-type: none"> Designate existing officers and partners to draft the curriculum 	NCDC		0	0
	<ul style="list-style-type: none"> Conduct a three day workshop of 20 people to review and validate document 	NCDC		7,708,000	7,708,000
Expand the number of reporting sites to include private health facilities (and private veterinary clinics.)	<ul style="list-style-type: none"> See plan under reporting 	NCDC, FMARD		0	0
Build capacity for surveillance among human and animal health workers in both public and private sectors	<ul style="list-style-type: none"> Every health facility must designate an IDSR focal person, and that focal person must be recorded by the DSNO; NCDC can work via the state epidemiologists to continue to put pressure on this activity 	NCDC FMARD SMOH		0	0
	<ul style="list-style-type: none"> TOT modular trainings at the national level with 35 participants over 5-days on IDSR for each training. 	NCDC		6,633,000	6,633,000
	<ul style="list-style-type: none"> National trainers will then conduct state TOT in 37 states, for 3 modules 	NCDC		257,002,00	257,002,00
	<ul style="list-style-type: none"> Health facility-level training conducted by State and LGA officers who were trained in the above. 	SMOH		1,138,000,00	2,642,436,096
	<ul style="list-style-type: none"> Training of tertiary care facilities on IDSR 	SMOH		83,250,000	83,250,00
	<ul style="list-style-type: none"> Supportive supervision by national staff for the tertiary care facility trainings 	NCDC		2,308,800	2,308,800
	<ul style="list-style-type: none"> 1.Hire a consultant to review and develop training manual, guideline, SOP for epidemic-surveillance, preparedness and response, and disease reporting and reporting tools (ARIS) 	FMARD		0	0
	<ul style="list-style-type: none"> 2. Conduct 2-day meeting of 30 participant to validate the training manual, guideline, SOP for epidemic-surveillance, preparedness and response, and disease reporting and reporting tools (ARIS) 	FMARD		0	0
	<ul style="list-style-type: none"> 3. Conduct 5-day training of 80 participants (1 federal and 1 state Vet Epid. Officer) on epidemic-surveillance, preparedness and response, and disease reporting and reporting tools (ARIS) 	FMARD		0	0
	<ul style="list-style-type: none"> 4. Printing of 500 copies of training manual 	FMARD		0	0

	<ul style="list-style-type: none"> • Hold 1 TOT training at the national level with 40 participants over 5-days on ARIS in Abuja (36 away participants; 1 from each state) 	FMARD		12,018,800	12,018,800
	<ul style="list-style-type: none"> • Hold 2 TOT trainings at the regional level with 37 participants over 5-days on ARIS for each training. (2 people per state) 	FMARD		18,398,000	18,398,000
	<ul style="list-style-type: none"> • Hold 37 step down trainings at the state level with 30 participants over 5-days on ARIS for each training. 	FMARD		70,072,000	136,456,000
	<ul style="list-style-type: none"> • Hire national consultant to oversee the compilation of data on community based surveillance structures for 20 days, including support staff. 	NCDC		1,200,000	1,200,000
	<ul style="list-style-type: none"> • Hold 2 stakeholders consultative meeting on community based surveillance structures and inform strategy with 40 participants over 2-days for each meeting. 1st meeting is for consultation. 2nd meeting is for compiling partner data. 	NCDC		2,266,000	2,266,000
	<ul style="list-style-type: none"> • Hold workshop to review and validate results with 30 participants over 1-day with key stakeholders. 	NCDC		1,252,000	1,252,000
	<ul style="list-style-type: none"> • Print (guidelines, SOPs, Reporting forms, treatment protocols) and distribute to state, LGAs, health facilities 	NCDC		151,600,000	606,400,000
Integrate priority zoonotic diseases into routine human and animal surveillance	<ul style="list-style-type: none"> • Host workshop with 40 participants over 3 days to review, validate, and accept national priority zoonotic diseases. AND also will review IDSR priority disease list 	NCDC		5,170,400	5,170,400
	<ul style="list-style-type: none"> • Update guidelines and SOPs (human and animal) for the new priority zoonotic diseases by Dec 2018. 	NCDC, FMARD		0	0
	<ul style="list-style-type: none"> • Integrate into IDSR and ARIS trainings mentioned above. 	NCDC, FMARD		0	0
Pilot national event-based surveillance system for animal health sector in the context of One Health by December 2019	<ul style="list-style-type: none"> • Hire consultant to develop national level event-based surveillance system (media monitoring and call center) for animal health. 	FMARD		1,200,000	1,200,000
	<ul style="list-style-type: none"> • Procure ICT equipment for 6 staff 	FMARD		2,890,000	2,890,000
	<ul style="list-style-type: none"> • Hold 1 consultative meeting to leverage on the existing event based surveillance system in human health with 40 participants over 3 days 	FMARD		8,822,800	8,822,800
	<ul style="list-style-type: none"> • Hold 1 training on EBS system at the national level with 40 participants over 5-days 	FMARD		0	12,018,800
Review of IDSR list of priority diseases	<ul style="list-style-type: none"> • Appoint a committee of 4 to Develop a Delphi process for review of Priority disease list 	NCDC, FMOH		0	0
	<ul style="list-style-type: none"> • Conduct a 3-day workshop of 40 participants to review and adopt the priority list. 	NCDC, FMOH		0	0
	<ul style="list-style-type: none"> • Recommend the list to the DG, HMH and NCH for approval 	NCDC, FMOH		0	0
Adapt the WHO Afro IDSR guidelines as soon as concluded	<ul style="list-style-type: none"> • Hire a consultant with 4 designated officers to adapt the Guideline 	NCDC		1,740,000	1,740,000
	<ul style="list-style-type: none"> • Share document with stakeholders for review. 	NCDC		40,000	40,000

	<ul style="list-style-type: none"> ● Convene a 5-day stakeholders workshop with 30 participants for review and validation of the guidelines 	NCDC		13,711,000	13,711,000
	<ul style="list-style-type: none"> ● Print and disseminate new guidelines up to health facility level 	NCDC		0	0

D2.2: Interoperable, interconnected, electronic real-time reporting system

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Review IDSR surveillance governance, national systems architecture, and monitoring and evaluation components.	<ul style="list-style-type: none"> ● Hire a consultant for 25days to conduct an assessment of animal and human health data systems and develop data standards and also support the review process 	NCDC		1,500,000	1,500,000
	<ul style="list-style-type: none"> ● Hold national meeting to review surveillance governance, national systems architecture and M&E with 30 participants over 3 days. 	NCDC		0	0
Enhance utilization of ARIS Platform in all states	<ul style="list-style-type: none"> ● Hold 1 stakeholders meeting of 60 participants for 2-days with State Directors of Vet. Services and Directors of Vet. Teaching Hospitals to ensure compliance with use of ARIS platform 	FMARD		0	0
	<ul style="list-style-type: none"> ● Procure 100 laptops for Federal and State Veterinary Officers 	FMARD		0	0
	<ul style="list-style-type: none"> ● Conduct national refresher training with 100 federal and state staff over 3 days 	FMARD		0	0
Establish public-private partnership mechanisms for surveillance of human and animal health at national and state levels (Human Health)	<ul style="list-style-type: none"> ● Stakeholder mapping (internal meetings) 	NCDC		0	0
	<ul style="list-style-type: none"> ● Hold annual national stakeholder meetings to identify gaps and opportunities with 50 participants over 1-day 	NCDC		3,142,000	12,568,000
	<ul style="list-style-type: none"> ● Develop ToR for public-private partnership group 	NCDC		0	0
Establish public-private partnership mechanisms for surveillance of human and animal health at national and state levels (Animal Health)	<ul style="list-style-type: none"> ● Hold multi-Stakeholder meetings with private animal health service providers to discuss the PPP in surveillance, adopt and validate the PPP mechanism 	FMARD		3,451,600	3,451,600
	<ul style="list-style-type: none"> ● Develop ToR for public-private partnership group 	FMARD		0	0
Implement integrated human health surveillance system at health facility level countrywide	<ul style="list-style-type: none"> ● Develop SOP for the surveillance data entry on IDSR at the health facility 	NCDC, SMOH		0	0

D2.3: Integration and analysis of surveillance data

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022

Improve ICT to support data analysis for surveillance at all levels	● Conduct needs assessment of surveillance architecture, including ICT at state and LGA levels (see activity D2.2)	NCDC		0	0
	● Procure 1000 laptop computers for national, state, and LGA staff for human health surveillance	NCDC		0	0
	● Procure internet modems for 1000 staff members	NCDC		0	0
	● Provide voice and data credits for staff members per year	NCDC		0	0
	● Procure 1,500 tablets for SORMAS deployment at LGA level	NCDC		0	0
	● Conduct needs assessment of ICT at health facility level by December 2019	NCDC		0	0
	● Procure 800 printers and toner for all LGAs and States (assumes training on data analysis accomplished in the above activities)	NCDC		328,000,000	328,000,000

D2.4: Syndromic surveillance systems

Objective: Enhance the performance of the IDSR and technical capacity of the workforce by 2021

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen capacity for syndromic surveillance in Private sector and tertiary/referral health facilities	● Print and disseminate SOPs/guidelines on syndromic surveillance to all tertiary/referral and private health facilities	NCDC		0	0
	● Train designated 2-3 health workers on IDSR in all tertiary/referral Health facilities	NCDC		0	0
	● Publish designated laboratories for confirmation of specific priority diseases	NCDC		0	0
	● Hire a consultant to link surveillance and Laboratory data platform	NCDC		0	0
Enhance monitoring and evaluation capacity for IDSR	● Develop/review existing M&E strategy and tools for monitoring on ODK	NCDC		0	0
	● Hold annual IDSR review meeting with 300 participants over 3 days	NCDC		60,610,000	242,440,000
	● Hold 37 state visits for 3 national staff over 3 days for supportive supervision biannually	NCDC		36,630,000	146,520,000
	● Hold quarterly IDSR indicator review meetings in all 37 States over 1-day with LGAs	SMOH		274,724,992	934,065,024
	● Quarterly visit by 2 state officers to all LGAs within the state (774 total) over 1-day for supportive supervision	SMOH		123,840,000	421,056,000

Develop a system of routine (10 events) After Action Reviews annually to enhance reporting	● Consultant and 1 designated staff to domesticate/adapt WHO AAR guidance for Nigerian AAR	NCDC		600,000	600,000
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D3: Reporting

D3.1: System for efficient reporting to WHO, FAO and OIE

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Expand the number of reporting health facilities	<ul style="list-style-type: none"> ● Human Health ● Hold 1-day national awareness and advocacy meetings with stakeholder on disease surveillance and reporting with 50 participants (Stakeholders: NMA, SMOH, AGPMN, MDCN, MOD etc.). ● Draft a memo to the Honorable Minister , Health to the NCH on enforcement of reporting on IDSR by all health facilities (Public and private)and linking it to health facility license renewal ● Develop video clips and IEC materials on disease reporting for health care workers ● Publicize video clips and IEC materials via traditional and social media ● Print 100,000 disease reporting IEC materials to all health facilities ● Dissemination to 36 states and 36,000 health facilities ● Hold 1-day State level awareness for both public and private health facilities in 37 states with 200 participants each ● Surveillance department and ICT unit of NCDC develop an e registry of all health facilities with focal point in all states and LGAs ● Hold 1-day meeting of 10 participants to adapt and compile all the SOP for reporting into single document ● Print 50,000 booklets of the SOP ● Disseminate 40,000 booklets of the SOP ● Print 500,000 of IDSR reporting tool() ● Animal Health ● Hold 2-day national awareness and advocacy meetings with stakeholder on disease surveillance and reporting with 50 participants (Stakeholders: NVMA, State DVS, VCN, Private Vet Rep.NAQs). ● Draft a memo to the Honorable Minister , Agriculture to the NCA on enforcement of reporting on ARIS by all animal health facilities (Public and private)and linking it to practicing permit / license renewal ● Hold 1-day State level awareness for both public and private veterinary health facilities in 37 states with 100 participants each ● Department of Veterinary Services develop an e registry of the vet health facilities with focal point in all states and LGAs ● Hold 1-day meeting of 10 participants to adapt and compile all the SOP for reporting into single document 	NCDC NCDC, FMOPH, FMARD		12,674,000 0	31,685,00 0
		NCDC		0	0
		NCDC		0	0
		NCDC		0	0
		NCDC		0	0
		NCDC		129,078,20 0	129,078,2 00
		NCDC		100,000	250,000
		NCDC		528,000	528,000
		NCDC		37,500,000	37,500,00 0
		NCDC		740,000	740,000
		NCDC		300,000,00 0	300,000,0 00
		NCDC		8,167,000	8,167,000
		FMARD		0	0
		FMARD		76,168,200	76,168,20 0
		FMARD		100,000	250,000
		FMARD		528,000	528,000

	<ul style="list-style-type: none"> Print 20,000 copies of the SOP 	FMARD		15,000,000	15,000,000
	<ul style="list-style-type: none"> Disseminate 15,000 copies of the SOP 	FMARD		740,000	740,000
	<ul style="list-style-type: none"> Print 50,000 of animal disease reporting tool 	FMARD			
	<ul style="list-style-type: none"> Disseminate 40,000 of animal disease reporting tool 	FMARD			
Provide electronic reporting tools to all Health facilities	<ul style="list-style-type: none"> captured under surveillance 	NCDC, SMOH		0	0
Build capacity for IDSR reporting among human health workers in both public and private sectors	<ul style="list-style-type: none"> Hold 3 national stakeholder meetings for animal health with 40 participants over 2-days to develop and implement strategy (Stakeholders: NVMA, VCN). The 1st meeting is for advocacy and strategy development. The 2nd meeting is for validation and roll out of strategy. The 3rd meeting is for after action review of implementation. 	NCDC		0	0
Build technical capacity among the National IHR Focal Point and OIE teams.	<ul style="list-style-type: none"> Train health facility surveillance focal persons on e-IDSR and provide electronics tools for reporting to the LGA DSNOs 	NCDC		0	0
Develop a system for routine simulation exercise (3) annually for rare diseases to build capacity for case detection and reporting	<ul style="list-style-type: none"> Hold 3 1-day table top exercise with 40 participants on priority disease with high impact and low probability 	NCDC		22,404,000	56,010,000
Enhance utilization of ARIS Platform in all states	<ul style="list-style-type: none"> Hold 1 stakeholders meeting of 60 participants for 2-days with State Directors of Vet. Services and Directors of Vet. Teaching Hospitals to ensure compliance with use of ARIS platform 	NCDC		9,487,600	9,487,600
	<ul style="list-style-type: none"> Procure 100 laptops for Federal and State Veterinary Officers 	FMARD		29,250,000	29,250,000
	<ul style="list-style-type: none"> Conduct national refresher training with 100 federal and state staff over 3 days 	NCDC		0	20,332,000
Improve ICT to support data analysis for surveillance at all levels	<ul style="list-style-type: none"> Conduct needs assessment of surveillance architecture, including ICT at state and LGA levels (see activity D2.2) 			0	0
	<ul style="list-style-type: none"> Procure 1000 laptop computers for national, state, and LGA staff for human health surveillance 	NCDC		330,000,000	330,000,000
	<ul style="list-style-type: none"> Procure internet modems for 1000 staff members 	NCDC		37,500,000	37,500,000
	<ul style="list-style-type: none"> Provide voice and data credits for staff members per year 	NCDC		20,000,000	80,000,000
	<ul style="list-style-type: none"> Procure 1,500 tablets for SORMAS deployment at LGA level 	NCDC		33,750,000	33,750,000
	<ul style="list-style-type: none"> Conduct needs assessment of ICT at health facility level by December 2019 	NCDC		12,200,000	12,200,000

D3.2: Reporting network and protocols in country

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen the reporting capacity for intersectoral involvement through One Health	● Constitute a 10 member intersectoral OH TWG working group to drive implementation and coordination of OH.	NCDC		0	0
	● TWG to develop a framework for intersectoral reporting of key priority diseases	NCDC		0	0
	● Conduct a 2day stakeholders meeting to review and adopt the below	NCDC		4,654,400	4,654,400
Establishment of a central surveillance and laboratory database that sources and integrate data from other sector	● Hire a consultant to find linkages between IDSR and ARIS reporting and establish a system that is able to detect animal or human events and can be used to investigate in human and animal health sectors. AND develop a monitoring and evaluation framework for reporting of listed zoonoses.	NCDC		3,600,000	3,600,000
Adapt IHR 2005 after enactment of NCDC bill	● Constitute a 5 man team to adapt the IHR 2005 after enactment of NCDC bill	NCDC		0	0
	● Review and validate the adapted document in a 2-day meeting with 40 participants	NCDC		0	0
Establish disease free zones for 5 selected food animals	● Hire a consultant for 4 weeks to develop the protocol and guideline for establishment of diseases free zone	FMARD		0	0
	● Conduct 2-day meeting in conjunction with consultant in identification of free zone for 5 selected food animals (Pig, poultry, sheep, goat, cattle)	FMARD		8,720,000	8,720,000
	● Conduct the certification process for the 6 selected zones each in geopolitical zone (collection of sample for screening, facilities inspection etc.)	FMARD		9,990,000	9,990,000
	● Conduct periodic surveillance and monitoring quarterly for the selected zone	FMARD		6,960,000	27,840,000
	● Conduct 5-day training of 30 participants on operational framework of diseases free zone	FMARD		5,812,000	5,812,000
	● Printing of 500 copies of the protocol.	FMARD		1,000,000	1,000,000
Establish compartment for 5 selected food animals	● Hire a consultant for 4 weeks to develop the protocol and guideline for the establishment of compartments	FMARD		1,770,000	1,770,000
	● Conduct 2-day meeting in conjunction with consultant in identification of compartment in state for 5 selected food animals (pig, poultry, sheep, goat, cattle)	FMARD		3,750,000	3,750,000
	● Conduct the certification process for the 6 selected compartments in each state (collection of sample for screening, facilities inspection etc.)	FMARD		27,269,000	27,269,000
	● Conduct periodic surveillance and monitoring quarterly for the selected compartments	FMARD		12,888,000	51,552,000
	● Conduct 5-day training of 30 participants on operational framework of diseases compartments	FMARD		5,812,000	5,812,000
	● Printing of 500 copies of the protocol.	FMARD		0	0

Provision of Animal Surveillance kits	<ul style="list-style-type: none"> Procurement of surveillance kit for 1000 surveillance agents (sampling materials- test tube, anticoagulant, needle and syringes, disinfectants, gloves, markers, polythene bags, cool-boxes) 	FMARD		50,000,000	100,000,00
Conduct gap analysis of the existing surveillance system for Transboundary Animal Diseases and zoonotic diseases	<ul style="list-style-type: none"> Engage a consultant to conduct gap analysis for the existing animal diseases surveillance system, 2. Conduct two multi-stakeholder meetings of 50 & 65 persons for the adoption and validation of the report respectively (3 days residential) and I 4. Print 2500 copies and disseminate 2000 copies of the report 	FMARD	Yes	21,824,384	21,824,384
Scale up and training of Animal Disease Surveillance Agents (DSA) from 591 to 1,000;	<ul style="list-style-type: none"> Hire a consultant to develop training manual and 2. Conduct multi-stakeholder, meeting 3. Hire 4 facilitators to train the surveillance agents on core surveillance activities; (case definition and recognition, response to outbreak, reporting),,, and 4. Print training manual 	FMARD	Yes	76,213,832	76,213,832
Establishing, deployment, licensing and training of an enterprise management software for procurement, audit and financial management	<ul style="list-style-type: none"> Procurement of consultancy for installation, licensing and training of an enterprise management system for financial procurement and audit management 	FMARD	Yes	54,149,624	54,149,624
Logistics and utilities support for the NCDC	<ul style="list-style-type: none"> Cost sharing to support running costs for NCDC HQ 	FMARD	Yes	120,750,000	120,750,000
Procurement of vehicles, insurance and running cost	<ul style="list-style-type: none"> Procurement of vehicles for REDISSE project office 	FMARD	Yes	211,034,992	211,034,992
Embark on targeted advocacy for ownership of influenza surveillance	<ul style="list-style-type: none"> Pay annual high-level 2-days advocacy visit to the Chief Medical Directors of 4 sites and their corresponding State MOHs management 	NCDC	Yes	655,140	655,140
Strengthen sample and data collection activities	<ul style="list-style-type: none"> Carry out annual 3-day supportive supervisory visits to 4 sentinel sites 	NCDC	Yes	954,040	954,040
Review, update, print and distribute NISS protocol and collection tools.	<ul style="list-style-type: none"> Convene meeting to review and update National Influenza Surveillance Protocol with the data collection tools 	NCDC	Yes	901,580	901,580
	<ul style="list-style-type: none"> Print 200 protocols and 2000 data tools and distribute to sentinel sites and MOHs 	NCDC	Yes	1,677,500	1,677,500
Strengthen One Health approach to influenza surveillance	<ul style="list-style-type: none"> Convene1-day meeting of 15 Human Health and Animal Health on joint influenza surveillance and outbreak response 	NCDC	Yes	203,740	203,740
Carry out active surveillance for influenza among human contacts of Avian influenza infected birds and provide early response to the resulting human cases.	<ul style="list-style-type: none"> Hold 2 meetings ii. Review protocols iii. Provide necessary data tools iv. Carry out investigations v. Ship samples from outbreaks to NRL vi. Write reports. 	NCDC	Yes	2,006,900	2,006,900
Carry out routine shipment of samples from sites to the National Reference Laboratory	<ul style="list-style-type: none"> Ship weekly ILI and SARI samples including Epidemiological records from the sentinel sites to the reference laboratory 	NCDC	Yes	915,000	915,000
Carry out clearing of goods, reagents and consumables for influenza testing shipped to the National Reference Laboratory	<ul style="list-style-type: none"> initiate clearing of reagents and items for influenza received from International Reagents Resource (IRR) and other partners from the nation's ports 	NCDC	Yes	732,000	732,000
Share Influenza data with local and international partners	<ul style="list-style-type: none"> Promptly submit epidemiologic data to FluiD and Virologic data to FluNet 	NCDC	Yes	0	0
Share influenza samples with relevant authorities	<ul style="list-style-type: none"> Ship positive and unsubtypable influenza samples to Global Influenza Surveillance and Response System (GISRS) via the WHO Collaborating Centers (WHOCC). WHO CC 	NCDC	Yes	0	0

Attend meetings, share data with/at international forum	<ul style="list-style-type: none"> Present data on influenza surveillance at local and international workshops 	NCDC	Yes	1,021,750	1,021,750
Ensure continuous influenza testing	<ul style="list-style-type: none"> Procure quality reagents and materials for influenza specimen collection, processing and rt-PCR testing 	NCDC	Yes	4,364,550	4,364,550
	<ul style="list-style-type: none"> Participate in External Quality Assurance Programme 	NCDC	Yes	0	0
Provide for unbudgeted expenses for keeping the laboratory	<ul style="list-style-type: none"> Make available monthly expense for the running of the laboratory 	NCDC	Yes	292,800	292,800
Ensure funds are spent in accordance with the rules and regulations of the donor (US-CDC)	<ul style="list-style-type: none"> Engage the services of a Fiscal Agent to guide on transactions on the project activities 	NCDC	Yes	1,525,000	1,525,000
Develop risk mapping for four priority zoonotic diseases using one health approach	<ul style="list-style-type: none"> Engage one consultant for 4 weeks to develop the risk mapping for priority zoonotic disease 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Conduct expert elicitation of 40 participants workshop for 5-days to support the consultant in developing risk mapping 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> 1-day stakeholder meeting with 20 participants to validate the report of the risk mapping 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Printing of 500 copies of the validated risk mapping 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Dissemination of 400 copies of the validated risk mapping 	NCDC	Yes	0	0
Strengthen laboratory detection for priority zoonotic diseases/pathogens (<ul style="list-style-type: none"> Hire a consultant to conduct needs assessment for human laboratories, six VTH laboratories across the geopolitical zones for the diagnosis of zoonotic diseases 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Procurement of reagents, consumables, and equipment for the six VTHs (Reagents – 2000 RDT kits; Lassa fever, Rabies, Brucellosis and Avian Influenza; consumables – 100,000 needle and syringes, 40,000 litres of disinfectants, 10,000 vacuum-containers, 20,000 test tubes, 20,000 gloves, 5000 PPEs; Equipment – 6 PCR machines, 10 bio-safety cabinets, 20 electron microscope etc. 	NCDC	Yes	0	0

D4: Workforce Development

D4.1: Human resources are available to implement IHR core capacity requirements

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop career path for specialized public health expertise within the Nigerian civil service structure	Hire a consultant for 60 days (retired high-level civil servant) to drive process and advocacy;	NCDC		4,938,000	4,938,000
	NCDC team guide consultant to draft and review the concept note	NCDC		143,000	143,000
	Establish a workforce career path development secretariat/committee between FMOH and FMARD to conduct a 2-day non-residential workshop for 10 persons to review existing civil service rules/policies and draft proposed career paths with consultant	NCDC		2,276,000	2,276,000
	Residential stakeholder workshop for 20 persons including high level officials FMOH, FMARD, OHSF to review and revise the draft policy	NCDC		4,430,000	4,430,000
	Advocacy visits to heads of relevant MDAS on the proposed career path	NCDC		930,000	930,000
	Support the four (4) sittings of national committee of 15 persons and advocacy visit of relevant stakeholders at the national and state level to develop the career path for specialized public health expertise within the Nigerian civil service structure.	NCDC		1,600,000	1,600,000
	Convene a 2-day national stakeholder meeting of the Heads of Civil Service Commission to review and adopt career path for specialized public health expertise within the Nigerian civil service structure (50 persons)-residential	NCDC		7,662,800	7,662,800

D4.2: Field Epidemiology Training Program or other applied epidemiology training program in place

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Increase national workforce of epidemiologists through sustainment of Frontline and Advanced FETP (Scale up)	<ul style="list-style-type: none"> • Advocacy for sustained funding for existing programs from external donors; • Conduct 3-day residential workshop to develop sustainability and advocacy strategy for GoN to incorporate programs into Federal budget 	NCDC		0	0
frontline public health workforce)	<ul style="list-style-type: none"> • Conduct 3 days multi-stakeholder workshop of 40 people to review, harmonize and integrate the relevant trainings for frontline public health workforce including IDRS, frontline FETP, SOMARS, WARDS, and ARIS (residential) • Conduct training of one public health professional per LGA (774) on Frontline IDSR over a period of 3 months (residential) in 6 batches/geopolitical zones • Engage at least one NFEITP graduate per state to supervise and mentor the trained frontline public workforce over a period of 4 weeks 	NCDC		5,710,000	5,710,000
		NCDC		7,850,000	7,850,000
		NCDC		1,048,769,984	1,048,769,984
		NCDC		89,628,000	224,070,000

	<ul style="list-style-type: none"> Enrollment of 50 public health professionals in advance FETP across the states yearly 	NCDC		1,680,999,936	4,202,500,096
Establish Intermediate FETP in Nigeria or through an agreement with another country	<ul style="list-style-type: none"> Conduct advocacy to stakeholders on need for intermediate FETP, draft and sign MOU with stakeholders 	NCDC		3,539,000	3,539,000
	<ul style="list-style-type: none"> Establish a technical team within NCDC to oversee trainings 	NCDC		160,389,216	400,973,024
	<ul style="list-style-type: none"> Conduct 2-days multi-stakeholder residential meeting of 40 persons to validate and adopt the curriculum of intermediate FETP (residential)NCDC/AFENET/Academia) 	NCDC		3,786,000	3,786,000
	<ul style="list-style-type: none"> Advertise and select 2 sets of trainees (2 per state) in Intermediate-level FETP over a period of 6 months (residential) 	NCDC		11,032,000	27,580,000
	<ul style="list-style-type: none"> Recruit and train 72 intermediate FETP trainees/year 	NCDC		417,600,000	1,670,400,000

D4.3: Workforce strategy

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop and implement a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce	<ul style="list-style-type: none"> Conduct 1-day residential multi-stakeholder meeting of 5 persons to discuss the establishment of national public health workforce strategy and develop the TOR for the engagement of consultant to develop the public health workforce strategy 	NCDC		373,000	373,000
	<ul style="list-style-type: none"> Hire a consultant to draft the national public health workforce strategy over a period of 4 weeks 	NCDC		1,706,000	1,706,000
	<ul style="list-style-type: none"> Conduct 2-days multi-stakeholder meeting of 40 persons to validate and adopt a national public health workforce strategy (residential) 	NCDC		2,890,000	2,890,000
	<ul style="list-style-type: none"> Presentation of national public health workforce strategy at the relevant council; Nation Council on Health and Agriculture for approval 	NCDC, FMOH		0	0
	<ul style="list-style-type: none"> Convene 2-days stakeholder meeting (50 participants) of Federal and State Heads of Civil Service Commission to develop implementation plan for the national public health workforce strategy (residential) 	NCDC		7,662,800	7,662,800
Define public health workforce roles, and map human resources at state and LGA levels	<ul style="list-style-type: none"> Develop an e –registry database for public health workforce by the in-house ICT unit in NCDC and update quarterly 	NCDC		2,514,000	2,514,000
	<ul style="list-style-type: none"> Training of state-level people to use the template properly 	NCDC		29,544,000	73,860,000
	<ul style="list-style-type: none"> Disseminate information to all public health professional in state through the national and state relevant public health organization for e -data entry 	NCDC		150,700	602,800
Conduct advocacy to employ additional veterinarians in the state	<ul style="list-style-type: none"> Conduct 2- day state engagement workshop of 100 participants with the commissioner of state ministry of Agriculture and state Head of civil services commission as an advocacy to employ additional veterinarians. (Residential) 	FMARD		9,440,000	9,440,000

Support Revolving scheme for Private veterinarians and paravets	<ul style="list-style-type: none"> 1. Support 774 Private veterinarians and paravets with veterinary toolkits (veterinary equipment and drugs) 	FMARD		1,548,000,00	1,548,000,00
Establish Sanitary Mandate Programme	<ul style="list-style-type: none"> Conduct 5-day training workshop for 774 private veterinarians on sanitary mandate in 37 states (Residential) 	FMARD		0	0
Develop an in-service training programme for the staff of DVPCS and leadership training of veterinary officers in managerial cadre	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop an in-service training programme for the staff of DVPCS 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct 3-day stakeholder meeting to validate the in services training (50 persons, residential) 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct 3-day quarterly training of 45 person on risk analysis, surveillance, preparedness and response , leadership, etc. (residential) 	FMARD		28,780,000	115,120,00
	<ul style="list-style-type: none"> Conduct 5-day training of 50 participants (DVS, DVPCS, VTHS) on management and leadership(residential) 	FMARD		12,190,000	12,190,000
Support the supervision, monitoring and evaluation and report writing of animal health policy and programmes implementation	<ul style="list-style-type: none"> Conduct 2-day intensive training of 50 staff on supervision, monitoring and evaluation and report writing of animal health policy and programmes implementation 	FMARD		5,484,000	5,484,000
	<ul style="list-style-type: none"> Procurement of 37 four runner vehicles for supervision, M&E 	FMARD		1,295,000,064	1,295,000,064
	<ul style="list-style-type: none"> Logistic support (fueling and maintenance of vehicle, communication allowance) for 50 supervisory staff 	FMARD		21,000,000	84,000,000
Develop Community Animal Health Worker Programme (CAHW)	<ul style="list-style-type: none"> Hire a consultant to review and develop CAHW training manual, guideline, SOP for epidemic surveillance, disease reporting and reporting tools and basic animal care services 	FMARD		1,297,050	1,297,050
	<ul style="list-style-type: none"> Conduct 2-day meeting of 30 participant to validate the CAHW training manual, guideline, SOP for epidemic-surveillance, disease reporting and reporting tools and basic animal care services 	FMARD		2,714,000	2,714,000
	<ul style="list-style-type: none"> Conduct 5-day training of 3,096 CAHVs (4 per LGAs) on epidemic-surveillance, disease reporting and reporting tools and basic animal care services 	FMARD		178,770,000	178,770,000
	<ul style="list-style-type: none"> Printing of 500 copies of training manual 	FMARD		750,000	750,000
Support Adhoc Animal Health Officer in state with inadequate human resources	<ul style="list-style-type: none"> Support 5 NYSC members and Hire 20 ad hoc Veterinarians for the states 	FMARD	Yes	48,900,000	195,600,00
Support Animal Health Sector of the PCU	<ul style="list-style-type: none"> Capacity Building, Coordination Program Specialist/Officer, Monitoring & Evaluation Officer, Finance/Accountant, Procurement Officer, Communications + Advocacy Officer, intern and component focal person 	FMARD	Yes	33,600,000	134,400,00
Support attendance of relevant nation and international events (seminars, short courses, workshops , conferences and OIE session)	<ul style="list-style-type: none"> Attendance of 10 staff in relevant nation and international events for 1 week 	FMARD	Yes	20,317,500	40,635,000
Conduct PVS gap analysis and assessment	<ul style="list-style-type: none"> Support 2 OIE delegates with DSA, airfare for 2 weeks) to conduct PVS, conduct 2 multi-stakeholder meeting for validation and g for 2-days residential meetings and 4. print and disseminate PVS report 	FMARD	Yes	23,832,344	23,832,344

R1: Preparedness

R1.1: Multi-hazard national public health emergency preparedness and response plan is developed and implemented

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP), linking existing agency-specific and disease-specific plans.	<ul style="list-style-type: none"> Six members team to Identify intersectoral and interdependence stakeholders, outlined potential contribution, roles and responsibilities of the different stakeholders to constitute an all-hazard TWG (a day meeting in Abuja) Inaugurate TWG at the national to plan for the development of all hazard multi-sectoral public health emergency preparedness and response plan. Present detailed potential contribution of different stakeholder. A day meeting in Abuja (30 persons selected across interdependent stakeholders) 3-day advocacy at the national level to heads of MDAs in Abuja for the development of the all-hazard multi-sectoral PHEPP (FMARD, FMoH, FMOEv, NEMA and other relevant stakeholders) (Max of 7persons for 3-day) Engage a consultant for 30 days to develop a zero draft of the all hazards PHEPP 3-day Stakeholder meeting for maximum of 40 participants in Kaduna to review zero draft and adopt input from stakeholders. Consultant updates draft with the input from all stakeholders Printing and dissemination of the national PHEPP to relevant stakeholders. Engage a consultant for 30 days to develop training module on risk reduction and emergency preparedness and response in the health 2-day, 20 member team to review the zero draft of the training module on risk reduction and EPR in Nasarawa (maximum of 10 participants) 5-day training and simulation on multiple (two hazard) hazard in Lagos for health worker at the national level (80 Participants). Engage a consultant for 14days to develop first draft of MOU that guide operation (Consult the Legal officer). 	NCDC		19,200	19,200
Develop memoranda of understanding with relevant MDAs. (Preparedness and response)	<ul style="list-style-type: none"> 1-day meeting of PHEPRP TWG in Abuja to develop a memo to National council on health to address coordination, collaboration and support among relevant stakeholders. (25 participants). 1-day meeting in Abuja to review and adapt the MOU for signing (30 participants) A day meeting in Abuja for Signing of MOU by head of MDAs. 	NCDC		771,000	771,000
		NCDC		682,000	682,000
		NCDC		100,000	100,000

R1.2: Priority public health risks and resources are mapped and utilized

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan	<ul style="list-style-type: none"> 5-day National workshop on profiling risk, vulnerability Risk Assessment and resources mapping using STAR and VRAM tools in Lagos. (45 participants) 2-day pre assessment training for data collectors in Nasarawa a week after the national workshop (18 participants) 	NCDC		0	0
		NCDC		2,834,800	2,834,800

	<ul style="list-style-type: none"> Twelve days' assessment phase for data collection and analysis in six geopolitical zones, six states per zone. (two data collectors per zone) Engage a consultant for 30days to collate, analyse and come up with final report. 	NCDC		6,124,800	6,124,800
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	<ul style="list-style-type: none"> Identify, constitute quantification and forecasting team for response materials, laboratory reagents, consumables and all health commodities for all the priority diseases and events. 15 participants , A day meeting in Abuja) 5-day meeting to forecasting for health commodity needed for priority diseases and events and develop procurement plan in Akwanga, Nasarawa state (Response and Laboratory) (15 participants) 5-day meeting to develop SOPs for receiving, storage , Profiling transporter (eligibility) , distribution and preposition of all health commodities including laboratory and response materials in Enugu (35 participants) Meeting to Prepare Procurement plan for commodities required for prevention, detection and response Procurement and deploy Health commodities, Equipment, reagents and Medicines to the points of use based on the procurement plan 	NCDC		122,000	122,000
Develop Plans for surge capacity to respond to public health emergencies of national and international concern	<ul style="list-style-type: none"> Engage a consultant for 30days to develop zero draft of the surge capacity plan. 5-day stakeholders meeting in Lagos to review the draft and buy-in of the stakeholders.(35 participants) Printing and dissemination Identify and constitute EMT team 	NCDC		6,729,000	6,729,000
Capacity development for technical and administrative staffs of Nigeria CDC and relevant MDAs.	<ul style="list-style-type: none"> Develop training module on risk reduction and emergency preparedness and response in the health sector (the same as above) Conduct TOT for health worker at the national Conduct 3-day training in six geopolitical zones(the same in activity one above) 	NCDC		11,097,000	11,097,000
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	<ul style="list-style-type: none"> Identify and constitute quantification and forecasting team for response materials, laboratory reagents, consumables and all health commodities for all the priority diseases and events. (A day meeting in Abuja) Four days forecasting and supply planning meeting for priority diseases and public health events in Abuja.(30 participants) 5-day meeting to forecasting for health commodity needed for priority diseases and events and develop procurement plan in Akwanga, Nasarawa state (Response and Laboratory) (30 participants) 5-day meeting to develop SOPs for receiving, storage , distribution and preposition of all health commodities including laboratory and response materials in Enugu (35 participants) 2-day meeting for Profiling transporter, storage facility for inventory management. (15 participants) Prepare Procurement plan, procure and deploy health commodities, equipment, reagents and medicines to the points of use across the country. (all through the year) 	NCDC		1,164,500	1,164,500
		NCDC		0	0
		NCDC		1,500,000	1,500,000
		NCDC		17,182,000	17,182,000
		NCDC		1,608,000	1,608,000
		NCDC		4,294,000	4,294,000
		NCDC		7,324,000	7,324,000
		NCDC		8,253,000	8,253,000
		NCDC		2,011,000	2,011,000
		NCDC		2,000,000,00	8,000,000,00

Develop Plans for surge capacity to respond to public health emergencies of national and international concern	<ul style="list-style-type: none"> Engage a consultant for 30days to develop zero draft of the plan. 5-day stakeholders meeting in Lagos to review the draft and buy-in of the stakeholders.(35 participants) 3-day finalization meeting in Kaduna (35 participants) Printing and dissemination. Identify and constitute EMT team. 3-day meeting to harmonize the link with the workforce for manpower, link with medical countermeasure logistics for resources management and link with coordination for the coordination of the EMT 	NCDC		3,780,000	3,780,000
Develop and maintain database of Subject Matter Experts for preparedness and response (moved from Emergency Response Operations)	<ul style="list-style-type: none"> Develop electronic data base for management of information of rapid responders Quarterly review of the subject matters expert's database. 	NCDC		3,780,000	3,780,000
Develop risk analysis programme for animal health officers	<ul style="list-style-type: none"> Hire a consultant for 4 weeks to develop risk analysis programme for animal health and training manual Conduct 2-day meeting of 30 participants to review and validate the programme and training manual Conduct 5-day training of 100 participants on risk analysis (NAQS, DVPCS, State VS, private vet) 	FMARD		2,137,050	2,137,050
Develop national preparedness plans for emerging and remerging animal diseases and other events	<ul style="list-style-type: none"> Hire a consultant for 4 weeks to develop national preparedness plans for emerging and reemerging animal diseases and other events Set up a national preparedness committee of 10 animal health professionals for emerging and remerging animal diseases and other events Support quarterly meeting of the national preparedness committee of 10 professionals Conduct 2-day stakeholder meeting of 40 participants to review and validate the preparedness plan Conduct 2-day training of 50 participants on preparedness plan for emerging and remerging animal diseases and other events Printing of 500 copies of the preparedness plan for emerging and reemerging animal diseases and other events 	FMARD		1,770,000	1,770,000
Map the hot spots in human, wild and domestic animal species interfaces for zoonotic diseases and TADs	<ul style="list-style-type: none"> Engage consultants to identify and develop the GIS mapping of the hot spots in human, wild and domestic animal interface and for zoonotic diseases and TADs, train data collector to collect the GPS coordinates and upload the GIS mapping with NCDC and Ministry website 2. Conduct two multi-stakeholder meetings of 65 & 60 persons for the adoption and validation of the report respectively (3 days residential) and 14. Print 2500 copies and disseminate 2000 copies of the report 	FMARD	Yes	64,828,756	64,828,756
Consultative Meetings -NLDC and NRCD with relevant stakeholder in the agricultural sector	<ul style="list-style-type: none"> Support for multi-stakeholder meeting of 60 persons to carry out advocacy and sensitization , 2.NLDC and 3. NRCD meeting -3 days residential 	FMARD	Yes	0	0
Procurement of essential veterinary stockpiles and vaccines for Vaccine preventable zoonotic diseases	<ul style="list-style-type: none"> Procure 2 s wildlife capturing tools (darting guns, traps, etc.), 1000 sample materials, (1000 cold box, tubes and bottle) 50,000 syringes and needle, 10,000 vacutainers 	FMARD	Yes	0	0

R2: Emergency Response Operations

R2.1: Capacity to Activate Emergency Operations

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)	<ul style="list-style-type: none"> Inauguration, and activation of national EPR team taking an all hazards approach involving the animal and environmental health sector. 	NCDC		550,000	550,000
	<ul style="list-style-type: none"> 1-day biannual meeting with Ministries, DGs and Directors from NiMET, NEMA and other stakeholders. 	NCDC		2,226,000	5,194,000
	<ul style="list-style-type: none"> Write to state to activate EPR and RRT teams which would include animal and environmental health component. 	NCDC		216,000	216,000
	<ul style="list-style-type: none"> Conduct 3-day Advocacy to relevant MDAs on the need for One Health in emergency response in Abuja. (15 members advocacy team selected across the stakeholders) 	NCDC		0	0
Enhance the NCDC EOC physical space, equipment, and logistic support	<ul style="list-style-type: none"> Procure a larger EOC physical space- conference room to accommodate 30 persons, 6 meeting (including EOC managers room) rooms to accommodate 10 persons each 	NCDC		0	0
	<ul style="list-style-type: none"> Three (3) 84" smart screen monitors for the conference room and One 84" smart screen monitors for the meeting rooms, Four video teleconference equipment, Two projector and projector screens, Six desktops for workstations and back up, 10 laptops, Two Multipurpose printers, One Photocopier, one scanner, Internet service and modems for back up, 1 Response hilux Conference area Large conference table to seat 15 persons, 30 swivel chairs, Three notice boards, one whiteboard, 2 Flipchart stands Meeting rooms Five conference tables to seat 10 persons each, 50 swivel chairs, 5 fireproof cabinets, 5 flip chart stands, 5 white boards EOC managers office One office desks, Two swivel chairs, one fireproof cabinet 	NCDC		0	0
Develop and maintain database of Subject Matter Experts and RRT for preparedness and response (Move to Preparedness)	<ul style="list-style-type: none"> Develop electronic data base for management of information of rapid responders 	NCDC		300,000	300,000
	<ul style="list-style-type: none"> Quarterly review of the subject matters expert database. 	NCDC		0	0

R2.2: Emergency Operations Centre Operating Procedures and Plan

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen procedures and plans for EOC emergency operations function	<ul style="list-style-type: none"> Appropriate legal instruments are in place to enact critical legal and administrative measures for emergency legislation, administrative regulations, non-legislative guidelines or standards, and non-legislative agreements, or arrangements for PHEOC to manage public health responses 	NCDC		8,494,000	8,494,000

	<ul style="list-style-type: none"> ● 1-day meeting to develop MoU on the establishment and functionality of EOCs at both National and State Level 	NCDC		746,000	746,000
	<ul style="list-style-type: none"> ● 1-day meeting in Abuja to review and adapt the MOU for signing (30 participants) 	NCDC		682,000	682,000
	<ul style="list-style-type: none"> ● A day meeting in Abuja for Signing of MOU by head of MDAs. 	NCDC		100,000	100,000
	<ul style="list-style-type: none"> ● Presentation by the Minister Health to the NCH 	NCDC		0	0
Develop missions, mandates, capabilities, and capacities of participating agencies for PHEOC functioning and response	<ul style="list-style-type: none"> ● 5-days training and mentoring of relevant stakeholders in 36 plus one state (3 from Abuja and 15 at the state level). 	NCDC		29,601,600	67,660,800

R2.3: Emergency Operations Program

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen capacity for emergency response among EOC staff and surge personnel by developing standard training, simulation exercises, and after action reviews	<ul style="list-style-type: none"> ● Conduct a 5-day meeting to review, harmonise and standardise training protocols of the existing document for EOC operations and for emergency response 	NCDC		3,450,000	3,450,000
	<ul style="list-style-type: none"> ● Conduct joint 30 outbreak investigations with Animal, human and environmental health teams (6 participants) 	NCDC		164,340,000	361,548,000
	<ul style="list-style-type: none"> ● Conduct after action reviews 	NCDC		97,927,200	228,496,800
Hire core public health emergency management staff	<ul style="list-style-type: none"> ● TWG to Conduct a 2-day meeting for needs assessment of human resources needed for response, roles and responsibilities should also be defined (this should be taken into context of the Public Health Workforce resource mapping to be conducted by the Health workforce technical area) 	NCDC		441,500	441,500

R2.4: Case management procedures are implemented for IHR relevant hazards

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop national case management guidelines for priority diseases, SOPs for the management and transport of potentially infected persons and improve infection prevention and control at the national and state levels	<ul style="list-style-type: none"> ● Conduct 3 days meeting to revise existing case management guidelines and SOPs (20 participants; involving the 6 pillar leads; Enugu) 	NCDC		6,696,800	6,696,800
	<ul style="list-style-type: none"> ● Engage consultant for 1 month to harmonise case management guidelines for priority diseases and develop SOP for transportation of potentially infected persons. 	NCDC		1,200,000	1,200,000
	<ul style="list-style-type: none"> ● Convene 5-days stakeholders meeting to validate revised and harmonised guidelines and SOP in conjunction with the IPC team (30 participants; Akwanga). 	NCDC		10,013,200	10,013,200
	<ul style="list-style-type: none"> ● Publication on MDAs website 	NCDC		0	0

	<ul style="list-style-type: none"> • Printing and Dissemination of revalidated case management guidelines, SOPs to relevant stakeholders 	NCDC		2,329,000	2,329,000
Improve infection prevention and control at the national and state levels	<ul style="list-style-type: none"> • Conduct assessment of isolation units in all the states in the country to identify gaps compared to global best practice and develop minimum standards for isolation practice. 2 days per state, 2 person per state for 36 states and FCT 	NCDC		11,277,600	11,277,600
	<ul style="list-style-type: none"> • Conduct 5-days training to build IPC capacity of Health workers in each geopolitical zone 40 participants per zone. 	NCDC		37,344,000	37,344,000
Establish funding mechanism and options for animal disease and transboundary pest outbreaks from the Ecological Fund and others	<ul style="list-style-type: none"> • Conduct 2-day stakeholder meeting for establishment of funding mechanism and options for animal disease and transboundary pest outbreaks from the Ecological Fund and others 	FMARD		0	0
	<ul style="list-style-type: none"> • Printing 200 copies of the memo on establishment of funding mechanism to NCA for approval 	FMARD		0	0
	<ul style="list-style-type: none"> • Conduct 2-day meeting to strengthen collaboration with relevant MDAs . NCDC, NEMA, Security agencies , NGO and partners 	FMARD		1,338,000	1,338,000
Provide 40 operational vehicles for animal health services including response to animal diseases outbreak	<ul style="list-style-type: none"> • Procure 40 operational vehicles for animal health services including response to animal diseases outbreak 	FMARD		720,000,000	720,000,000
	<ul style="list-style-type: none"> • Provide monthly fueling and maintenance of 40 operational vehicles 	FMARD		16,800,000	67,200,000
Support for Emergence and Response Activities	<ul style="list-style-type: none"> • Procure 2s 4 Runner, 6s. 4-Wheel double cabin and 2s Corolla Vehicles 2. Registration and insurance of the vehicles 3. Tracking , fueling and maintenance 	FMARD	Yes	239,680,000	239,680,000
Equipping the Crisis Management Center (animal component office)	<ul style="list-style-type: none"> • Procure 2 LED 60", TV, teleconference, Ups, stabilizer, swivel and visitor chair, printer, cartridge, camera, modem, desk phone, photocopier, window blind, waste bin & shredder 	FMARD	Yes	10,270,000	10,270,000
Refurbishment of REDISSE Animal Health component office at Headquarter	<ul style="list-style-type: none"> • Office portioning, tiling, painting, toilet fitting, procure refrigerator, water dispenser, TV, chair. Cabinet, vehicle, rent, and conference table 	FMARD	Yes	23,989,200	23,989,200
Support for project logistics	<ul style="list-style-type: none"> • Provide utility fees-electricity, water, waste management, l, PMS, detergents, beverage, microwave, freezer, seater, TV, laptop, cutleries and vehicles and attendance of international conference 	FMARD	Yes	14,985,500	14,985,500
Project management costs 6. Staff incentives	<ul style="list-style-type: none"> • Provide monthly incentives/stipends for 6 staff for 9 months 	FMARD	Yes	28,200,000	28,200,000
Engagement of contract staff and consultants	<ul style="list-style-type: none"> • Hire 4 cleaners, security, driver, grievance redressed officer, receptionist 	FMARD	Yes	7,800,000	7,800,000
Exchange visit	<ul style="list-style-type: none"> • Air ticket, accommodation and per diem for 3 NCDC staff for 5-days exchange visit to Robert Koch Institute Berlin Germany 	NCDC	Yes	3,889,018	3,889,018
1st Technical Working Group Meeting(TWG)	<ul style="list-style-type: none"> • 13 TWG MAURICE members, FMoH and NCDC MAURICE team met and: - Justified the need for a harmonised national Infection Prevention and Control (IPC) manual - Agreed on the content and structure of the MAURICE manual 3. Exchanged information on relevant IPC documents and literature for development of the draft manual 	-	NCDC	Yes	1,590,190
2nd Technical Working Group Meeting	<ul style="list-style-type: none"> • Review and incorporation of comments by TWG members into the draft MAURICE manual developed by the NCDC team 	NCDC	Yes	1,580,800	1,580,800
Training Module development Workshop in Abuja	<ul style="list-style-type: none"> • Training of NCDC, FMoH, UATH, NHA, RKI, GIZ staff on the concept of the participatory quality development approach and systemic view • Developed facilitators and participants guide Review of draft IPC MAURICE manual and draft one pagers 	NCDC	Yes	2,288,000	2,288,000

Pilot workshop at the University of Abuja Teaching Hospital (UATH), Gwagwalada	<ul style="list-style-type: none"> Training of 13 UATH staff as "IPC Change Agents" using a participatory quality development approach and system view, 1-day field visit and engagement of UATH for sustainability 	NCDC	Yes	794,269	794,269
Lagos Implementation workshop, part 1	<ul style="list-style-type: none"> IPC training of 28 frontline health care workers from 7 public health facilities and 7 private health facilities with 4 state ministry officials as "IPC change agents" using participatory quality development Approach and systemic view 	NCDC	Yes	13,615,014	13,615,014
Lagos Implementation workshop, part 2	<ul style="list-style-type: none"> Feedback on field phase findings and experiences by change agents Engagement of 11 hospital management (medical directors) for sustainability 	NCDC	Yes	10,758,550	10,758,550
Operational research	<ul style="list-style-type: none"> Systematic evaluation of the efficiency of MAURICE training with regard to IPC interventions in the hospital via supervisory visits 	NCDC	Yes	0	0
Ensure proper administration and operations management of the EOC	<ul style="list-style-type: none"> Engage an EOC planning officer, grants manager and IT maintenance officers 	NCDC	Yes	16,012,549	16,012,549
Convene regular EOC meetings	<ul style="list-style-type: none"> Routine and outbreak response meetings 	NCDC	Yes	1,281,000	1,281,000
EOC Facility Maintenance	<ul style="list-style-type: none"> Provide funds for maintenance of the EOC Facility 	NCDC	Yes	2,111,256	2,111,256
Ensure proper financial management of Co-Ag funds	<ul style="list-style-type: none"> Engagement of a fiduciary agent to ensure Good governance and strong financial practices which will be in compliance with terms and conditions of the cooperative agreement during the implementation of the grant. 	NCDC	Yes	2,954,840	2,954,840
Conduct gap analyses to determine minimum EOC optimal functionality	<ul style="list-style-type: none"> Carry out expert review and assessment of the existing EOC structures, systems and management. 	NCDC	Yes	0	0
Development of a National Medical Counter Measures Strategic Plan	<ul style="list-style-type: none"> Conduct a 5-day stakeholders' workshop to ratify the draft MCM strategic plan 	NCDC	Yes	4,282,200	4,282,200
Capacity building and mentorship of State EOCs during public health/emergency outbreaks of concern	<ul style="list-style-type: none"> Provision of onsite and offsite technical support to State EOCs and emergency response structures during public health/emergency outbreaks of concern 	NCDC	Yes	0	0
Development and Implementation of the NCDC Multi-Hazard Preparedness Plan for key priority diseases (Yellow Fever, CSM, Lassa Fever, Cholera, Avian Influenza, Monkeypox)	<ul style="list-style-type: none"> i. Collation and review of existing preparedness plans for different disease areas ii. Convey stakeholder meetings to integrate collated plans iii. Finalize and disseminate a multi-hazard preparedness plan. 	NCDC	Yes	4,282,200	4,282,200
Support outbreak investigation and response.	<ul style="list-style-type: none"> Deployment of RRTs for investigation and on-site response to rumours/alerts/confirmed reports of epidemic-prone disease outbreaks 	NCDC	Yes	2,793,800	2,793,800
Develop a National HEOC Policy	<ul style="list-style-type: none"> Constitute an 8-member policy drafting committee with members from NPHCDA, WHO, AFENET Conduct several meetings to develop a draft National HEOC policy. Submit the draft HEOC policy to the NCDC Management Committee 	NCDC	Yes	36,600	36,600
Ensure stockpile of sufficient laboratory reagents and other essentials.	<ul style="list-style-type: none"> Procure essential reagents and commodities for laboratories 	NCDC	Yes	2,592,500	2,592,500
Monitoring and supervision of facilities for adherence to standard and brainstorming on challenges	<ul style="list-style-type: none"> Conduct monitoring and supervisory visits to laboratories within the NCDC network. 	NCDC	Yes	2,293,600	2,293,600
Onsite assessment and valuation to identify a suitable facility.	<ul style="list-style-type: none"> Site assessment of proposed facility by the EOC team lead and independent valuation consultant. 	NCDC	Yes	1,300,000	1,300,000

Renovation of facility, equipping/optimisation of the EOC facility	<ul style="list-style-type: none"> Demolition and alteration @ 192,500 Rehabilitation works @ 3,067,963 Purchase of communications and Information Technology equipment @ 6,111, 200 Project Administration (2.5%) @ 287,691 <p>Value Added Tax (VAT) 5% 604,152</p>	NCDC	Yes	102,635,056	102,635,056
Basic PHEOC fundamentals training	<ul style="list-style-type: none"> Transportation of 5 NCDC Personnel to and from State for training activities @ 1,857,632 per state. Stationery@ 500/person X 30 persons and printing of training materials@100x40 itemsX30 persons and Teabreak &Lunch @6,000/person X30 persons X10days and filejackets @500/person X30 and tepads@400/personX30persons @ 1,966,000 	NCDC	Yes	0	0
Conduct an experience sharing workshop for the already established 6 state PHEOCs in Abuja to review the establishment process, what has gone well, and lessons learned. 3 people from each state will be in attendance.	<ul style="list-style-type: none"> DTA @ 16000/day for 2-days for 24 people Flight @ 60,000 per person for 24 people Airport taxi @ 20000/per person for 24 people Local running @ 0.3% of DTA for 24 people Hall hire for 2-days @ 300,000 Lunch for 35 persons @ 3000/day and tea break @ 1500/day. 7) Filejackets @500/person X 35 and tepads@400/person X 35people. This will also include road transport for some states. 	NCDC	Yes	4,200,000	4,200,000
Monitoring and supportive supervision of first 6 newly established state PHEOCs. 3 people will be deployed to the first 6 PHEOCs to provide supportive supervision and conduct simulation exercises.	<ul style="list-style-type: none"> Flight @ 60,000 for 3 people DTA @ 16, 000/day x 3people Airport taxi @ 20000/per person Local transport @1,500 /day Lunch @ 3000 for 10 people Tea Break @ 1500 for 10 people Printing of monitoring materials @ 5000 	NCDC	Yes	3,000,000	3,000,000
6. Personnel wages and salaries for state EOC project and national ICC for 12 months	<ul style="list-style-type: none"> 1 consultant/Team Lead for state PHEOC establishment @ 1,000,000/month 1 project assistant state PHEOC establishment @ 400,000/month 1 Incident Coordination Centre Assistant @ 150,000/month 1 Biomedical Engineer @ N120,000/month 1 Technical Assistant to DG @ 400,000/ month 1 Technical Assistant for (operations) @ 600,000/ month 1 Technical Assistant for Communications @ 400,000 / month 1 Communications Assistant @ 150,000/month 	NCDC	Yes	38,640,000	38,640,000
Onsite assessment and advocacy visits of Polio EOCs in 3 states which aims to understand the scope of operations to enable transition to PHEOCs for 2-days for 3 people	<ul style="list-style-type: none"> Flight @ 60,000 for 3 people Airport taxi @ 20000/per person DTA @ 16, 000/ day x 3 people Local transport @1,500 /day 	NCDC	Yes	1,200,000	1,200,000
Engagement workshop for the polio EOCs as a first step in the transition of polio EOCs into state PHEOC network- 2 persons will be invited from each of the 8 Polio EOCs.	<ul style="list-style-type: none"> DTA @ 16000/day for 2-days for 16 people Flight @ 60,000 per person for 16 people Airport taxi @ 20000/per person for 16 people Local running @ 0.3% of DTA for 16 people Hall hire for 2-days @ 400,000 Lunch for 30 people @ 3000/day and tea break @ 1500/day. filejackets @500/person X30 and tepads@400/personX30persons. This will include road transport for some states. 	NCDC	Yes	3,400,000	3,400,000
Internet services subscription	<ul style="list-style-type: none"> Annual subscription for NCDC internet services @ 1,000,000 	NCDC	Yes	1,000,000	1,000,000
ICC consumables & supplies	<ul style="list-style-type: none"> Printer/Copier ink @ 125,000, kitchenette supplies @ 25,000 	NCDC	Yes	1,800,000	1,800,000
Running of EOC meetings	<ul style="list-style-type: none"> Monthly meeting costs @ 50000 	NCDC	Yes	600,000	600,000

Monthly Cable subscription	● Payment for monthly cable subscription @ 20000	NCDC	Yes	240,000	240,000
Monthly subscription for closed user group (CUG) toll free lines for NCDC response staff, state epidemiologists and local government area district surveillance and notification officers.	● CUG subscription and data bundle rental @ 47,619 VAT @ 2380.95	NCDC	Yes	600,000	600,000
Payment for a data management tool for E-health Africa	● Annual subscription for NCDC disease outbreaks data tool @ 4945644	NCDC	Yes	4,945,644	4,945,644
Engage one consultant for 4weeks to develop conduct the evaluation process, identify research questions for publication and make recommendations for next phase of the EOC project.	● Consultancy fee @ 1,000,000 Travel logistics for evaluation visits X 2 people to 6 states for 2 @ 1,500,000 Focused group discussion and workshop @ 2,500,000	NCDC	Yes	5,000,000	5,000,000
Establish funding mechanism and options for animal disease and trans-boundary pest outbreaks from the Ecological Fund and others	● Conduct 2-day stakeholder meeting for establishment of funding mechanism and options for animal disease and trans-boundary pest outbreaks from the Ecological Fund and others	FMARD		0	0

R3: Linking Public Health and Security Authorities

R3.1: Public Health and Security Authorities, (e.g. Law Enforcement, Border Control, Customs) are linked during a suspect or confirmed biological event

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish a national TWG for linking public health and security authorities	• Set up TWG secretariat at ONSA and Write letters for nomination from all security agencies to constitute the TWG	ONSA		0	0
	• 1-day inaugural meeting of TWG(40 persons) to review TOR and define next steps	ONSA		1,062,000	1,062,000
	• Bi-Monthly meeting of 20 persons	ONSA		4,942,000	4,942,000
Update old statutory instruments to make them compliant with IHR.	• Secretariat to develop TOR and identify 7-man task team to compile available statutory documents	ONSA		0	0
	• Engage a consultant to conduct an assessment of existing statutory instruments, to identify related gaps	ONSA		1,221,200	1,221,200
	• 2-days workshop for Legal officers from all relevant MDAs and organizations to review reports, propose amendment, and draft new regulations where none exists	ONSA		4,196,000	4,196,000
	• High-level stakeholders (Civil + Military +Intel Agencies) 2-days meeting to review and approve the proposed amendment and/or new regulations	ONSA		3,468,000	3,468,000
	• Engagement with the legislative arm for legal backing, working with Ministry of Justice and the LEGISLATIVE TECHNICAL GROUP of JEE	ONSA		0	0
Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms	• Set up a 5 man task team to compile documents, develop TOR for a consultant to coordinate process	ONSA		0	0
	• Hire a consultant (working with the task team) to liaise with legal officers of relevant MDAs and organisations to facilitate the drafting of an MOU	ONSA		1,221,200	1,221,200
	• Stakeholders meetings to review and validate the MOU	ONSA		1,418,000	1,418,000
	• Conduct advocacy to heads of agencies for buy-in and endorsement of the MoU	ONSA		0	0
Integrate and continuously develop capacity on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements	• Ensure routine inclusion of relevant personnel from the security agencies in all public health-related trainings and workshops	ONSA		0	0
	• Identify desk officer for public health emergencies in all relevant MDAs and security agencies	ONSA		0	0
	• Joint capacity building on public health emergencies and disasters (tabletop exercise) for middle cadre officers - one per year	ONSA		21,332,000	53,330,000
	• Joint capacity building on public health emergencies and disasters (simulation exercises) for middle cadre officers - 1 per year	ONSA		36,600,000	91,500,000
	• Conduct biannual/seminars and step down trainings	ONSA		3,720,000	11,160,000
	• Integrate security agencies' personnel as co-editors of periodic epidemiology bulletins	ONSA		0	0
	• Ensure appropriate distribution of the document among stakeholders (Civil + Military +Intel Agencies)	ONSA		0	0

	<ul style="list-style-type: none"> ● Ensure involvement of Security Officials (NIPSS, NDC, ISS, ONSA, Armed Forces) in After Action Review (AAR) post incident. 	ONSA		0	0
Implement appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi-sectoral health preparedness and response.	<ul style="list-style-type: none"> ● To involve desk officers on public health emergencies from security agencies and MDAs in NASORM ● Embed military and security agencies in NCDC and other public health agencies, to facilitate inter-agency collaborations, skills exchange and capacity building 	NCDC		0	0
Improve reporting and information sharing mechanisms including cross-border collaboration	<ul style="list-style-type: none"> ● Establish and keep updated, a listserv/database of all the relevant desk officers and key personnel of the security agencies and MDAs , at secretariat (ONSA) ● Establish a mechanism for transmission of risk communication information, situation reports and response activities, to relevant security agencies and MDAs ● To have public health issues discussed during cross-border collaboration meetings (ECOWAS Health Ministers meeting) ● Advocacy to have public health emergency situation reports routinely discussed at national security meetings ● Advocacy to have public health emergency situation reports routinely discussed at national security meetings 	ONSA		0	0
		ONSA		0	0
		ONSA		0	0
		ONSA		0	0
		ONSA		0	0

R4: Medical Countermeasures and Personnel Deployment

R4.1: System is in place for sending and receiving medical countermeasures during a public health emergency

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop a national framework for procurement, deployment and receipt of medical countermeasures during public health emergencies	<ul style="list-style-type: none"> ● 5-day workshop for 40 people to develop SOPs and protocols for planning, placing order, procurement, deployment, emergency commodities for waivers and receiving MCM assets locally and internationally and concept note on MCM framework ● 4-day Workshop for 40 people and Training of stakeholders on MCM logistics at six geopolitical zones by MCM TWG (5 facilitators from Abuja and 35 participants from neighboring states). ● 1-day meeting for 30 people to set up and for the inauguration of the Inter-Ministerial Steering Committee on MCM ● One day bi-annual meetings of 25 people of the Inter-Ministerial Steering Committee on MCM ● 2-days meeting of 6 people to develop database of the donors and suppliers ● NCDC to develop memo to National NCH on the roles and responsibilities with stakeholders/donor for MCM (no cost) 	NCDC		9,406,000	9,406,000
		NCDC		39,310,400	78,620,800
		NCDC		904,000	904,000
		NCDC		2,445,000	5,705,000
		NCDC		907,600	1,815,200
		NCDC		0	0
Support the development of MOUs with international suppliers of medical countermeasures for public health	<ul style="list-style-type: none"> ● Engage one national consultant for 14 days consultancy to support the process of developing the MOUs. ● 1-day review of the first draft of MOU by the consultant by six member team 	NCDC		930,000	930,000
		NCDC		551,200	551,200

emergencies	<ul style="list-style-type: none"> A 2-day residential meeting to validate and adapt MOU (30 residential and 10 non-residential participants; Lagos) Printing of 100 copies of the final document Dissemination of final document 	NCDC		4,292,000	4,292,000
		NCDC		232,900	232,900
		NCDC			
Conduct tabletop simulation exercise to test the medical countermeasures plan	<ul style="list-style-type: none"> Conduct a quarterly 2-day residential meeting of the PD/MCM TWG (30 participants) which will include 1-day simulation exercise (table top exercise) 	NCDC		19,730,000	67,082,000
Promote the adherence to the national pharmaceutical assurance policy by local manufacturers for items required for MCM that can be procured in country	<ul style="list-style-type: none"> FMoH, NAFDAC and NCDC to organize a 3-day annual sensitization workshop to promote the adoption of the practices in the area of the executive order ease of doing business for the pharmaceutical companies (70 participants). 	NAFDAC		2,598,000	2,598,000
	<ul style="list-style-type: none"> Disseminate the PAQP to all stakeholders 	NCDC		20,000	20,000

R4.2: System is in place for sending and receiving health personnel during a public health emergency

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop a personnel deployment plan and legal and regulatory framework for personnel deployment, including sector roles and responsibilities to identify barriers to receiving health personnel during public health emergencies	<ul style="list-style-type: none"> Hire 1 national consultant for 10 working days to review the legal and regulatory framework for personnel deployment including sector roles and responsibilities. 	NCDC		690,000	690,000
	<ul style="list-style-type: none"> Hire 1 National Consultant for 10 working days to draft the national medical personnel deployment plan 	NCDC			
	<ul style="list-style-type: none"> 3 days meeting of 25 people to review zero draft developed by consultants (Akwanga) 	NCDC		4,575,000	4,575,000
	<ul style="list-style-type: none"> Print and dissemination of 500 copies of the final document 	NCDC		1,164,500	1,164,500
Review and establish standards of care including the competencies required - including SoPs, domesticate guidelines etc.	<ul style="list-style-type: none"> Hire an international consultant for a 14-day consultancy to review, establish, draft and adapt the standards of care including the d - including SoPs, domesticate guidelines etc. 	NCDC		0	1,297,050
	<ul style="list-style-type: none"> 3-day meeting of 25 people to review zero draft developed by consultants (Kaduna) 	NCDC		0	4,832,000
	<ul style="list-style-type: none"> Printing and dissemination of 100 copies of the final document 	NCDC			
	<ul style="list-style-type: none"> Dissemination of final document 	NCDC			
Provision of Animal containment equipment and materials during Animal Health crisis	<ul style="list-style-type: none"> Procure 1 loading truck and 1 excavator truck Procure 6 wildlife surveillance vehicle for national wildlife parks Procure wildlife capture materials (capture guns, traps, sedatives, tranquilizer, PPE) 	FMARD			

R5: Risk Communication

R5.1: Risk Communication Systems

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop a multi-sectoral and all-hazards risk communication strategy and emergency plan	<ul style="list-style-type: none"> Identification and mapping of relevant stakeholders across sectors and disciplines Inauguration of the multi-sectoral risk communication group Monthly meeting of the multi-sectoral risk communication working group, 30 persons -local (communication and refreshment, tea break and one lunch) 2-days training for 30 members of risk communication working group on multi-sectoral risk communication covering health system building blocks Conduct 3 days' Workshop for 40 multi-sectoral risk communication group members to develop/collate communication plans of different MDAs (This includes cost for travels/per diem/feeding/accommodation/venue for) 	NCDC		0	0
Develop a Monitoring and Evaluation process to provide feedback into the programme for improvement.	<ul style="list-style-type: none"> Engage a consultant to support the process (This includes cost for travel/per diem/accommodation/food/venue) Conduct 2-days workshop to develop monitoring and evaluation toolkits and research to gather data for analysis. (This includes cost for travel/per diem/accommodation/food/venue) Conduct 3 days training on monitoring and evaluation for 30 multi-sectoral risk communication group members at the national level (This includes cost for travel/per diem/feeding/accommodation/venue) 3 days step down training for the sub-national structures(774 LGA Educators: 2 State health educators per state including FCT) on monitoring and evaluation process (This includes the cost for feeding/travels per diem/accommodation/venue) Pretest monitoring and evaluation tool kit 2-day Finalization meeting by 30 multi-sectoral risk communication group members for the monitoring and evaluation process Dissemination of the tool kit to the states (This includes cost for printing and logistics) Quarterly supportive supervision (This includes cost for travel/per diem/accommodation/food/venue) 	NCDC		2,490,000	2,490,000
		NCDC		1,392,000	2,784,000
		NCDC		0	14,712,000
		NCDC		55,776,000	125,496,000
		NCDC		789,200	3,156,800
		NCDC		2,198,000	8,792,000
		NCDC		1,139,600	2,279,200
		NCDC		11,145,600	33,436,800

R5.2: Internal and Partner Communication and Coordination

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Build capacity for risk communication among human, environmental, and animal health	<ul style="list-style-type: none"> Identify relevant training needs of communication officers across across human, animal, and environmental health MDAs 	NCDC		0	0

workers	<ul style="list-style-type: none"> Develop a training curriculum or training module on risk communication Engage a consultant to support the process Conduct a training of trainers on risk communication for 40 Communication officers across National MDAs (This includes cost for feeding/Local transport /venue/ honourarium for 5 facilitators) Cascade training to the state level across 36 States and FCT for 20 communication officers across MDAs in each State (This includes cost for travels/local transport/per diem/accommodation/feeding/venue) 	NCDC		150,000	300,000
Create and disseminate IEC materials to increase facilities reporting (from reporting technical area)	<ul style="list-style-type: none"> Develop video clips and IEC materials on disease reporting for health care workers Publicize video clips and IEC materials via traditional and social media Print 100,000 disease reporting IEC materials to all health facilities Dissemination to 36 states and 36,000 health facilities 	NCDC		250,000	250,000
		NCDC		1,100,000	1,100,000
		NCDC		10,000,000	10,000,000
		NCDC		1,850,000	1,850,000

R5.3: Public communication

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Build capacity for coordinated public communication at the National and State level	<ul style="list-style-type: none"> Engage consultant to support the process (This includes cost for travels/per diem/accommodation/ feeding/venue) Develop training modules Conduct 3 days Training workshop for Communication officers in the National (30). (This includes cost for travels/per diem/accommodation/ feeding/venue) Support States to Cascade Training (1-day) to other relevant agencies in each of their States (This includes cost for travels/ feeding/venue) Engage a consultant to develop national communication strategy (T actively reach out to variety of media platforms) Conduct 2-days document review workshop Pretest finalised document Printing and Disseminate Documents 	NCDC		0	1,290,000
		NCDC		0	0
		NCDC		3,282,000	3,282,000
		NCDC		0	14,392,800
		NCDC		0	2,490,000
		NCDC		0	4,524,000
		NCDC		0	819,200
		NCDC		0	5,979,200

R5.4: Communication Engagement with Affected Communities

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022

Establish community outreach programs and regularly conduct information education communication (IEC) materials testing with members of the target audience.	• Develop and produce IEC materials	NCDC		11,250,000	11,250,000
	• Mobilize 774 LGA Social mobilization officers to regularly engage members of their communities on different health issues (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	13,438,400
	• Identify and segment target audience	NCDC		0	0
	• Conduct field testing and finalization of IEC materials as soon they are produced (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	1,730,700

R5.5: Dynamic Listening and Rumour Management

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop strategic framework to integrate fragmented event monitoring at the community level	• Conduct 2-days meeting for 20 stakeholders to review existing monitoring tools, and identify ways they can feed into each other (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	4,432,000
	• Engage a consultant to support the process (to develop an integrated framework for monitoring tools)	NCDC		0	2,490,000
	• Conduct a 1-day finalization meeting (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	0
Develop/strengthen National and State systems to consider communication feedback—including rumours and misinformation from the public—in decision-making processes to improve communication response.	• Capacity building for 2-days for 10 National communication officers and 40 State officers on the collection, collation, analysis, and escalation of feedback to relevant authorities for action (This includes cost for travel/per diem/accommodation/food/venue)	NCDC		0	5,704,000
	• Conduct Advocacy visits to 15 relevant MDAs (This includes cost for Local transport)	NCDC		7,920,000	7,920,000
	• Weekly Collection, collation and analysis of feedback at State and National level	NCDC		0	0
Branding and corporate communication and risk communication strategies for the REDISSE project	• Consultancy to develop, test and disseminate risk communication information for epidemic-prone diseases based on seasonality and prevailing including developing project communication plan and sample communication material	NCDC	Yes	61,043,648	61,043,648
Risk Communication TWG meetings	• Conduct quarterly Technical committee meetings in Abuja hall, accommodation, lunch, tea break, stationery	NCDC	Yes	9,917,660	9,917,660
Set up of project website, set up of the intranet communications and networking of the office	• Consultancy to develop project website and project intranet including overhaul and upgrade of NCDC website and development of REDISSE webpages	NCDC	Yes	18,674,850	18,674,850
REDISSE PCU Office set up	• Procurement of office supplies and equipment	NCDC	Yes	20,715,000	20,715,000

Points of Entry

PoE.1: Routine capacities are established at PoE

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Designate PoEs as guided by IHR (2005) Articles 20 and 21	<ul style="list-style-type: none"> Memo to HMH from Dir. PHS for consideration and approval, and notification to WHO and IHR focal person. Send communication to WHO AFRO via the Nigerian IHR NFP to indicate decision to designate MMIA, NAIA, MAKIA and the Port of Lagos (Papa). 	FMOH		0	0
Conduct IHR assessment for core capacity requirements at designated airports and ports (40-50 persons/site) - Site visits	<ul style="list-style-type: none"> Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for MMIA Conduct IHR assessment for MAKIA Conduct IHR assessment for NAIA Conduct IHR assessment for Port of Lagos (Papa) Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for NAIA Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for MMIA Conduct IHR assessment for MAKIA Conduct IHR assessment for Port of Lagos (Papa) Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for NAIA A final assessment meeting with between 15 and 20 agencies (50 participants) will hold at the PoE. This will require 1 coffee and 1 lunch break. The final assessment meeting will require travel for 4 directorate cadre staff (this is in addition to the 5 IHR consultants). They would require flight tickets to and from Abuja, accommodation and per diems for 3-days (including 2 travel days) Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for MMIA Conduct IHR assessment for MAKIA Conduct IHR assessment for Port of Lagos (Papa) A final assessment meeting with between 15 and 20 agencies (50 participants) will hold at the PoE. This will require 1 coffee and 1 lunch break. The final assessment meeting will require travel for 4 directorate cadre staff (this is in addition to the 5 IHR consultants). They would require flight tickets to and from Abuja, accommodation and per diems for 3-days (including 2 travel days) Develop an action plan to address the gaps at each of the selected points of entry. Engage 5 National consultants to meet in Abuja for 5-days Develop an action plan to address the gaps at each of the selected points of entry. <ol style="list-style-type: none"> The consultants will meet in Abuja for 5-days to evaluate the results of the assessment tools, determine the scores of each PoE, identify the gaps and develop action plans to address each of the selected points. They will require renting an office space for the 5-days 1 coffee and lunch break would be required for 5-days Share report of assessment with NAIA -specific and national stakeholders at 'Report Dissemination and Strategy Development Meetings'. (Each IHR assessment requires site visits to and a final assessment meeting with between 15 and 20 agencies) <ol style="list-style-type: none"> The Post-IHR assessment meeting will consist of 15 and 20 agencies (50 participants). This will require 1 coffee and 1 lunch break. 	FMOH		6,000,000	6,000,000
		FMOH		196,000	196,000
		FMOH		1,918,800	1,918,800
		FMOH		1,240,000	1,240,000
		FMOH		6,355,200	6,355,200
		FMOH		1,500,000	1,500,000
		FMOH		1,750,000	1,750,000
		FMOH		1,240,000	1,240,000

	<ul style="list-style-type: none"> c. The assessment meeting will require travel for 4 directorate cadre staff. d. The assessment meeting will require renting a venue. 			
	<ul style="list-style-type: none"> • Share report of assessment with MMIA, MAKIA, Port of Lagos Papa -specific and national stakeholders at 'Report Dissemination and Strategy Development Meetings'. (Each IHR assessment requires site visits to and a final assessment meeting with between 15 and 20 agencies) <ul style="list-style-type: none"> a. The Post-IHR assessment meeting will consist of 15 and 20 agencies (50 participants). b. This will require 1 coffee and 1 lunch break. c. The assessment meeting will require travel for 4 directorate cadre staff. d. The assessment meeting will require renting a venue. 	FMOH	7,705,200	7,705,200
	<ul style="list-style-type: none"> • Share report of assessment with relevant PoE -specific and national stakeholders at 'Report Dissemination and Strategy Development Meetings'. (Each IHR assessment requires site visits to and a final assessment meeting with between 15 and 20 agencies) <ul style="list-style-type: none"> Engage 5 National consultants to meet in Abuja for 1-day 	FMOH	1,200,000	1,200,000
Build/sustain infrastructure for routine services at identified target ports/airports/ground crossings	<ul style="list-style-type: none"> • Use finding from IHR assessments to determine the resources needed to address gaps and implement action plan. 	FMOH	0	0
	<p>Procurement of equipment Capital Procurement</p> <ul style="list-style-type: none"> • Build 4 temporary human holding areas at each designated PoE using fabricated 2-in-1 40 ft. • container (including full installation) • Each structure should have partitioned area for further assessment of the ill traveler, 1 donning area, 1 doffing area, and two bed spaces - N3,120,000/building • Incinerator for medical waste - N7,930,000 (will serve for both human and animal medical waste) <p>Equipment Procurement: Each facility will have the following -</p> <ul style="list-style-type: none"> • 2 examination couches - N60,000 x2 • 2 hand stretcher - N45,500.00 x2 • 2 wheelchairs - N36,000.00 x2 • 2 hand sanitizer dispenser (purel) - N58,500.00 x2 • 2 air conditioner (1.5 HP) LG - N175,000.00 x2 • 1 Inverter (10KVA) N3,250,000.00 • 2 Stabilizer (5KVA for ACs) - N30,000 x 2 • 1 Stabilizer (2KVA for refrigerator) - N15,000.00 • 1 Mobile Hand wash sink - N595,000.00 • 2 Hospital Screen - N45,500.00 x2 • 1 Office table - N65,000.00 • 2 chairs - N15,000.00 x2 • 2 Hospital bedside locker/rack - N18,500.00 x2 • 2 AED - N494,000.00 x2 • 2 Nebulizer - N45,500.00 x2 • 2 Oxygen Tank (12.5L) - N58,500.00 x2 • 2 Ambu bag - N13,000.00 x2 • 1 Fire Extinguisher - N45,500.00 • 1 refrigerator N97,500.00 • 1 Water Storage tank (GEEPEE) - N156,000.00 • 2 drip stands - N13,000.00 x2 • 2 Digital sphygmomanometer - N32,500.00 x2 	FMOH	0	0

	<ul style="list-style-type: none"> • 2 Manual sphygmomanometer - N45,500 • 2 Littman's Stethoscope - N32,500.00 • Glucometer (Accucheck) - N9,800 • 1 desktop Computer HP Pavilion 570- N279,500 • 1 UPS 2KVA- N45,500 • 1 Printer Laserjet Enterprise - N281,000 • 1 Photocopier (sharp AR6020) + stand - N286,000 • 1 Automatic Hand Driers (Brimix) - N14,500 • 1 Automatic soap dispensers - N35,100 • 5 Infrared Thermometer - N12,000 • 1000 Digital Clinical Thermometer - N2,600/unit • 1 Autoclave Sterilizer - N775,000 • 5 Plastic sharp container - N4,500/container <p>Supplies for Human Holding Area:</p> <ul style="list-style-type: none"> • 1152 Aprons - N2,000/unit • 240 Disposable gloves - N1,600/pack • 144 Cotton wool - N1,500/roll • 48 Antiseptic - N4,600/L • 120 Syringes & Needles 2cc - N3,500/pack • 120 Syringes & Needles 5cc - N4,600/pack • 120 Syringes & Needles 10cc - N5,200/pack • 48 face masks - N650/pack • 24 N95 Particulate Masks - N9,500/pack • 12 Glucometer strip x50 (accucheck) - N6,500 • 400 Level 3 PPE - N46,787/unit • 4 Mackintosh - N3,300/unit • 12 Hydrogen peroxide (500ml) - N4,700 • 24 Methylated Spirit/2L - N2,000 • 12 Specimen bottles Plain x100 - N5,000/Pack • 12 Specimen bottles EDTA x100 - N5,000/Pack • 12 Surgical gloves x50 - N5,000/pack • 600 Hand sanitisers - N1,200 • 60 Hand sanitisers refill- N3,200/L • 48 Jik - N3,000/carton • 120 Disposable couch drapes - N4,500/pack • 12 Lancets x 200 - N1300/Pack • 12 IV Fluid - N4,600/carton • 600 Bactericidal liquid hand wash (500ml) - N1,950 • 5 Infusion giving set x50 - N4,600 • 5 IV Cannula x50 - N4,600 <p>Procure 4 dedicated, fully equipped ambulances for transfer of ill travellers - N45,500,000.00</p>			
	• Identification of 4-5 directorates to oversee the procurement process			0 0
	Capital Procurement	FMOH	67,619,904	67,619,904

	<ul style="list-style-type: none"> • Build 4 temporary human holding areas at each designated PoE using fabricated 2-in-1 40 ft. container (including full installation) Each structure should have a partitioned area for further assessment of the ill traveller, 1 donning area, 1 doffing area, and two-bed spaces - N3,120,000/building • Incinerator for medical waste - N7,930,000 (will serve for both human and animal medical waste) <p>Equipment Procurement:</p> <ul style="list-style-type: none"> • Each facility will have the following - • 2 examination couches - N60,000 x2 • 2 hand stretcher - N45,500.00 x2 • 2 wheelchairs - N36,000.00 x2 • 2 hand sanitizer dispenser (purel) - N58,500.00 x2 • 2 air conditioner (1.5 HP) LG - N175,000.00 x2 • 1 Inverter (10KVA) N3,250,000.00 • 2 Stabilizer (5KVA for ACs) - N30,000 x 2 • 1 Stabilizer (2KVA for refrigerator) - N15,000.00 • 1 Mobile Hand wash sink - N595,000.00 • 2 Hospital Screen - N45,500.00 x2 • 1 Office table - N65,000.00 • 2 chairs - N15,000.00 x2 • 2 Hospital bedside locker/rack - N18,500.00 x2 • 2 AED - N494,000.00 x2 • 2 Nebulizer - N45,500.00 x2 • 2 Oxygen Tank (12.5L) - N58,500.00 x2 • 2 Ambu bag - N13,000.00 x2 • 1 Fire Extinguisher - N45,500.00 • 1 refrigerator N97,500.00 • 1 Water Storage tank (GEEPEE) - N156,000.00 • 2 drip stands - N13,000.00 x2 • 2 Digital sphygmomanometer - N32,500.00 x2 • 2 Manual sphygmomanometer - N45,500 • 2 Littman's Stethoscope - N32,500.00 • Glucometer (Accuchek) - N9,800 • 1 desktop Computer HP Pavilion 570- N279,500 • 1 UPS 2KVA- N45,500 • 1 Printer Laserjet Enterprise - N281,000 • 1 Photocopier (sharp AR6020) + stand - N286,000 • 1 Automatic Hand Driers (Brimix) - N14,500 • 1 Automatic soap dispensers - N35,100 • 5 Infrared Thermometer - N12,000 • 1000 Digital Clinical Thermometer - N2,600/unit • 1 Autoclave Sterilizer - N775,000 • 5 Plastic sharp container - N4,500/container <p>Procure 4 dedicated, fully equipped ambulances for transfer of ill travellers - N45,500,000.00</p>			
	<ul style="list-style-type: none"> • procurement of equipment <p>Supplies for Human Holding Area:</p> <p>1152 Aprons - N2,000/unit 240 Disposable gloves - N1,600/pack</p>	FMOH	107,812,80 0	323,438,4 00

	<p>144 Cotton wool - N1,500/roll 48 Antiseptic - N4,600/L 120 Syringes & Needles 2cc - N3,500/pack 120 Syringes & Needles 5cc - N4,600/pack 120 Syringes & Needles 10cc - N5,200/pack 48 face masks - N650/pack 24 N95 Particulate Masks - N9,500/pack 12 Glucometer strip x50 (accucheck) - N6,500 400 Level 3 PPE - N46,787/unit 4 Mackintosh - N3,300/unit 12 Hydrogen peroxide (500ml) - N4,700 24 Methylated Spirit/2L - N2,000 12 Specimen bottles Plain x100 - N5,000/Pack 12 Specimen bottles EDTA x100 - N5,000/Pack 12 Surgical gloves x50 - N5,000/pack 600 Hand sanitisers - N1,200 60 Hand sanitisers refill- N3,200/L 48 Jik - N3,000/carton 120 Disposable couch drapes - N4,500/pack 12 Lancets x 200 - N1300/Pack 12 IV Fluid - N4,600/carton 600 Bactericidal liquid hand wash (500ml) - N1,950 5 Infusion giving set x50 - N4,600 5 IV Cannula x50 - N4,600</p> <p>Procurement of equipment</p> <p>Capital Procurement</p> <ul style="list-style-type: none"> • Build 4 temporary animal holding areas at each designated PoE using fabricated 2-in-1 40 ft. container (including full installation) - N3,120,000/building <p>Equipment for animal quarantine facility:</p> <ul style="list-style-type: none"> • 4 Kennels - N80,000 • 1 examination table - N25,000 • 1 Office table - N65,000.00 • 2 chairs - N15,000.00 x2 • 1 air conditioner (1.5HP) N175,000.00 • 1 inverter (10KVA) N3,250,000.00 • 1 Stabilizer(5KVA) - N30,000.00 • Stabilizer(2KVA for refrigerator) - N15,000.00 • 1 water storage tank (GeePee) - N156,000.00 • 1 Mobile Hand wash sink - N595,000.00 • 1 hand sanitizer dispenser (purel) - N58,500.00 • 1 microscope (Olympus) - N455,000.00 • 1 hematocrit centrifuge - N234,000.00 • 1 Refrigerator - N97,500.00 • 1 desktop Computer HP Pavilion 570- N279,500 • 1 UPS 2KVA- N45,500 • 1 Printer Laserjet Enterprise - N281,000 	FMOH	53,237,600	53,237,600
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	<ul style="list-style-type: none"> • 1 Photocopier (sharp AR6020) + stand - N286,000 • 1 Automatic Hand Driers (Brimix) - N14,500 • 1 Automatic soap dispensers - N35,100 • Trocar and Cannula (small size) - N5,000 • Trocar and Cannula (big size) - N10,000 • 1 Autoclave Sterilizer - N775,000 • 2 Animal Stethoscope - N32,500 <p>4 fabricated and equipped ambulances for the transfer of ill animals to designated referral facilities. The animal ambulances will have 4 detachable kennel - N42,800,000.00</p>			
	<p>Supplies for Animal Holding Area:</p> <ul style="list-style-type: none"> • 1152 Aprons - N2,000/unit • 240 Disposable gloves - N1,600/pack • 144 Cotton wool - N1,500/roll • 48 Antiseptic - N4,600/L • 120 Syringes & Needles 2cc - N3,500/pack • 120 Syringes & Needles 5cc - N4,600/pack • 120 Syringes & Needles 10cc - N5,200/pack • 48 face masks - N650/pack • 24 N95 Particulate Masks - N9,500/pack • 400 Level 3 PPE - N46,787/unit • 4 Mackintosh - N3,300/unit • 12 Hydrogen peroxide (500ml) - N4,700 • 24 Methylated Spirit/2L - N2,000 • 12 Specimen bottles Plain x100 - N5,000/Pack • 12 Specimen bottles EDTA x100 - N5,000/Pack • 12 Surgical gloves x50 - N5,000/pack • 600 Hand sanitisers - N1,200 • 60 Hand sanitisers refill- N3,200/L • 48 Jik - N3,000/carton • 120 Disposable couch drapes - N4,500/pack • 12 IV Fluid - N4,600/carton • 600 Bactericidal liquid hand wash (500ml) - N1,950 • 5 Infusion giving set x50 - N4,600 • 5 IV Cannula x50 - N4,600 • 12 Potassium permanganate - N11,000/L 	FMOH	107,966,40 0	323,899,2 00
	<p>Training and re-training of staff;</p> <p>Engage 2 training facilitators who will conduct biannual 2-day trainings at each of the PoEs.</p> <p>20 staff per PoE will be trained for 2-days on the maintenance of temporary holding areas, quarantine facilities and ambulances 80 per quarter for 5 years. Training will involve 1 coffee break and 1 lunch break</p> <p>A venue would need to be rented</p> <ul style="list-style-type: none"> • Periodic evaluation for sustainability. Engage 2 consultants to conduct a 2-day biannual evaluation visits to each of the PoEs • Conduct biannual evaluation for sustainability. 2 consultants and 1 directorate cadre level staff of PHS will be part of the team. • One (1) meeting to harmonize resource needs Engage 2 consultants who would consult a 1-day resource harmonization meeting 	FMOH	12,544,000	37,632,00 0
		FMOH	1,920,000	5,760,000
		FMOH	4,699,200	14,097,60 0
		FMOH	120,000	120,000

PoE.2: Effective Public Health Response at Points of Entry

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Review the legislation and policies on PoEs and advocate for revision of appropriate legislation to develop PoE capacities specified in Annex 1 of the IHR e.g. Quarantine law	<ul style="list-style-type: none"> • Dir. Port Health Services to initiate (identifying the needs) and send a memo to HMH requesting review of legislation • HMH to constitute a multi-sectoral committee to review legislation and policies on POEs and communicate same to National Council on Health • Committee will consist of 10 key stakeholders. Committee to meet 4 times before recommendation for amendment is sent to the HMH and report is sent to the Ministry of Justice. • Committee meeting will require travel per diem, accommodation and flight tickets for 10 directorate level staff for each of the 4 meetings recommended. • 1 coffee break and 1 lunch break will be required. • A venue will be required for the 4 meetings • Committee identifies relevant stakeholders and sends memoranda for their input Committee meeting has been costed in activity above. • Committee to bring up a draft recommendation for the amendment and send to HMH <ul style="list-style-type: none"> ◦ Committee meeting to review recommended amendment has been costed in activity above. ◦ Stationery ◦ Transport of two selected committee members to visit the office of the HMH to submit the draft recommendation. • Report of Committee to be sent to the ministry of justice • Ministry of justice to liaise with the legal dept. of FMOH to get a final draft • Final draft is sent to the Federal Executive Council by FMOH....FEC approves and transmits to NASS as an executive bill • National Assembly holds first, second reading, public hearing and final reading • Committee meeting to review report to be sent to the MOJ has been costed in activity above. • The budget holder will require funds for advocacy and logistics to facilitate this process. • Law is passed by joint assembly(upper and lower chamber) • Bill is sent to President for assent • Assented bill is gazetted by Federal Ministry of Justice 	FMOH		0	0
Develop public health emergency contingency plan for PoEs which includes coordinated, multi-sectoral response actions for access to treatment, isolation, and diagnostics facilities, quarantine of suspect travelers and animals, infection prevention and control, and international alert and response for ill or suspect travelers on board.	<ul style="list-style-type: none"> • Dir. PHS to convene stakeholders meeting to review the Draft National Public Health Emergency Plan for POEs <ul style="list-style-type: none"> ◦ Hold a 3-day review meeting with 30 - 40 participants from 15 - 18 MDAs. ◦ Meeting will require travel flight tickets, per diems and accommodation for 30 - 40 directorate level staff. ◦ There will also be 1 coffee break and 1 lunch break. ◦ Meeting would require renting a venue • Test and validate the plan <ul style="list-style-type: none"> ◦ Conduct a tabletop exercise to test the plan. Exercise will be a 1-day event with about 30 - 40 participants requiring travel and accommodation for 30 - 40 directorate level staff. ◦ Meeting will require travel flight tickets, per diems and accommodation for 30 - 40 directorate level staff. ◦ There will also be 1 coffee break and 1 lunch break. 	FMOH		10,290,000	10,290,000
		FMOH		6,966,000	6,966,000

	<ul style="list-style-type: none"> ○ Meeting would require renting a venue ● 2 document review sessions <ul style="list-style-type: none"> ○ 1-day review meeting with 30 -40 participants from 15 - 18 MDAs. ○ Meeting will require travel flight tickets, per diems and accommodation for 40 directorate staff. ○ There will also be 1 coffee break and 1 lunch break. ● Final approval by HMH and relevant stakeholders <ul style="list-style-type: none"> ○ Will involve 2-week travel by 2 endorsement facilitators ○ Flight tickets, accommodation and per diems required ● Printing of draft and final copies of the Plan (700- 1000 copies). (700- 1000 copies) @ N1750 with 35% markup per copy. ● Guided by the IHR assessment report and the accompanying action plan determine staff strength and knowledge gaps. Engage 2 consultants who will conduct a 1-day evaluation at each of the PoEs to determine staff strength and knowledge 	FMOH		13,932,000	13,932,000
Build technical capacity for port health service	<ul style="list-style-type: none"> ● Guided by the IHR assessment report and the accompanying action plan determine staff strength and knowledge gaps. <ul style="list-style-type: none"> ○ The consultants would require flight tickets to 3 PoEs outside Abuja ○ Accommodation would be required for states about Abuja ○ Car Hire for 6 days required ○ Per Diem for consultants ● Guided by the IHR assessment report and the accompanying action plan determine staff strength and knowledge gaps. This meeting would require: <ul style="list-style-type: none"> ○ The 2 consultants' local transportation to NAIA ○ Car Hire for 1-day ○ 1-day per diem for consultants ● Develop and implement workforce strategy. Engage 2 consultants who will conduct a 2-week workforce strategy development meeting in Abuja with 5 directorate cadre staff ● Develop and implement workforce strategy. <p>The meeting would require 5 directorate cadre level staff There will also be 1 coffee break and 1 lunch break FMOH will provide an office space for the meeting</p> ● Develop, as part of workforce strategy, a comprehensive 3-5-year capacity building and skills transfer program. Meeting already costed above ● Conduct targeted training of personnel. <ul style="list-style-type: none"> ○ Conduct 3-day trainings for 50 PoE staff bi-annually (200 staff per year). ○ 10 of the 50 participants (per quarter) will require directorate level DSA. ○ Training will require the engagement of 2 training consultants and 3 facilitators would be required. ○ There will also be 1 coffee break and 1 lunch break ○ Training would require a training venue ● Conduct targeted training of personnel. <ul style="list-style-type: none"> ○ Conduct 3-day trainings for 50 PoE staff bi-annually (200 staff per year). ○ 10 of the 50 participants (per quarter) will require directorate level DSA. ○ Training will require the engagement of 2 training consultants and 3 facilitators would be required. ○ There will also be 1 coffee break and 1 lunch break ○ Training would require a training venue ● 8 Support personnel (2 from each PoE) to conduct cascaded trainings. <ul style="list-style-type: none"> ○ 2 staff from each PoE will hold 5 cascade training sessions at their PoEs. ○ Each session will require tea break and stationeries and would involve 20 participants per session. ○ Supervision of the training will involve site visits by 4 directorate cadre staff living in the states where each PoE is located. ○ The 4 directorate cadre staff will require per diems and car hire. 	FMOH		199,800	199,800
		FMOH		34,600	34,600
		FMOH		1,200,000	1,200,000
		FMOH		847,000	847,000
		FMOH		0	0
		FMOH		2,880,000	8,640,000
		FMOH		24,462,000	73,386,000
		FMOH		1,702,000	5,106,000

	<ul style="list-style-type: none"> 8 Support personnel (2 from each PoE) to conduct cascaded trainings. <ul style="list-style-type: none"> 2 staff from each PoE will hold 5 cascade training sessions at their PoEs. Each session will require tea break and stationeries and would involve 20 participants per session. Supervision of the training will involve site visits by 4 directorate cadre staff living in the states where each PoE is located. The 4 directorate cadre staff will require per diems and car hire. 	FMOH		596,000	1,788,000
Integrate public health emergency contingency plan with other public health response plans at the local/intermediate/national levels and other emergency operational plans at PoE, and disseminated to IHR NFP, relevant sectors, and key stakeholders.	<ul style="list-style-type: none"> At stakeholder meeting to review the National PHECP, ensure all existing and relevant plans are integrated with the National PHECP which integrates all PoE-specific PHECPs. Costed in activity 2 above. Establish Protocol for all new Plans relevant to PoEs to integrate measures with the National PHECP. Costed in activity 2 above. 	PHS		0	0
Develop triggers and formal communications processes to communicate information on public health threats or other incidents of concern (e.g., chemical, radiological) to IHR NFP, PoE authorities, relevant multi-sectoral agencies, and stakeholders.	<ul style="list-style-type: none"> Communication protocols and frameworks for triggers to be adopted across sectors to be developed as part of the National PHECP Costed in activity 2 above. 	PHS		0	0
Renovation of Animal Quarantine Facilities and procurement of inspection vehicle for border points	<ul style="list-style-type: none"> Renovation of quarantine facilities in 10 border points Procurement of 10 inspection vehicles for border points Procurement 10 tracker for tracking animals Procurement of 10 laptops 	FMARD		150,000,000	150,000,000
Develop training programme for quarantine officers	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to review and develop training programme for quarantine officers Conduct 5 day training for 50 quarantine officers on core activities of procedures and surveillance strategies 	FMARD		930,000	930,000
		FMARD		0	10,290,000

CE: Chemical Emergencies

CE.1: Mechanisms are established and functioning for detecting and responding to chemical events or emergencies

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthening inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control.	<ul style="list-style-type: none"> Create a 40 members committee on Chemical emergency response (FMOH, NAFDAC, NEMA, ONSA, SGF, FMEnv, NCDC, NESREA, MMSD, FMARD, IPAN, ICCON, partners-WHO, MSF etc.) Inauguration of the Committee consisting 25 people from Abuja and 15 from other states. (20 ministry officials) 			0	0
		FMOH		5,158,000	5,158,000

	<ul style="list-style-type: none"> 1. 2-days biannual meeting of the 40 members Committee in Abuja consisting 25 people from Abuja and 15 people from other states 	FMOH		4,538,000	18,152,000
	<ul style="list-style-type: none"> 1. 2-days biannual meeting of the 40 members Committee in Abuja consisting 20 people from Abuja and 20 people from other states 	FMOH		7,319,200	29,276,800
	<ul style="list-style-type: none"> Engage consultant for a 30 days to develop draft SOPs on chemical risk communication 	FMOH		1,890,000	1,890,000
	<ul style="list-style-type: none"> Meeting of the Committee to make input/in validate the draft SOPs 	FMOH		3,276,000	3,276,000
	<ul style="list-style-type: none"> Finalization of Draft Document by the Consultant (2 days) 			0	0
	<ul style="list-style-type: none"> Production of draft SOPs on chemical risk communication (2000 copies) 	FMOH		4,658,000	4,658,000
Strengthen the capacity to monitor chemicals in air, water, wastewater, soil, sediments, human and Plant specimen and products for purposes of compliance promotion, research, and enforcement by 2020	<ul style="list-style-type: none"> Engage Consultant for 30 days to conduct a baseline assessment on the National preparedness and response to chemical emergencies 	FMOH		28,260,000	28,260,000
	<ul style="list-style-type: none"> Engage 3 Consultants for 25 working days each to develop a strategic plan, SOPs and training manuals with the Chemical Management Programme/ NCDC for risk assessment, (surveillance, laboratory confirmation, event confirmation and notification) and response to chemical events. 	FMOH		4,770,000	4,770,000
	<ul style="list-style-type: none"> Organise a 5-day training of 80 participants at Niger State consisting of 50 participants from FCT and 30 from other states. (Consultants will be facilitators) 	FMOH		24,420,000	97,680,000
	<ul style="list-style-type: none"> Launching of the Strategic Plan, SOPs and Training Manual with 100 people in attendance 	FMOH		8,034,000	8,034,000
	<ul style="list-style-type: none"> 3 days training of toxicologists (34) on analysis, transportation and packaging of specimen from tertiary healthcare facilities in the Country to referral Chemical Laboratory (2 per state including FCT) -Hands-on training on the use of the equipment in Lagos 17 southern states 	FMOH		13,190,800	39,572,400
	<ul style="list-style-type: none"> 3 days training of toxicologists (40) on analysis, transportation and packaging of specimen from tertiary healthcare facilities in the Country to referral Chemical Laboratory (2 per state including FCT) -Hands-on training on the use of the equipment in Abuja for 19 northern states plus FCT 	FMOH		10,187,800	30,563,400
	<ul style="list-style-type: none"> 2-days training of 60 laboratory personnel working in established tertiary healthcare facilities at Abuja (10 in each geopolitical zones) 	FMOH		12,179,800	24,359,600
	<ul style="list-style-type: none"> 3-day Annual review of the risk assessment, surveillance, laboratory confirmation, event confirmation and notification, and response to chemical emergency by the Chemical emergency response team in Abuja for 60 people. 	FMOH		8,624,000	34,496,000
	<ul style="list-style-type: none"> Constitute a technical working group with 15 members (10 from national and 5 experts from states) 	FMOH		20,000	20,000
Develop risk assessment and management framework for pollution and chemical hazard	<ul style="list-style-type: none"> Bi monthly technical working group meeting (15 members) 	FMOH		6,030,000	24,120,000
	<ul style="list-style-type: none"> 40 member stakeholders meeting at Nasarawa (25 from national and 15 from other states) to develop a list of National priority areas of chemical/pollution events in Nigeria for 2-days 	FMOH		8,628,000	8,628,000
	<ul style="list-style-type: none"> Engage a consultant (10 working days) to collate the data being generated from the stakeholders meeting 	FMOH		690,000	690,000
	<ul style="list-style-type: none"> 4-days workshop for TWG to develop the tools for risk assessment and management 	FMOH		2,423,000	2,423,000

	<ul style="list-style-type: none"> ● Conduct risk assessment and mapping of pollution and chemical hazard 5-days, 4 per team 15 states ● Organise a-one day stakeholders workshop to validate information from the stakeholders ● 5-days pilot survey of the tool in the field at Lagos (10 people) 	FMOH		14,145,000	14,145,000
		FMOH		3,276,000	3,276,000
		FMOH		2,441,000	2,441,000

CE.2: Enabling environment is in place for management of chemical events

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish required multi-sector capacity for response to chemical events	<ul style="list-style-type: none"> ● Field monitoring and supervisory visit to Chemical hazard/ polluted sites in states to determine the level of contamination (including safer mining practices) in the states two persons per state for 5-days annually to 36 states and FCT ● 5 event per annum visit to respond to large level of chemical event/contamination for 14 days 4 persons per team ● Use developed training manual to train 4 e workers from each state in the six geopolitical zone on response and treatment for 3days (3 trainers from the National per geopolitical zone) 2019, 2020 ● 5-day capacity training at Jos for 60 environmental compliance officer on environmental monitoring and compliance in mining ● 5-day capacity building training on safer mining program 40 ASM zamfara & Niger ● Engage one Consultant to conduct a baseline assessment for transportation of chemical material, samples and wastes from hospitals and healthcare facilities including import and export (15 working days) and develop a National & international plan for transportation of chemical material, samples and wastes from hospitals and healthcare facilities (15 working days) 2020 ● 1-day technical working group workshop to discuss the National & international plan for transportation of chemical material, samples and wastes from hospitals and healthcare facilities For 40 people 2020 ● Convene1-day Validation workshop of 40 stakeholders to validate the draft document (including the technical working group) 2020 ● Procurement of office equipment (20 Laptops, 10 desktops, 2 Printers, 4 scanners 1 Photocopier, 10 office tables and 10 chairs) 	FMOH FMOH FMOH MMSD MMSD FMOH FMOH FMOH FMOH FMOH		13,875,000 8,162,000 16,378,800 0 0 0 0 0 11,685,000	55,500,000 32,648,000 32,757,600 0 0 1,800,000 2,330,000 2,330,000 11,685,000
Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX	<ul style="list-style-type: none"> ● Develop a self-assessment tool for the inventory of chemical toxicology laboratories in the country (no cost) ● Production of a draft copy of the tool (10 tools per state x 36 states and FCT) 2019 ● Distribute tools to all laboratories that perform toxicology analysis. (10 tools per state x 36 states and FCT) 2019,2020 ● Hire consultant for mapping of toxicology laboratories 2019 	FMOH FMOH FMOH		40,700 40,700 1,490,000	40,700 81,400 1,490,000

	<ul style="list-style-type: none"> Visit to toxicology laboratories to conduct verification and assessment of the toxicology labs quarterly. (4 persons per state x36 states) 	FMOH		95,040,000	95,040,000
Conduct a study tour of chemical toxicology laboratory in a developed country.	<ul style="list-style-type: none"> Identify International toxicology lab to visit (The setting up of a chemical toxicology lab, modern equipment required, SOPs required) (4 persons for 5-days) 	FMOH		0	3,030,000

RE: Radiation Emergencies

RE.1: Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Test the National Nuclear and Radiological Emergency Plan	Assignment of Critical Tasks—Who is to do What during an emergency (Stakeholders) <ul style="list-style-type: none"> •Materials for the Meeting, •Logistics for the Meeting •Duration of the Meeting—2days •Refreshment for the Meeting •Number of Participants for the Meeting—40person •Venue of the Meeting..... 	NNRA		1,046,000	1,046,000
	Scenario Development—By NNRA and NEMA with the support of IAEA and it is going to be a real like scenario <ul style="list-style-type: none"> •Materials for the Meeting, •Logistics for the Meeting •Duration of the Meeting—2days •Refreshment for the Meeting •Number of Participants for the Meeting—10person •Venue of the Meeting—NNRA/NEMA Head office 	NNRA		3,095,000	3,095,000
	Conduct of the Exercise and Evaluation(early).	NEMA		0	0
	Table Top Exercise once every year <ul style="list-style-type: none"> •Materials for the Exercise, •Logistics for the Exercise •Duration of the Exercise—2 days •Refreshment for the Exercise •Number of Participants for the Exercise—50 person •Venue of the Exercise..... 	NEMA		7,174,000	14,348,000
Build capacity for radiation and nuclear detection and response among human health workers	Training of Human Health Workers; National Train the Trainers course on Medical Response to malicious events with the involvement of radioactive material in each of the zones where the designated Six (6) Hospitals are located. <ul style="list-style-type: none"> • Minimum of 25–30 participants at each of the Zones University of Nigeria Teaching Hospital, (UNTH), Enugu- SE, Ahmadu Bello University Teaching University (ABUTH), Zaria–NW, University of Maiduguri Teaching University (UMTH)-NE, University of Port-Harcourt Teaching Hospital(UPTH)—SS, University College Hospital, (UCH), Ibadan-SW and National Hospital Abuja (NHA)-NC • Five (5) nos. National Expert and one from IAEA • Training Venue—at the Zone • Refreshment • Duration of the Training Course—5 days • Training Materials for the Training Course • Logistics 	FMOH		0	64,020,000
	Procurement of decontamination equipment; <ul style="list-style-type: none"> • Decontamination Kits (2 nos. for each designated hospital), Total is $2 \times 6 = 12$ nos. • Personal Contamination Monitor (2 nos. for each designated hospital), Total = $2 \times 6 = 12$ nos • Gamma/beta surface contamination monitor (2 nos for each designated hospital), Total is $2 \times 6 = 12$ nos. 	NNRA		27,187,200	27,187,200

	<ul style="list-style-type: none"> Beta counting monitor(2 nos. For each designated hospital), Total is 2x6= 12 nos Decontamination tents (2 nos.for each designated hospital), Total is 2x6=12 nos. 				
	<p>Procurement of detection equipment;</p> <ul style="list-style-type: none"> Hand held radionuclide Identifier (2 nos. for each designated hospital),Total= 2x6=12 nos. MicroSievertsMeter.2nos. for each designated hospital), Total is 2x6=12 nos. Radeye.2nos.for each designated hospital), Total is 2x6 = 12 nos. Pen Dosimeter.2 nos. for each designated hospital), Total is 2x6 = 12 nos. Pocket Survey meter. 2nos. for each designated hospital),Total is 2x6 = 12 nos Pedestrian Walkthrough Radiation Detectors at each of the Six(6) emergency Unit(designated Hospital) 	NNRA		0	4,071,000
	<p>Procurement of personal protective equipment;</p> <ul style="list-style-type: none"> Coverall-fully encapsulated (Level A) PPE (10nos. for each designated hospital), Total is 10x6= 60 nos. Safety Boot(10 nos. for each designated hospital),Total is 10x6= 60 nos Eye protection equipment (10 nos for each designated hospital), Total is 10x6 = 60 nos. Face and Nasal Mask-Respirator (10 nos. for each designated hospital), Total is10x6= 60nos. Hand gloves (20 nos. for each designated hospital),Total is 20x6 = 120 nos. 	NNRA		13,200,000	52,800,000

RE.2: Enabling environment is in place for management of Radiation Emergencies

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point.	<p>Strengthening the NNRA Emergency Response and Communication Centre to be fully equipped and available 24/7.</p> <ul style="list-style-type: none"> • Communicators- 10 nos • 24/7 telephone lines (fixed-3 nos. And mobile-5nos.) • Fax machines- 2 nos • Dedicated Computer System (3-nos/Desktop and 5-nos Laptops) 	NNRA		1,985,000	1,985,000
	<p>Improve communication and coordination among Stakeholders through regular yearly Meetings</p> <ul style="list-style-type: none"> • Materials for the Meeting, • Logistics for the Meeting • Duration of the Meeting-2-days • Refreshment for the Meeting • Number of Participants for the Meeting–50 person • Venue of the Meeting–Reiz Continental Hotel, Abuja 	NNRA		5,286,000	21,144,000
	Designation of Focal Point for effective information exchange and coordination among key stakeholders and	NNRA		0	0
	Strengthen the NNRA Emergency Response and Communication center.	NNRA		0	12,032,000

Implementation Plans for 2018-2019, by Technical Area

This section describes high-level “strategic actions” selected by technical area groups for implementation during 2018–2019, based on the prioritization process described earlier. The activities included in this section include those with funding identified and those with outstanding resource needs. Each of these high-level actions consists of more detailed activities, which are provided in full in Annex 5. The Annex also indicates which detailed activities have existing resources. The lead MDA is indicated for high-level actions, although multiple MDAs might cooperate on a given activity.

National Legislation, Policy, and Financing

Background and Objective: Working towards ensuring that adequate statutory and administrative provisions for the implementation of IHR are in place by December 2019, including completing pending legislative actions for NCDC Bill.

JEE Indicators

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)

JEE 2017 Capacity Level: 1

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)

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations
2. Advocate for revision of legal instruments and policies to address existing gaps and challenges within the national administrative environment
3. Completion of pending legislative actions (NCDC Bill, 2017; Public Health Bill, 2013) to give key public health institutions (e.g. Nigeria Centers for Disease Control) the legal mandate needed to accomplish national goals
4. National government should articulate specific policies, guidance, and guidelines to States and Local Governorate Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014)
5. Streamline roles and responsibilities in the various Ministries and Agencies that have responsibilities in IHR implementation to minimize duplication within their respective mandates

Short Term Goals (2018–2019):

- Expand public awareness on health accountability
- Increase CSOs involvement in the NCDC Bill and Review of National Health Act (2014)
- Expand States funding of Health
- Implement protocols, processes, regulations and legislation governing Health Financing and Funds

Strengths	Limitations
<ul style="list-style-type: none"> • Present throughout state health institutions • Legal precedent • Expertise, especially in identifying and developing relevant policies framework for health sector gaps that impend compliance with IHR • Budget line exists in several key agencies, but not sufficient funding for health, and not sufficient health funding participation by all the States and LGAs, due to weak political will 	<ul style="list-style-type: none"> • Low coverage of legislative and financing gaps implementation at the States and LGAs • Poor health funding mostly at the State levels • Lack of IHR Focal Persons and Desk Officers in MDAs due to MDAs pooling system • Poor inter-sectoral coordination in information sharing on new policies

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals.	NCDC						
Review of the “National Health Act of 2014” to define roles/responsibilities of key public health institutions across the three tiers of government.	NCDC						
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	NCDC						
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	NCDC						
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014)	NCDC						
Review the existing animal health laws, regulations, and policies	FMARD						
Conduct sensitization workshop for the updated PVS with the animal health officers in DVPCS and state DVS	FMARD						

Important Considerations:

- To avoid delay of the NCDC Bill, increase public relations and CSOs pressure on Senate Committee on health
- Reward States that participant in IHR to increase commitment of state government, and States participation will be sought to sustain all investments made through the implementation of the NAPHS
- Support key meetings as stated in the Costing Budget to facilitate the LP&F process

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Finance
- Federal Ministry of Justice
- National Assembly
- Federal Ministry of Agriculture and Rural Development

IHR Coordination

Background and Objective: Strengthen IHR NFP for effective coordination, communication and advocacy for IHR implementation. There will be establishment of information exchange system for the parties involved in IHR, using modern electronic communications, as well as a biannual stakeholders meeting. With additional funds, further activities to integrate human, animal, and food sectors will be initiated.

JEE Indicators

P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Establish legislative foundation for NCDC as National Focal Point
2. Establishment of a national One Health platform for intersectoral collaboration of outbreak responses that involve the human health, animal health and environmental sectors
3. Develop all hazard standard operational procedures for IHR coordination between IHR NFP and stakeholders

Short Term Goals (2018–2019):

- Establish multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and responsive systems for effective implementation of the IHR (2005)
- Establish a national One Health platform
- Coordinate nationwide resources, including sustainable functioning of a national IHR focal point – a National Centre for IHR (2005) communications which is a key requisite for IHR (2005) implementation – that is accessible at all times

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none">• National IHR focal points responsible designated and accessible 24/7• Multisectoral stakeholders identified across all hazards• SOP exists to guide coordination between the IHR NFP and relevant sectors• Submission of annual report on the status of the IHR implementation	<ul style="list-style-type: none">• Delay in presidential assent to the bill establishing NCDC• Information exchange system for communication between the relevant stakeholders has not been developed• There is an interaction between human and animal sectors but not optimal. Therefore, there is a need to establish one Health multi-sectoral group for IHR.

• Nigeria NFP is a recognized leader in West Africa						
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals. (See National Legislation)	NCDC						
Establish One Health platform at the national level, state level, and LGAs	NCDC						
Develop All-hazards Standard Operating Procedures (SOPs) and guidelines for IHR coordination between IHR NFP and stakeholders	NCDC						
Conduct biannual and annual IHR review meetings	NCDC						
Conduct Performance of Veterinary Services (PVS) gap analysis assessment	FMARD						

Important Considerations:

- Development of a concept note that provides a model for communication between various MDAs under IHR coordination, and identifies stakeholders
- IHR NFP to write the stakeholder agencies and ask them to identify focal persons for IHR coordination
- Convene the technical working group on One Health and meet bi-annually
- IHR-related stakeholders to identify existing SOPs pertinent to IHR coordination and communication (IHR NFP already has SOPs available for coordination, communication between IHR NFP and other stakeholders, and notification); SOPs on the side of the other stakeholders need to be developed

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Finance
- Federal Ministry of Environment

Antimicrobial Resistance

Background and Objective: Antimicrobial Resistance (AMR) has recently gained worldwide recognition as the World health assembly endorsed global action plan to tackle AMR. The AMR Coordinating Body was established at Nigeria Centre for Disease Control by Honourable Minister of Health. The One Health AMR Technical Working Group was formally inaugurated at NCDC to conduct situation analysis and develop a National Action Plan for AMR. The TWG comprises of key members representing animal health, food and animal production, human health and environment sector.

JEE Indicators

- P.3.1 Antimicrobial resistance detection
- P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens
- P.3.3 Health care-associated infection (HCAI) prevention and control programmes
- P.3.4 Antimicrobial stewardship activities

JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Implement the Nigeria NAP on AMR
2. Strengthen the "One Health" components in the Nigeria NAP on AMR
3. Strengthen stewardship on antimicrobial use in humans and food animals

Short Term Goals (2018–2019):

- Report human health AMR data to GLASS before 2019
- Identify priority organisms, set up a national surveillance system for AMR and commence surveillance in animals
- Standardize AST guidelines for AMR surveillance in Nigeria
- Implement protocols, processes, regulations and legislation governing AMR and AMU data reporting
- Conduct a nationwide baseline behavioural study on AMR awareness and use findings to develop and disseminate an AMR communication among One-health stakeholders
- Train human and animal health workers on how to detect antibiotic resistant pathogens, use antibiotics rationally and improve biosecurity in animal production

Strengths	Limitations
<ul style="list-style-type: none"> • Conducted Situation Analysis and developed National Action Plan • Designation of UCH, Ibadan as AMR National Reference Laboratory for Human Health • Enrollment of the AMR National Reference Laboratory for Human Health and 2 human health surveillance sites to GLASS and reporting of data nationally to NCDC and GLASS • Procurement of EQA for AMR National Reference Laboratory and 2 human health AMR surveillance sites • Development of AMR surveillance guidelines for human health • Revised Standard Treatment Guidelines and Drug Policy for human health to include AMR • NCDC coordinated the quarterly meeting of the National One-health AMR TWG meeting and commenced process for inaugurating the National AMR Steering Committee • NVRI designated as AMR National Reference Lab and has an antimicrobial working group constituted to coordinate AMR work • Reporting AMU to the OIE Global database using option one • AMR issues have been captured in the amended Animal Disease Control Act in the National Assembly • Recently revised Veterinary Formulary now available for use in the country • National Animal Disease Information and Surveillance system in place and can report to AU-IBAR on the ARIS 2 platform • National Residue Monitoring Program for aquaculture in Nigeria and diagnosis is carried out at Department of Veterinary Public Health and Preventive Medicine, University of Ibadan 	<ul style="list-style-type: none"> • Non-availability of dedicated funding for AMR implementation and control activities in one-health sector • Paucity of personnel for AMU/AMR Surveillance in One-health sector and available personnel requires retraining on AMR/AMU Surveillance • Absence of AMR/AMU Surveillance protocols and guidelines in the One-health sector • Poor public awareness and weak coordination of AMR awareness activities in One-health sector • Lack of National data on AMR that can be easily accessed • No existing channel for information sharing among stakeholders • Lack of appropriate data capture, equipment and audit • Absence of studies on economic impact of AMR in Nigeria and poor coordination of research on antibiotic use • Paucity of infrastructure for AMR tracking and audit

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Establish a national steering committee to advise the Honourable Ministers	NCDC						
Convene regular meeting with all Departments/parastatals to discuss the report, the quarterly AMR activity mapping meeting and areas of integration between partners and agencies	NCDC						
Strengthen the “One Health” components in the Nigeria National Action Plan on AMR.	FMARD						
Establish and implement a Monitoring & Evaluation framework for AMR surveillance	NCDC						
Create a database for AMR and AMU Surveillance from human health facilities, farms, feed mills, vet clinics and environment	FMARD NCDC						
Establish and integrate national surveillance system on AMR across human, animal and environment	NCDC						
Conduct AMR diagnostic capacity assessment of laboratories to selected sentinel sites for reporting into GLASS across human, animal and environmental health institutions and designate AMR National Reference Laboratory for human and animal health	NCDC						
Establish an AMR Reference Laboratory and network system for animal and environmental health laboratories	FMARD						
Strengthen HCAI surveillance and prevention programs	NCDC						
Assess infection prevention and control facilities and advocate for resources to support IPC nationally and in all healthcare facilities	NCDC						
Introduce IPC programme in veterinary practice at the veterinary hospitals/clinics and biosecurity at farm level in aquatic and terrestrial animal husbandry.	FMARD						
Improve hand hygiene, food hygiene and waste disposal across all sectors	MoEnv						
Develop and Implement antimicrobial stewardship programs across human, animal and environmental health	NCDC						
Promote optimal prescribing and dispensing of antimicrobials in humans and animals and support participation of tertiary health facilities in Nigeria in AMS point prevalence survey	FMARD						
Conduct Assessment (Survey) of current practices of AMU in humans and animals	NCDC						
One-day advocacy visit to policy makers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation)	NCDC						
Conduct a nationwide baseline behavioural study on AMR awareness, KAPP. Use baseline findings to develop and disseminate AMR SBCC materials in English, Pidgin Hausa, Igbo and Yoruba	NCDC						
Develop and print risk communication tools for AMR awareness in Humans and animals	NCDC						
Organise seminars and trainings for relevant stakeholders such as media, PPMV, animal health inspectors, clinical veterinarians, livestock producers, aquaculture farmers, toll milers, feed manufacturers, etc.	NCDC						

Incorporate AMR activities into existing WASH programs within NPHCDA and Family health and other agencies	NCDC						
Conduct nationwide active surveillance for AMR in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops	FMARD						

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural development
- Federal Ministry of Environment
- Professional societies
- Regulatory bodies

Zoonotic Diseases

Background and Objective: The increase and expansion in the human population globally has significantly impacted on the interconnection of people, animals, and the environment by increasing the contact between humans and wild animal habitats. This ultimately increases the risk of exposure to new pathogens. Most of emerging diseases in human are zoonotic. It is likely that zoonotic diseases will continue to be threats to public health especially in areas where human population is dense, and bio-diversity is high, as in many parts of Nigeria. To detect, prevent and response timely, improvement in animal disease surveillance system will require developing the list of national priority zoonotic diseases, building the technical capacities of animal health workforce in surveillance and laboratory diagnosis with a multi-sectoral approach to coordinate the response of outbreaks of zoonotic diseases.

JEE Indicators

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens

JEE 2017 Capacity Level: 2

P.4.2 Veterinary or animal health workforce

JEE 2017 Capacity Level: 3

P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Enhance collaboration between Ministry of Health and Ministry of Agriculture at the national, state and district levels
2. Strengthen linkage between public health and animal health laboratories
3. Enhance surveillance of zoonotic diseases (including consensus building meetings of appropriate stakeholders to identify the top priority zoonotic diseases to include in zoonotic disease surveillance system)

Short Term Goals (2018–2019):

- Surveillance system in place for priority zoonotic diseases/pathogens
- Increase animal health workforce capacity at national level and at least 50% of states
- Establish a multi-sectorial mechanism for coordinated response to outbreaks of zoonotic diseases by human, and animal sectors at national and state levels

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> The willingness of major stakeholders to collaborate in line with the 'One Health' approach Existing collaboration between human and animal sectors on control of certain zoonotic diseases Skilled professionals Public health training of veterinarians by FELTP, McArthur Foundation and Veterinary Council of Nigeria A policy document and guidelines for response to some key zoonosis exist 	<ul style="list-style-type: none"> Poor intersectoral mechanism in place for coordinated response to zoonotic diseases by human and animal health sectors in the national and states Undeveloped national surveillance plan for priority zoonotic diseases A robust surveillance system for the highest priority zoonotic diseases in animals is lacking in the Ministry of Agriculture Inadequate technical capacity among stakeholders Lack of a dedicated budget line for One Health activities Low level of public awareness, resulting in reluctance to accept necessary behavioural or cultural changes that will improve health

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop integrated zoonotic disease surveillance system	FMARD						
Develop risk mapping for four priority zoonotic diseases using one health approach	FMARD						
Advocate for the recruitment and deployment of animal health epidemiologists into the Public Health sector at the State and national levels	FMARD						
Strengthen of laboratory capacity for detection for priority zoonotic diseases/pathogens	FMARD						
Strengthening of technical capacity of animal health workforce (zoonotic disease control, communications, RDTs, etc)	FMARD						
Build technical capacity for zoonotic disease of Disease Surveillance and Notification Officers and Animal Surveillance Officers at LGA level	FMARD						
Update list of top priority zoonotic diseases through a "One Health" deliberation process (<i>last reviewed 2017</i>)	FMARD						

What will it take to do this:

- Increased collaboration and cooperation between key stakeholders through high level advocacy and political commitment
- The establishment of a One Health Technical working group
- Creation of a budget line for control of priority zoonotic diseases
- Incorporating or harmonising the funding and implementation of activities into the on-going efforts of the various ministries and parastatal.
- Improved information sharing between human and animal health

Key Participating Agencies:

- Nigeria Centre for Disease Control (Co-Lead)
- Federal Ministry of Agriculture and Rural Development (Co-Lead)
- Federal Ministry of Health
- Federal Ministry of Environment

Food Safety

Background and Objective: The National Policy on Food Safety & its Implementation Strategy (NPFSIS) was developed in 2014 to modernise the food safety system and structure in the country, reduce the incidence of foodborne diseases, and improve economic productivity. The National Food Safety Management Committee (NFSMC) was inaugurated to coordinate all food safety related programs in the country. Further strengthening these mechanisms will enhance food safety, detection, and response efforts.

JEE Indicators

P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease
2. Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response
3. Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels

Short Term Goals (2018–2019):

- Establish a functional Foodborne Illness Detection and Response Collaborative team by March 2019
- Development and validation of National Drug Residue Monitoring Plan by end of June 2020
- Enhance the NADIS through the development and validation of checklists, SOPs and guidelines to ensure proper surveillance of foodborne diseases of animal origin by 2020
- Development of a fully functional interactive food safety website by December 2019
- Begin a nationwide assessment of Laboratory capacity in detection of foodborne diseases by September 2019

Strengths	Limitations
<ul style="list-style-type: none">• Presence of a coordinating National Food Safety Management Committee• Presence of a National Food Safety & Quality Bill at the National Assembly	<ul style="list-style-type: none">• Poor/weak coordination, collaboration and communication between MDAs involved with food safety

<ul style="list-style-type: none"> Presence of INFOSAN Emergency Contact Point and Focal Points across MDAs Investigation of outbreaks are usually timely Presence of a regional diagnostic vet laboratory (NVRI) 	<ul style="list-style-type: none"> Inadequate technical capacity among food safety regulators, food handlers, and laboratory technicians on foodborne investigations Ineffective risk management capacity for food safety Lack of a multisectoral investigation and response to food safety emergencies Non-allocation or poor allocation of funds to existing budget lines in key MDAs
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease	FMARD FMOH						
Develop a food safety website	FMOH						
Conduct a national assessment of food safety laboratory capacity	FMOH						
Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response	FMOH FMARD						

What will it take to do this:

- Regular meetings of NFSMC to better coordinate food safety system and structure effectively and adequately
- Improving the effectiveness of National Animal Disease Information System (NADIS) as well as a fully established and functional Foodborne Illness Detection and Response Collaborative team
- Improved capacity of foodborne disease detection through the development of relevant SOPs for sample collection and analysis
- Support of line MDAs and in having a harmonised, effective and efficient food safety system and structure
- Support for development partners and the Organised Private Sector (OPS) will be essential to improving the Food Safety System
- The commitment of State Governments will be sought to sustain all investments made through the implementation of the NAPHS

Key Participating Agencies:

1. Federal Ministry of Health (Lead)

2. Federal Ministry of Agriculture and Rural development
3. Federal Ministry of Environment
4. Federal Ministry of Science & Technology
5. National Agency for Food and Drug Administration and Control – (INFOSAN FP)
6. Nigeria Centre for Disease Control
7. Standards Organisation of Nigeria

Biosafety and Biosecurity

Background and Objective: With the frequent occurrence of insurgency and terrorism all around which might prompt the use of biological agents put public health systems in check to develop robust surveillance systems and disease notification systems for early detection reducing mortality and morbidity. Biosafety refers to the implementation of laboratory practices and procedures; specific construction features of laboratory facilities, safety equipment, and appropriate occupational health programs when working with potentially infectious microorganisms and has other biological hazards. Effective biosecurity measures require the cooperation of a wide range of experts such as scientists, policy makers, security engineers and law enforcement.

JEE Indicators

P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities

JEE 2017 Capacity Level: 1

P.6.2 Biosafety and biosecurity training and practices

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Biosecurity Legislation needs to be enacted
2. Development of a multi-sectoral, national coordination, oversight and enforcement mechanism for response to and control of dangerous pathogens
3. Adequate funding and training be provided for Biosafety and Biosecurity programs
4. Perform an audit of institutions and locations with dangerous pathogens; and toxin control in order to develop a plan for consolidation

Short Term Goals (2018–2019):

- Transmit a draft legislative bill on laboratory biosafety and biosecurity, including sustainable funding mechanisms before the end of 2019
- Initiate a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens
- Perform an audit of institutions and locations with dangerous pathogens and toxin control in order to develop a plan for consolidation as well as gaps in current biosafety and biosecurity training

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> • Availability of biosafety regulation and regulatory authority • Established biosafety policies for the human and agricultural sectors • Institutional biosafety officers and manuals in some of the facilities • Availability of Biosafety Level-2 laboratories in the country 	<ul style="list-style-type: none"> • Lack of biosecurity policies and programmes with dedicated funding • Absence of emergency response plan and monitoring system for biosafety and biosecurity involving dangerous pathogens • Consolidation of institutions and locations with dangerous pathogens and toxin control with training support to reduce the risk of theft or release of dangerous pathogens. • Sub-optimal institutional biosecurity programmes and national coordination of biosecurity activities • Depleted storage and inadequate logistic mechanisms for biosafety and biosecurity

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop multisectoral legislation and regulations on biosafety and biosecurity, including sustainable funding mechanisms	ONSA						
Establish a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens	ONSA						

Important Considerations:

- Relevant agencies should synergize their activities to avoid overlapping functions; responsibilities of collaborating agencies should be clarified
- Relevant agencies should input funding component of activities into their agencies annual budget to fund the above activities as well as capacity development of their workforce in order to attain global standard for disease monitoring and safety

Key Participating Agencies:

- Ministry of Defence (Lead)
- Federal Ministry of Science and Technology
- National Biotechnology Development Agency (Co-Lead)
- Federal Ministry of Health

- Nigeria Centre for Disease Control
- Office of the National Security Adviser
- National Biosafety and Management Agency

Immunizations

Background: The Expanded Programme on Immunisation (EPI) has been operational in Nigeria since 1979 and has incrementally increased the number of vaccines on the routine schedule. The programme is responsible for the purchase, distribution and retrieval of vaccines across the country, in addition to oversight of the routine immunization programme and supplemental immunization activities and reactive vaccination campaigns. Immunizations, including outbreak response immunizations, are overseen by the National Primary Health Care Development Agency (NPHCDA), whereas surveillance for vaccine-preventable diseases is overseen by the Nigeria Centre for Disease Control (NCDC).

The immunizations programme differs somewhat in implementation when compared to other IHR technical areas. A fully costed strategic plan, the Nigeria Strategy on Immunization and Primary Health Care Systems Strengthening (NSIPSS) has been developed, and its activities and objectives have been carried forward directly in the NAPHS. Efforts to strengthen surveillance and laboratory confirmation of vaccine-preventable diseases including measles, rubella, and yellow fever are captured under the surveillance and laboratory plans.

NSIPPS 2018–2019 Objectives:

1. Reduce Measles incidence to 5 cases per million by reaching at least 82% RI and 95% SIA National Coverage by 2023
2. Reduce Measles incidence to less than 1 case per million by reaching at least 91% RI and 95% SIA National Coverage by 2028
3. Ensure vaccines/commodities are transported in good quality to zonal stores, states, and ultimately healthcare facilities nationwide on time the right quantity
4. Distribution and transport management (national to states)
5. Put in place mechanism for the procurement of the vaccines
6. Improve the availability and functionality of cold chain at LGA and ward levels

JEE Indicators

- P.7.1 Vaccine coverage (measles) as part of national programme
P.7.2 National vaccine access and delivery

JEE 2017 Capacity Level: 3

JEE 2017 Capacity Level: 4

JEE Priority Actions

1. Dedicate resources to information management system for vaccine data, in order, to ultimately improve data quality (completeness, timeliness and reliability of administrative data)
2. Develop strategies to improve national coverage, especially focusing on historically low coverage areas
3. Include vaccines for zoonotic disease, particularly in special populations such as health care workers and veterinarians

Nigeria Strengths and Limitations

Strengths	Limitations
<ul style="list-style-type: none"> • Use of the primary healthcare structure to deliver vaccines to every part of the country including outreach services, mass/nationwide vaccination campaigns and outbreak response • A laid down structure through the Interagency Coordinating Committee (ICC) and the respective technical working groups to coordinate the activities off all stakeholders working in the Immunization space • Dedicated RI (NERRIC) and SIAs (NMTCC) technical committees to address immunization coverages and gaps • Budget line present in key agencies and National Health Act • Expertise, especially in polio eradication system 	<ul style="list-style-type: none"> • Low immunization coverage especially in hard to reach and security compromised areas • Vaccine hesitancy/non-compliance. • Poor attitude and inadequate capacity of health care workers • Poor implementation of Primary Health Care Under One Roof (PHCUOR) strategy • Inadequate cold chain capacity at all (national, zonal, state LGA and ward) levels

NSIPSS Strategic Actions for 2018–2028

1. Strengthen immunization data systems and build capacity of health care workers at all levels to use and interpret analytics from NAVISION software platform to address stock challenges
2. Increase demand for immunization using demand creation strategies
3. Improve service delivery at PHC and outreach sites
4. Conduct follow-up Measles Vaccination campaign targeting children 9–59 months in accordance with the National Measles Elimination strategy (2019–2028)
5. Dedicate resources to information management system for vaccine data to ultimately improve data quality (completeness, timeliness and reliability)
6. Distribute quarterly allocation of vaccines and devices to zones and states (for routine immunization)
7. Improve forecasting and demand planning for vaccines
8. Improve Cold chain management and temperature monitoring and control, including curative maintenance of cold rooms in NCSC and zonal stores
9. Develop a harmonized, multi-sectoral, interconnected, surveillance system.

Important Considerations:

- Improve collaboration between government, partners, and private sector actors to harmonize efforts and reduce duplication of activities
- Increase advocacy and resource mobilization efforts to get sustainable funding for activities
- Establish and Implement a strong monitoring, evaluation and accountability framework to track progress of activities
- Encourage the use of PHCUOR guidelines to improve planning and delivery for health services

Key Participating Ministries, Department and Agencies:

- Federal Ministry of Health
- Nigeria Center for Disease Control
- National Primary Health Care Development Agency (Lead)

National Laboratory System

Background: The laboratory was introduced into the Nigeria's Integrated Disease Surveillance and Response (IDSR) Strategy in 2001 as a veritable component to support care and management of cases as well as mitigate impact through appropriate screening, identification and confirmation of agents of diseases of public health importance as well as monitor disease trends, changes in pathogen profile and evaluate progress of intervention among others. There is increasing need of the public health laboratories to fulfil its other responsibilities of protecting the health of the nation through ensuring food and environmental safety as well as collaborating and communicating with the animal health component to prevent/reduce zoonotic transmission through appropriate diagnosis.

Expanding laboratory capacity is important for an effective response network which, in turn, enhances the efficiency of operation and geopolitical zone coverage. Prompt diagnosis of specimens is predicated not only on meeting up with the turn-around-time (TAT) but also ensuring that quality specimens are collected, promptly transported under biosafety and biosecurity conditions and tested using competent hands and appropriate procedures that guarantee accuracy and reproducibility. These qualities form the basis of the operation of the National Reference Laboratory under the NCDC while also striving to integrate other components (animal health, environment health and food safety) that make up one health response to achieve total health and well-being of the population.

JEE Indicators

- D.1.1 Laboratory testing for detection of priority diseases
- D.1.2 Specimen referral and transport system
- D.1.3 Effective modern point-of-care and laboratory-based diagnostics
- D.1.4 Laboratory quality system

JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Enhance the laboratory infrastructure and resources available to sustain an integrated national laboratory network
2. Implement Strengthening Laboratory Management Toward Accreditation (SLMTA) Program for the national laboratory network with a focus on biosafety, biosecurity and quality assurance
3. Develop a robust sample and specimen transportation system which ensures an effective cold chain
4. To adopt basic laboratory information sharing system among the relevant stakeholders

Short Term Goals (2018–2019):

- Expand/maintain lab capacity at the national reference lab network to be able to conduct 6 of 10 WHO core tests, activate testing on food safety and strengthen diagnostic capacity of veterinary laboratory
- Institute an effective system for collection, packaging and transport of biological specimens
- Adopt and implement one Laboratory Information sharing system by all laboratories

Strengths	Limitations
<ul style="list-style-type: none"> • Existence of three-tiered laboratory structure • Availability of specialized laboratories across the country with capability to render public health care services • Existence of a National Reference Laboratory positioned to coordinate National Public Health Laboratory response • Existence of a national network of laboratories and collaborating centers with capacity for horizontal and vertical expansion • Existence of laboratories for diagnosis of animal specimens (e.g. National Veterinary Research Institute, Vom) with capacity and readiness for collaboration • Ready availability of human resources for laboratory with basic laboratory knowledge and improvable skill • Collaboration and support from national and international partners to promote good laboratory practices, accreditation, quality management and training 	<ul style="list-style-type: none"> • Inadequate laboratory participation in the referral system embodied in the current laboratory network • Anomalous supply of laboratory reagents and consumables often leading to stock-outs • Weak national public health laboratory information management system • Ineffective system for collection, packaging and transport of biological specimens • Lack of skill in modern diagnostic technique among laboratory specialists in some facilities • Few laboratory facilities participating in External Quality Assurance programmes • Weak collaboration on food safety issues and on zoonotic disease diagnosis and information sharing with the animal sector • The non-accreditation of existing public health laboratories

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Identify public health Laboratories that constitute the network and create database	NCDC						
Develop plan with FMOH, FMARD, and other stakeholders for developing the capacity needed to meet diagnostic and confirmatory requirements for priority diseases in human and animal health laboratories	NCDC						
Develop strategy to set up a central Repository and coordinated dissemination/distribution of core reagents and consumables of the priority diseases to the laboratory network to improve existing supply chain	NCDC						
Adopt and implement one Laboratory Information sharing system by all laboratories	NCDC						

Establish a comprehensive, integrated National policy, guidelines, and SOPs on sample management for human, animal, food, and environmental	NCDC						
Establish a specimen transportation system at all levels	NCDC						
Build sample management capacity for public health network laboratories for priority diseases	NCDC						
Establish monitoring and evaluation mechanism for collection, packaging, and transport of specimens	NCDC						
Provide refresher training for network labs to develop technical competency	NCDC						
Implement SLMTA in all labs in the public health laboratory network	NCDC						
Register NCDC & VTH labs in the MLSCN EQA program.	FMARD						
Laboratory infrastructure upgrades and procurement	FMARD						
Establish a mechanism for biological specimen transportation and disposal for VTH and NVRI	FMARD						

Important Considerations:

- The recognition of the National Reference Laboratory as the coordinating arm of all national public health laboratories and collaborating centers by the laboratory stakeholders
- A strong understanding and collaboration between human, animal and environmental laboratories
- Pooling of resources of NCDC and partners together to achieve holistic strategy at specimen transportation
- Work with regulatory agencies to provide framework for the accreditation of laboratories within the network
- Collaboration with EQA-providing institutions to launch EQA in the network

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Health (Co-Lead)
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Environment
- Medical Laboratory Science Council of Nigeria
- Nigerian Institute for Medical Research
- National Veterinary Research Institute
- National Institute for Pharmaceutical Research
- State Ministries of Health
- All Local Government Areas

Surveillance and Reporting (Combined Technical Areas)

Background and Objective: The Integrated Disease Surveillance and Response (IDSR) strategy was adopted in 2006 in Nigeria. The system was key in Nigeria's control of the 2014 Ebola outbreak while Animal Disease Information and Surveillance (NADIS) is a strategy adopted in 2006 for the surveillance/reporting of major trans-boundary animal diseases and zoonosis through the Animal Resources Information System-ARIS platform. It was the main system used in the eradication of Rinderpest 2005 and the control of highly pathogenic avian influenza outbreak in 2010. The NAPHS provides an opportunity to plan for surveillance system strengthening, including integration and expansion of animal and human health surveillance systems and strengthening IDSR implementation.

JEE Indicators

- D.1.1 Indicator- and event-based surveillance systems
- D.2.2 Interoperable, interconnected, electronic real-time reporting system
- D.2.3 Integration and analysis of surveillance data
- D.2.4 Syndromic surveillance systems
- D.3.1 System for efficient reporting to FAO, OIE and WHO
- D.3.2 Reporting network and protocols in country

JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Systematically build capacity for surveillance at all levels (HF, LGA, state and national), expanding surveillance to all health facilities including private facilities for both human and animal health
2. Develop real-time surveillance capability for animal health and promote a ONE-Health approach.
3. Establish linkage between the surveillance and public health laboratory systems
4. Establish an electronic reporting system that is inter-operable and integrated to other systems and also linked to DHIS2
5. Enhance monitoring and evaluation capacity for IDSR, including supportive supervision and data quality assessment
6. Strengthen and improve consistency, completeness (including from private sector) and timeliness in reporting from the local and state levels
7. Establish a framework for multi sectoral coordination in reporting and communication that will enable information sharing
8. Establishment of central data base that integrates data from all sectors for all 41 priority diseases under IDSR
9. Instituting monitoring and evaluation of reporting against set IDSR and IHR indicators

Short Term Goals (2018–2019):

- Expand existing human and animal health surveillance systems to 80% of private health facilities/private Vet. Clinics and 80% of public health facilities/Vet. Tech. Hospitals by 2021 (100% States, 80% LGAs, 80% health facilities)
- Implement human and animal health surveillance system at health facility level in 100% of states, 80% of LGAs, and 80% of public health facilities by 2021
- Link human health and animal health surveillance systems to DHIS 2 by December 2020
- Enhance the performance of the IDSR/ARIS and technical capacity of the workforce by 2021
- Implement protocols, processes, regulations and legislation governing reporting

Strengths	Limitations
<ul style="list-style-type: none"> • IDSR is present throughout state health institutions while NADIS has 37 State Field Epidemiology officers and more than 600 surveillance points nationwide • Legal precedent • Reports are received electronically on weekly and monthly • Expertise, especially in Polio eradication system • Budget line exists in several key agencies • Central diagnostic lab for the key agencies 	<ul style="list-style-type: none"> • Low coverage for surveillance especially in private health care facilities, private Veterinary clinics / Veterinary Teaching Hospitals • Inadequate technical capacity among health care workers, • Lack of interoperability of surveillance systems • Poor inter-sectoral coordination using one health approach • Lack of integration of the wildlife surveillance into ARIS

Important Considerations:

- To avoid duplication and ensure synergy of efforts, the funding and implementation of these activities will be harmonized with on-going efforts
- Support from all partners will be harmonized to provide synergy and where necessary, aspects of the plan will be implemented using private and non-governmental organization with expertise in the areas
- Where data is unavailable, well-designed assessments will be conducted to generate data to establish a base-line to guide implementation
- To enable expansion of the surveillance system to private facilities, linkages with other agencies and related organizations will be used to ensure that reporting is a condition to government support for infection prevention and control, and health insurance funding, among others
- The commitment of state government will be sought to sustain all investments made through the implementation of the NAPHS

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Assess the baseline proportion of reporting public and private health facilities in all states	NCDC						
Expand the number of reporting health facilities	NCDC FMARD FMoH						
Build capacity for surveillance among human and animal health workers in both public and private sectors	NCDC FMARD						
Integrate priority zoonotic diseases into routine human and animal surveillance	FMARD						
Adapt the WHO AFRO IDSR guidelines as soon as concluded	NCDC						
Enhance monitoring and evaluation capacity for IDSR	NCDC						
Develop a system for routine simulation exercise (3) annually for rare diseases to build capacity for case detection and reporting	NCDC						
Enhance utilization of ARIS Platform in all states	FMARD						
Capacity building of notification officers from the relevant sector on IHR	FMARD						
Scale up and training of Animal Disease Surveillance Agents (DSA) from 591 to 1,000	FMARD						
Rehabilitate the state veterinary public health/epidemiology offices	FMARD						
Conduct gap analysis of the existing surveillance system for Transboundary Animal Diseases and zoonotic diseases	FMARD						
Procurement of logistics, including vehicles, for human and animal surveillance	FMARD NCDC						
Conduct step-down training on disease reporting for private veterinary clinics and develop a database of all public and private veterinary clinics	FMARD						
Review and develop animal disease reporting tools for animal health clinics	FMARD						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Agriculture and Rural Development (Co-Lead)
- State Ministries of Agriculture and Rural Development
- Federal Ministry of Health
- State Ministries of Health

Workforce Development

Background and Objective: The Nigeria Field Epidemiology and Laboratory Training Programme is a two-year advanced training established in 2008. It has trained more than 400 field epidemiologists spread across the country. They provide a robust workforce for various public health programs in the country and were a useful resource utilized to control the 2014 Ebola outbreak. A shorter training for frontline health workers have been established for more than two years training frontline workers at local government levels. The frontline training has recently been reviewed to capture as many aspects of the health workers training requirements as possible and was harmonized into the Integrated Training for Surveillance Officers in Nigeria (ITSON). The need for a comprehensive workforce strategy that ensure continuous training and even distribution of healthcare workers as well as establishing an incentivised career path for public health workforce is an urgent need identified by the recently concluded joint external evaluation (JEE).

JEE Indicators

- D.4.1 Human resources available to implement IHR core capacity requirements
- D.4.2 FETP or other applied epidemiology training programme in place
- D.4.3 Workforce strategy

JEE 2017 Capacity Level: 3

JEE 2017 Capacity Level: 4

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Develop a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce in order to reach the goal of one trained field epidemiologist (or equivalent) per 200,000 population
2. Launch the Intermediate FETP and fully implement Frontline FETP so that there is an ‘appropriately’ trained field epidemiologist in every Local Government Area
3. Define career path for specialized public health expertise within the Nigerian civil service structure

Short Term Goals (2018–2019):

- Sustain on-going Advanced and Frontline FETPs
- Commence the development of workforce strategy
- Commence the development of career path for specialized public health workforce

Strengths	Limitations
<ul style="list-style-type: none"> Strong NFELTP programme with ability to contribute to rapid control of outbreaks Frontline FETP providing trained personnel at the Local Government Area (LGA) level Strong NFELTP alumni to support training at various levels within and outside the country Strong advanced public health fellowship programme for senior physicians NFETLP residents working in all 36 States and the Federal Capital Territory National workforce strategy exists for most health care cadres, including laboratory scientists, technicians, physicians, and nurses 	<ul style="list-style-type: none"> Limited worker incentive to retain trained personnel Limited long-term career development pathways for public health professionals Geographic distribution of workers within the country may not be adequate to address workforce shortages Lack of an intermediate-level FETP to address other cadre of healthcare workers

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop career path for specialized public health expertise within the Nigerian civil service structure	NCDC						
Increase national workforce of epidemiologists through sustainment of the Advanced FETP	NCDC						
Develop Integrated Training for Surveillance Officers in Nigeria (ITSON) curriculum for frontline public health workforce	NCDC						
Rollout ITSON training package for LGA DSNOs in all states	NCDC						
Establish Intermediate FETP in Nigeria or through an agreement with another country	NCDC						
Develop and implement a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce	NCDC						
Define public health workforce roles, and map human resources at state and LGA levels	NCDC						
Conduct advocacy to employ additional veterinarians at the state level	FMARD						
Develop an in-service training program for staff of Department of Veterinary and Pest Control Services (DVPCS) and leadership training of veterinary officers in managerial cadre	FMARD						
Support <i>ad hoc</i> Animal Health Officer in states with inadequate human resources	FMARD						
Support animal health sector coordination	FMARD						

Important Considerations:

- Establish institutionalization and sustainability of the training programmes for epidemiologists, specifically by transitioning the training programs to the NCDC based on global standard and establishing a budget line for the training and establishing a training unit within the NCDC
- Establishment of an intermediate program will cater for other healthcare professionals ineligible for advanced FETP, this will address their training needs, ensure wider coverage and better distribution of the workforce, and enable the country to achieve the set target of an epidemiologist per 200,000 population
- Harmonize all frontline epidemiology trainings to address the primary competencies required of the various levels of the trainings through curriculum review and emerging global trends
- Develop a comprehensive workforce strategy and career path for specialized public health workforce by engaging stakeholders by use of seasoned career path technocrats to ensure buy-in for developed policies

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Nigeria Field Epidemiology and Laboratory Training Programme
- Federal Ministry of Agriculture and Rural development
- Federal Ministry of Health
- Ahmadu Bello University, Zaria
- University of Ibadan
- State and Local Governments

Preparedness

Background and Objective: Preparedness involves the development and maintenance of national, intermediate and community/primary response level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards, the identification and maintenance of available resources, including national stockpiles and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency. The plan will ensure that resource deployment is based on thorough risk assessment and hazard mapping so that surge personnel are drawn from diverse sectors, adequately trained, and work towards a shared evidence-based all-hazards preparedness plan. It will help in ensuring the availability of health commodities.

JEE Indicators

- R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented
R.1.2 Priority public health risks and resources are mapped and utilized

JEE 2017 Capacity Level: 1

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Develop an all-hazards multi-sectoral PH emergency preparedness plan, linking existing agency-specific and disease-specific plans
2. Where indicated NCDC should lead in preparation of memoranda of understanding between response agencies in different sectors
3. Strengthen the technical and administrative capabilities of NCDC and Nigeria Emergency Management Agency to develop national vulnerability maps that involve military, media, wildlife and animal health sectors to address zoonotic and emerging infections
4. Pre-position equipment and other resources to strategic locations consistent with vulnerability maps (e.g. remote hard-to-access areas)

Short Term Goals (2018–2019):

- Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan November 2018
- Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP) by February 2019
- Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas) meeting annually need by 70%.

Strengths	Limitations
<ul style="list-style-type: none"> Surge capacity (Nigeria Field Epidemiology and Laboratory Training Program residents) has been identified and effectively utilized during recent public health crises Strategic stockpiles have been identified and disseminated to the intermediate health tiers Information gathered from IDSR – based surveillance has been used to determine priorities for resource stockpiling and distribution Expertise, especially in State SMOH Budget line exists in several key agencies like NEMA, SEMA, SMOH and NCDC 	<ul style="list-style-type: none"> Fragmented planning - several draft documents and plans (either event-based or administrative), without clear coordination or linkage between sectors Public health concerns are not adequately addressed in existing national emergency and disaster response plans There are no memoranda or agreements between agencies for coordination and collaboration in response to public health emergencies Inadequate technical capacity among health care workers Poor inter-sectoral coordination using one health approach

Key Activities for Implementation	MDA	2018	2019				
		Q3	Q4	Q1	Q2	Q3	Q4
Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP), linking existing agency-specific and disease-specific plans.	NCDC						
Develop memoranda of understanding with relevant MDAs (Preparedness and response)	NCDC						
Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan	NCDC						
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	NCDC						
Develop plans for surge capacity to respond to public health emergencies of national and international concern	NCDC						
Capacity development for technical and administrative staff of Nigeria CDC and relevant MDAs	NCDC						
Develop and maintain database of Subject Matter Experts for preparedness and response	NCDC						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- National Emergency Management Agency
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development

- Federal Ministry of Environment
- Ministry of Water Resources
- Ministry of Information
- Ministry of Education
- State Emergency Management Agency
- National Medical Stores
- Nigeria Civil Aviation Authority
- Office of the National Security Adviser
- Security Agencies - Nigerian Army, Nigerian Air force, Nigerian Navy, Nigerian Police, NSCDC
- National Supply Chain Integration Programme
- National Animal Disease Information Service

Emergency Response Operations

Background and Objective: A public health emergency operations centre is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. Emergency operations centres provide communication and information tools and services, and a management system during a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration. The emergency response operations plan intends to strengthen inter-sectoral collaboration for emergency response, establish SOPs for activation and operations, and train personnel.

JEE Indicators

- R.2.1 Capacity to activate emergency operations
- R.2.2 EOC operating procedures and plans
- R.2.3 Emergency operations programme
- R.2.4 Case management procedures implemented for IHR relevant hazards

JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)
2. Establish standard operative procedures for EOC activation and operation
3. Establish standard training protocols for EOC operation and for emergency response
4. Enhance the NCDC EOC physical space, equipment, and logistic support

Short Term Goals (2018–2019):

- Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach) by 2019
- Establish standard operative procedures for EOC activation and operation by 2018–2019
- Establish standard training for EOC operation and for emergency response by 2018–2019
- Enhance the NCDC EOC physical space, equipment, and logistic support by 2019

Strengths	Limitations
<ul style="list-style-type: none"> NCDC EOC has activated several times and has been an important contributor to the successful control of the several public health emergencies NCDC conducts routine public health surveillance and situational analysis and is prepared to respond to public health emergencies, including activating the EOC, 24-hours a day, 7-days a week The polio EOC has been critically important in the successful progress towards polio elimination and has provided important lessons learned to the NCDC EOC EOC plans and procedures are drafted and have been utilized during EOC activations EOC training has been conducted, although it was conducted during EOC activations Table-top exercise for emergency response and EOC activation have been conducted NCDC EOC has coordinated several successful responses to public health emergencies Procedures have been developed, and were followed during the Ebola response, to safely transport infectious substances to public health laboratories Case management guidelines are available for patient management of priority infectious diseases 	<ul style="list-style-type: none"> NCDC EOC is limited by physical space and equipment Standard operating procedures for emergency response and EOC activation have not been fully developed. Response to public health emergencies that require a one-health response is limited EOC procedures need to be more fully developed Operating the EOC is limited by available resources Emergency responses resulting in activation of the NCDC EOC have not involved coordinated responses with agriculture or animal sectors Procedures need to be standardized to enable more rapid activation Case management guidelines are needed for transport of patients with infectious diseases

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)	NCDC						
Enhance the NCDC EOC physical space, equipment, and logistic support	NCDC						
Purchase of hardware health informatics input and output devices	NCDC						
Strengthen procedures and plans for EOC emergency operations function	NCDC						
Development of MOU between National and State levels	NCDC						

Develop missions, mandates, capabilities, and capacities of participating agencies for PHEOC functioning and response	NCDC						
Strengthen capacity for emergency response among EOC staff and surge personnel by developing standard training, simulation exercises, and after-action reviews	NCDC						
Joint outbreak response to strengthen one health	NCDC						
Hire core public health emergency management staff	NCDC						
Develop national case management guidelines for priority diseases, SOPs for the management and transport of potentially infected persons and improve infection prevention and control at the national and state levels	NCDC						
Improve infection prevention and control at the national and state levels	NCDC						
Support for emergency response activities, stockpiles, and equipping an animal crisis management center	FMARD						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- National Emergency Management Agency
- Federal Ministry of Health
- Federal Ministry of Agriculture and Rural Development
- Federal Ministry of Environment
- Ministry of Water Resources
- Ministry of Information
- Ministry of Education
- State Emergency Management Agency
- National Medical Stores
- Nigeria Civil Aviation Authority
- Office of the National Security Adviser
- Security Agencies - Nigerian Army, Nigerian Air force, Nigerian Navy, Nigerian Police, NSCDC
- National Supply Chain Integration Programme
- National Animal Disease Information Service

Linking Public Health and Security Authorities

Background: Linking public Health with security authorities is considered vital in the overall global health security agenda. Before now, public health emergencies appear limited to pure civil agencies and authorities in Nigeria with exclusion of a core component from the military and security agencies. However, public health emergencies pose special challenges whether man made or naturally occurring. The involvement of the military in the 2014 Ebola crisis bring to fore the need for synergy between civil and security agencies authorities during public health emergencies. Therefore, it has become imperative for a coordinated approach by linking public health practice with security authorities.

JEE Indicators

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event

JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Review, revise and seek assent to old or existing laws (or bills) relating to health security
2. Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms
3. Integrated and continuous capacity development on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements.
4. Development and harmonization of appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response.
5. Reporting and information sharing mechanisms including cross border collaboration

Short Term Goals (2018–2019):

- Establish a national TWG for linking public health and security authorities
- Engage wider stakeholders for simulation exercises
- Carry out table top and ground simulation exercises

Strengths	Limitations
<ul style="list-style-type: none"> Awakened interest in collaboration between public health institutions and security agencies Experience of security agencies in the Ebola outbreak of 2014 The military is actively engaged in providing assistance to ensure that all children are immunized against the poliovirus in order to eradicate polio in Nigeria The ongoing crises in the Northeast Nigeria have seen Involvement of various military formations in responding to outbreaks 	<ul style="list-style-type: none"> Conservative nature of military command and internal control mechanisms Absence of common operation plans across the armed forces and paramilitary services Shortage of skill manpower across the agencies and services Constant and rapid changes in leaderships across the services in political dispensation High cost of simulation exercises across services Getting endorsement of ALL heads of agencies

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Establish a national TWG for linking public health and security authorities	ONSA						
Update old statutory instruments to make them compliant with IHR.	ONSA						
Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms	ONSA						
Integrate and continuously develop capacity on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements	ONSA						
Implement appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response.	ONSA						
Improve reporting and information sharing mechanisms including cross border collaboration	ONSA						

Important Considerations:

- The TWG to be set up will work with all stakeholders for early buy-in
- Table top and real time simulation exercises would be carried out to build on skills and develop relationships among agencies
- Conduct advocacy to have health issues discussed at national security meetings, FEC and ECOWAS levels

Key Participating Agencies:

- Office of the National Security Adviser (Lead)

- Nigeria Centre for Disease Control
- Federal Ministry of Health
- States' Ministry of Health
- Ministry of Defense
- Intelligence Agencies
- Paramilitary Services
- Nigerian Police Force
- Federal Ministry of Agriculture and Rural Development
- National Emergency Management Agency

Medical Countermeasures and Personnel Deployment

Background and Objective: Medical countermeasures are vital to national security and protect nations from potentially catastrophic public health threats. Investments in medical countermeasures create opportunities to improve overall public health. On the other hand, recent pandemics have shown the importance of trained personnel who can be deployed in case of a public health emergency for response. Countries need to have a process in place to receive/send both medical countermeasure assets and health care personnel in the event of public health events of international concern.

JEE Indicators

- R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency
R.4.2 System in place for sending and receiving health personnel during a public health emergency

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Development of a national framework for deployment and receipt of medical countermeasures and HWs during emergencies
2. Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures
3. Including MOUs with regional and international players (countries, manufacturers)
4. Development of the national capacity for production of vaccines and antibiotics

Short Term Goals (2018–2019):

- Development of a national framework for deployment and receipt of medical countermeasures and HWs during public health emergencies by 2018
- Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures 2018–2019
- Identify key regional and international partners (countries, manufacturers) to establish partnerships for the procurement and supply of medical countermeasures by 2019

Strengths	Limitations
<ul style="list-style-type: none">• NEMA, a dedicated agency solely created for response to emergencies has successfully coordinated response to man-made and natural disasters in Nigeria; most states also have State Emergency Management Authority (NEMA).	<ul style="list-style-type: none">• The country needs to develop a comprehensive medical countermeasures and personnel deployment plan• Establishing pre-negotiated agreements and other efficient procurement mechanisms with manufacturers or

<ul style="list-style-type: none"> • The Federal Ministry of Health, through the Nigeria Centre for Disease Control has improved the coordination of national and state public health response to infectious disease outbreaks. • The country has a regulatory body (NAFDAC) that provides guidelines to importation of drugs, consumables and other medical countermeasures in the country. • There is a national supply chain system which has been developed to support health commodities (primarily for reproductive health, AIDS, TB and malaria) which can be leveraged for stockpiling MCMs for PHEICs. • There are nationally developed guidelines that are used by the central medical stores to manage medical commodities that are donated to the country. • An influenza pandemic preparedness plan initially prepared for response to pandemic influenza can be adapted for other pandemic diseases • There is a national plan being developed to manage the logistics for managing medical countermeasures imported into the country. • Nigeria has had rich experience with deploying her technical experts to support outbreaks in other countries such as the EVD response in Liberia and Sierra Leone • The country has a pool of human resources exists that may be mobilized during local and international emergencies • The health professional regulatory bodies that regulate multi professional practice have procedures in place for health professionals who wish to work in the country, these need to be streamlined for receiving external experts during emergencies. 	<ul style="list-style-type: none"> distributors for procuring medical countermeasures during public emergencies will better prepare the country • Engagement in regional and international mechanisms for medical countermeasure procurement, sharing and distributions agreements by the country • A critical list of essential drugs and commodities are needed to stockpile medical commodities for public health emergencies • Agreements for logistics and security for medical countermeasures should be established based on the needs and peculiarities of conflict prone areas across the country • The development of a personnel deployment plan, in collaboration with the professional regulatory authorities to guide future receiving or sending of technical personnel • Minimum competencies for Development of a training curriculum for use in emergencies by deployed personnel • An inventory of technical personnel should be developed. The identified personnel should be appropriately trained, accredited and insured for future deployment to other countries
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Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Conduct a small table top simulation exercise to clarify roles and responsibilities of stakeholders and finalize the MCM plan	NCDC						
Develop a national framework for procurement, deployment and receipt of medical countermeasures during public health emergencies	NCDC						
Support the development of MOUs with international suppliers of medical countermeasures for public health emergencies	NCDC NAFDAC						
Conduct table top simulation exercise to test the medical countermeasures plan							
Promote the adherence to the national pharmaceutical assurance policy by local manufacturers for items required for MCM that can be procured in country	NCDC						
Develop a personnel deployment plan and legal and regulatory framework for personnel deployment, including sector roles and responsibilities to identify barriers to receiving health personnel during public health emergencies	NCDC						
Review and establish standards of care including the competencies required - including SOPs, domesticate guidelines etc.	NCDC						

Key Participating Agencies:

- Nigeria Centre for Disease Control (Lead)
- Federal Ministry of Health
- Federal Ministry of Agricultural and Rural Development
- National Agency for Food and Drug Administration and Control
- Nigeria Customs Service
- Nigeria Emergency Management Agency
- National Primary Healthcare Development Agency
- Office of National Security Adviser
- Ministry of Interior
- National Supply Chain Integration Programme (NSCIP)
- National Animal Disease Information Service
- Medical and Dental Council of Nigeria
- Nursing and Midwifery Council of Nigeria
- Medical Laboratory Council of Nigeria

- Veterinary Council of Nigeria
- Pharmaceutical Council of Nigeria

Risk Communication

Background and Objective: Will develop a multi-sectoral and all-hazards risk communication strategy and plan with a built-in monitoring and evaluation process. Thus, it will create a multisector working group, develop capacity of communication officers, carry out community engagement/social mobilization, and produce IEC materials. The training will be cascaded to states to prepare communication officers. With further funds, it will be possible to engage 774 LGA social mobilizers, develop video clips and IEC materials on disease reporting for health care workers, and publicize video clips and IEC materials via traditional and social media.

JEE Indicators

- R.5.1 Risk communication systems (plans, mechanisms, etc.)
- R.5.2 Internal and partner communication and coordination
- R.5.3 Public communication
- R.5.4 Communication engagement with affected communities
- R.5.5 Dynamic listening and rumour management

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 2
JEE 2017 Capacity Level: 3
JEE 2017 Capacity Level: 3

JEE Priority Actions

1. Coordination: Develop a multi-sector and multi-hazard risk communication and emergency plan and implement the communication strategy
2. Capacity Building: Conduct training on multi-sector and multi-hazard risk communication which should include social science.
3. Establish continuous monitoring and evaluation of risk communication activities

Short Term Goals (2018–2019):

- Strengthen capacity of risk communication systems at the national level
- Implement and sustain coordinated event monitoring systems
- Build capacity for public communication at the national and State level
- Strengthen health care reporting system using both the traditional and social media

Strengths	Limitations
<ul style="list-style-type: none"> Communication officers in the Ministry, Department and Agency Public Communication officers at the states and LGAs Legal framework for public communication Budget line for communication in the different MDAs 	<ul style="list-style-type: none"> No holistic approach for risk communication in Nigeria Inadequate communication officers at the National, states and LGAs, Lack of collaboration between MDA Poor inter-sectoral coordination using one health approach Ineffective resource mobilization Poor reporting system at facility level

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Develop a multi-sectoral and all-hazards risk communication strategy and emergency plan	NCDC						
Develop a Monitoring and Evaluation process to provide feedback into the programme for improvement	NCDC						
Build capacity for risk communication among human, environmental, and animal health workers	NCDC						
Build capacity for coordinated public communication at the National and State level	NCDC						
Establish community outreach programs and regularly conduct information education communication (IEC) materials testing with members of the target audience	NCDC						
Develop strategic framework to integrate fragmented event monitoring at the community level	NCDC						
Develop/strengthen National and State systems to consider communication feedback—including rumors and misinformation from the public—in decision making processes to improve communication response	NCDC						

Important Considerations:

- Effective risk communication and early warning system needs collaborative and participatory approaches within the different levels (especially local level) and actors in outbreak response and control during planning and decision making, and these planned activities are geared towards ensuring this

Key Participating Agencies:

- Nigeria Center for Disease Control (Lead)
- Federal Ministry of Health

- Federal Ministry of Agriculture and Rural Development
- National Orientation Agency
- Federal Ministry of Environment
- National Primary Healthcare Development Agency
- Federal Ministry of Information
- Nigeria Police Force
- Nigeria Security and civil Defense Commission
- State Ministry of Health/ social mobilization committees
- Local Government Authorities and LGA mobilization committees

Points of Entry

Background: The Port Health Services Division in the Public Health Department, Federal Ministry of Health, was established in 1925 in response to the outbreak of Plague which began in Europe, and later spread to West Africa to the then Gold Coast (now Ghana) and then Lagos. Port Health Services is charged with the responsibility to prevent the cross-border/ international spread of disease in compliance with the World Health Organization (WHO) International Health Regulations (IHR 2005) through the implementation and application of health measures under the IHR (2005).

JEE Indicators

- PoE.1 Routine capacities established at points of entry
- PoE.2 Effective public health response at points of entry

JEE 2017 Capacity Level: 1
JEE 2017 Capacity Level: 1

JEE Priority Actions

1. Designation of PoEs within the prescription of the IHR (2005)
2. Review the legislation and policies on PoEs and advocate for revision of appropriate legislation e.g. Quarantine law
3. Build/sustain IHR capacities as set forth in Annex 1a and 1b of the IHR (2005)
4. Build technical capacity for port health service
5. Develop the national public health emergency Contingency plan for PoEs

Short Term Goals (2018–2019):

- Designate points of entry by end of December 2018
- Implement protocols, processes, regulations and legislation governing IHR implementation at POE for improved public health preparedness & response
- Improve inter-sectoral coordination using One Health approach
- Convene Stakeholder review meeting to review National PHECP for POE
- Finalize legislation; finalize draft policy & national PHECP

Strengths	Limitations
<ul style="list-style-type: none"> • Nationwide presence • Derive core mandate from the IHR (2005) • Other relevant legislation in place, including ICAO SARPS, CAPSCA, IMO, public health laws, Quarantine Act • Availability of Draft National Port Health Policy • Availability of Draft National PHECP for PoE 	<ul style="list-style-type: none"> • Inadequate resources (human resources, materials, and funds) • Low coverage for surveillance • Inadequate technical capacity among staff • Inadequate number of qualified staff • Weak interoperability of surveillance systems (not all PoE have IDSR in place) • Poor inter-sectoral collaboration and coordination using One Health approach • Outdated national legislation i.e. Quarantine Act (1926) and Nigeria Public Health Law (1986) • National policy not finalized

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Designate PoEs as guided by IHR (2005) Articles 20 and 21	FMoH						
Conduct IHR assessment for core capacity requirements at designated airports and ports (40-50 persons/site) - Site visits	FMoH						
Build/sustain infrastructure for routine services at identified target ports/airports/ground crossings	FMoH						
Review the legislation and policies on PoEs and advocate for revision of appropriate legislation to develop PoE capacities specified in Annex 1 of the IHR e.g. Quarantine law	FMoH						
Develop a National public health emergency contingency plan for PoEs which includes coordinated, multisectoral response actions for access to treatment, isolation, and diagnostics facilities, quarantine of suspect travelers and animals, infection prevention and control, and international alert and response for ill or suspect travelers on board.	FMoH						
Build technical capacity for port health service	FMoH						
Integrate public health emergency contingency plan with other public health response plans at the local/intermediate/national levels and other emergency operational plans at PoE, and disseminated to IHR NFP, relevant sectors, and key stakeholders.	PHS						
Develop triggers and formal communications processes to communicate information on public health threats or other incidents of concern (e.g., chemical, radiological) to IHR NFP, PoE authorities, relevant multisectoral agencies, and stakeholders.	PHS						

Important Considerations:

- Engender & sustain multi-stakeholder collaboration & participation
- Advocacy to governments & partners for requisite support & funding
- Strengthen existing linkages with IDSR
- Advocacy to Human resource, Budget office, Ministry of Finance for increase human capacity at PoE
- Harness existing resources and partnerships for effective coordination & collaboration
- Plan & implement stakeholder review meeting & workshop
- Initiate legislation review process

Key Participating Agencies:

- Federal Ministry of Health (Lead)
- Federal Ministry of Agriculture and Rural development
- Nigeria Center for Disease Control
- National Animal Disease Information Service
- Nigeria Immigration Service
- National Assembly
- Nigeria Agriculture Quarantine Services
- Nigeria Customs Service
- Nigeria Civil Aviation Authority
- Federal Airport Authority of Nigeria
- Federal Ministry of Justice
- Nigeria Airspace Management Agency
- National Emergency Management Agency

Chemical Events

Background and Objective: The chemical event programme was put in place to address health issues related to chemical risk and poison in air, water, waste water, soil sediment, human, plant and animal specimens and products. This plan seeks to further strengthen inter-agency capacity to monitor and respond to chemical events.

JEE Indicators

CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies

JEE 2017 Capacity Level: 1

CE.2 Enabling environment in place for management of chemical events

JEE 2017 Capacity Level: 2

JEE Priority Actions

1. Establishment of Poison Information Control and Management Centres (PICMC) in the Country
2. Collaboratively map risk and implement routine surveillance for Chemical events
3. Develop guidelines and protocols for Chemical surveillance with relevant stakeholders
4. Establish required multi-sector capacity for Chemical response
5. Perform an inventory of chemicals with the Toxicology Laboratory of Nigeria in collaboration with INTOX

Short Term Goals (2018–2019):

- Strengthening inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control.
- Strengthen the capacity to monitor chemicals in air, water, waste water, soil, sediments, human and Plant specimen and products for purposes of compliance promotion, research, and enforcement
- Develop risk assessment and management framework for pollution and chemical hazard
- Establish required multi-sector capacity for response to chemical events
- Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX

Strengths	Limitations
<ul style="list-style-type: none"> • The Country has National Guidelines for establishment of poison Information control and management centres in the country. • The National Policy on Chemicals Management determines the roles and responsibilities of ministries, departments and agencies during chemical emergencies. • There is a Chemical Legislation domiciled in relevant agencies such as NAFDAC and National Environmental Standards and Regulations Enforcement Agency. • There is a National Chemical Profile for chemical management in the Country 	<ul style="list-style-type: none"> • Non-existence of Poison Information Control and Management Centre in the Country • Low coverage of data collection on Poison Incidences/Chemical Poisoning inventory of Chemical events in the Primary, Secondary and Tertiary Health Care Facilities. • Chemical emergency guidelines and manuals for control of chemical emergencies should be developed and implemented. • Poor inter-sectoral coordination using One Health approach • A weak multisectoral coordination mechanism in relation to chemical events and response. • Lack of up to date chemical emergency guidelines and manuals for surveillance, assessment and management of chemical events, intoxication and poisoning. • Insufficient fund allocation to address chemical risk mitigation and response for Nigeria. • No inter-agency emergency response squad/team on chemical event • No Chemical Information Exchange Network (CIEN) and chemical database • Legislative and policy mechanisms relating to chemical issues need to be established and updated. • National chemical and surveillance and response system is poor • No budget line for chemical management activities

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Strengthen inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control	FMoH						
Strengthen the capacity to monitor chemicals in air, water, waste water, soil, sediments, human, animal and Plant specimen and products for purposes of compliance promotion, research, and enforcement by 2020	FMoH						
Develop risk assessment and management framework for pollution and chemical hazard	FMoH						
Establish required multi-sector capacity for response to chemical events	FMoH Ministry of Mines and Steel Dev.						
Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX	FMoH						
Conduct a study tour of chemical toxicology laboratory in a developed country	FMoH						

Important Considerations:

- Allocation of budget line for chemical events activities
- Synergy among the MDAs implementing Chemical Management activities
- Technical and financial support from WHO and development partners to implement chemical management activities
- Engagement of National consultants to draft chemical events Manuals Establishment of Database for chemical events.
- Put in place effective intersectoral surveillance system on Chemical Events to be put in place

Key Participating Agencies:

- National Environmental Standard and Regulation Enforcement Agency (Lead)
- Federal Ministry of Environment
- Federal Ministry of Health
- Ministry of Mines and Steel Development
- Federal Ministry of Environment
- National Centre for Disease Control
- Federal Ministry of Agriculture
- National Agency for Food and Drug Administration and Control

Radiation Emergencies

Background and Objective: To respond to nuclear and radiological emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies requires collaboration with sectors responsible for radiation emergencies management in Nigeria. Nigeria has a well-developed legislative framework for the control of radiation sources and emergencies. The designated responsible authority for implementation of these regulations in Nigeria is the Nigerian Nuclear Regulatory Authority (NNRA). NNRA works in partnership with the National Emergency Management Agency (NEMA) to coordinate the response to radiation emergencies. A large number of multi-sectoral stakeholders with responsibilities in the preparedness and response to radiation events have been identified and response is coordinated through a National Nuclear and Radiological Emergency Plan (NNREP). The Plan was developed by the National Nuclear and Radiological Emergency Committee set-up by the NNRA in 2004 and it was completed in 2005 and circulated to Stakeholders for comments and inputs. The Plan assigns to NEMA overall co-ordination and to NNRA technical support functions, which begin at the initial notification of a nuclear and or radiological emergency and end when all government agencies have terminated their response activities. Although this plan is regularly reviewed and updated, testing has been limited to internal drills within licensed premises and the plan has never been tested through planned multi-agency exercises or in response to an actual radiation incident.

JEE Indicators

- | | |
|--|-----------------------------------|
| RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies | JEE 2017 Capacity Level: 3 |
| RE.2 Enabling environment in place for management of radiation emergencies | JEE 2017 Capacity Level: 3 |

JEE Priority Actions

1. Test the National Nuclear and Radiological Emergency Plan (NNREP)
2. Improve detection and response capability by training staff, equipping & training designated hospitals and enhancing detection capabilities with radiation monitors and other detection equipment
3. Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point

Short Term Goals (2018–2019):

- Establish and test drills/exercises EPR framework
- Establishment of a high-level policy framework
- Drafting of National Radiation Emergency Plan and implementing procedures (NREP) and/or other plans

- Implementing of EPREV mission recommendations

Strengths	Limitations
<ul style="list-style-type: none"> • Party to various international legal instruments for nuclear and radiological emergency preparedness and response (EPR) • Nigeria has registered its capabilities and functional areas under the IAEA Response Assistance Network (RANET) • A well-developed Legislative Framework for the control of radiation sources, prevention and detection of radiation and nuclear emergencies and other related matters with clear legislation covering licensed applications, transport, disposal and use in specific industries • The Nuclear Safety and Radiation Protection Act 19 of 1995 • Nigerian Nuclear and Radiological Emergency Preparedness and Response • Regulations (draft) • National Nuclear and Radiological Emergency Plan (NNREP). • Institutional framework and stakeholder base in terms of nuclear and radiation • emergency preparedness and response. • Establishment of a competent authority (The NNRA) with the prime responsibility for nuclear safety and radiological protection regulations in Nigeria • Research Centres • National Emergency Management Agency • Enforcement of Emergency Drills/Exercise at Facility levels • National Policies, Strategies, Guidelines and SOPs are developed and regularly • updated for the management of emergencies 	<ul style="list-style-type: none"> • Financial resources (Emergency Fund) to meet the needs for nuclear safety and radiation protection • Lack of equipped laboratories for detection and systematic analysis of radiation emergency situations. • Inadequate public awareness, education and information on ionizing radiation • Lack of motivation and commitment from decision makers/participating organizations to attend meetings for effective coordination and collaboration mechanism. • Lack of systematic programmes for national training course for first responders and for the conduct, evaluation of drills and exercises • Human resource capabilities of relevant stakeholders in emergency response. • Emergency drills/exercises at national level • Upgrading of laboratories for treating/conditioning of waste radioactive sources • Lack of reference healthcare facilities or centers with full capacity to address or treat radiation injuries • Inclusion of radiation basics in medical school's curriculum • Effective National Radiation Emergency Response System • Equipment and capabilities for decontamination • Involvement of the national IHR focal point as a stakeholder in radiation emergencies.

Key Activities for Implementation	MDA	2018		2019			
		Q3	Q4	Q1	Q2	Q3	Q4
Test the National Nuclear and Radiological Emergency Plan	NNRA						
Build capacity for radiation and nuclear detection and response among human health workers	FMOH NNRA						
Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point.	NNRA						

Key Participating Agencies:

- Nigerian Nuclear Regulatory Authority (Lead)
- Federal Ministry of Science and Technology
- National Emergency Management Agency (NEMA)
- Nigeria Atomic Energy Commission (NAEC)
- MDAs
- Military and paramilitary Services
- Security Agencies
- Research Centres in Zaria, Gwagwalada-Sheda, Ile-Ife and Ibadan
- Designated Teaching Hospitals

Annex 1: Costed NAPHS (2018–2022)

TECHNICAL AREA	2018	2019	2020	2021	2022	TOTAL (NAIRA)	TOTAL (USD)
National Legislation and Financing	23,466,000	254,974,050	47,648,000	47,648,000	47,648,000	406,134,050	1,332,898
IHR Coordination and National IHR Focal Point Functions	61,461,410	300,717,534	120,422,970	120,422,970	120,422,970	723,447,854	2,374,296
Antimicrobial Resistance (AMR)	140,225,500	343,203,400	287,999,000	253,291,800	183,432,800	1,208,152,500	3,965,056
Zoonotic events and the human-animal interface	40,598,284	584,256,400	27,183,000	6,725,000	6,725,000	665,487,684	2,184,075
Food safety	15,356,000	255,343,450	122,085,200	372,648,400	33,740,000	799,173,050	2,622,819
Biosafety and biosecurity	-	172,687,728	1,710,682,228	40,067,428	59,415,228	1,982,852,612	6,507,557
Immunization	13,100,796,656	34,941,010,214	12,001,822,276	10,700,605,629	9,866,215,056	80,610,449,830	264,556,777
National Laboratory System	1,229,120,090	3,846,410,232	1,707,648,454	1,935,568,050	1,859,048,850	10,758,995,676	35,310,127
Surveillance	184,696,400	3,074,573,240	2,173,540,800	640,702,000	590,702,000	6,664,214,440	21,871,396
Reporting	154,691,200	1,784,058,028	157,343,000	102,847,000	102,847,000	2,249,936,228	7,384,103
Human Resources/Workforce Development	1,009,135,607	5,717,063,801	1,535,827,307	1,556,144,807	1,535,827,307	11,353,998,829	37,262,878
Preparedness	11,873,800	3,245,888,206	3,002,384,000	3,002,884,000	2,002,384,000	11,265,414,006	36,972,150
Linking Public Health and Security Authorities	33,845,200	45,985,200	31,446,000	31,446,000	31,446,000	174,168,400	571,606
Emergency Response Operations	365,810,990	1,317,717,300	201,202,400	201,202,400	16,800,000	2,102,733,090	6,900,995
Medical Countermeasures and Personnel Deployment	5,665,000	82,811,600	23,543,050	57,632,000	15,784,000	184,715,650	606,221
Risk Communication	14,832,000	263,355,561	148,371,100	80,830,400	14,019,200	521,408,261	1,711,218
Points of Entry (PoE)	21,617,600	742,177,100	274,872,400	264,582,400	-	1,303,249,500	4,277,156
Chemical events	-	320,870,800	98,877,700	108,526,600	96,346,800	624,621,900	2,049,957
Radiation emergencies	-	58,973,200	105,783,000	18,486,000	18,486,000	201,728,200	662,055
TOTAL	16,413,191,737	57,352,077,043	23,778,681,885	19,542,260,884	16,601,290,211	133,800,881,760	439,123,340

Annex 2: JEE Results and Priority Actions

Nigeria has made commendable progress in the broad area of prevent but will need additional investments to move to a higher level:

- A top priority is to fast track the legislation, regulatory and policy frameworks to support IHR implementation at the Federal, State, and Local Government levels
- A critical piece of legislation is the finalization of the legislative approval for the Nigeria Centre for Disease Control (NCDC)
- To support implementation of “the One health approach” there is a need to establish a multi-sectoral, multi-disciplinary coordination mechanism (political and technical) at FG, State and LGA levels

Nigeria has made tremendous progress in bio-surveillance for vertical diseases such as polio, TB, HIV/AIDs, but will need additional efforts to:

- Strengthen laboratory capacity, especially specimen shipping, transportation and referral
- Scale up, enhance and sustain the IDSR program nation-wide at all levels (FG, State, LGA, PHC facilities), capitalizing on the polio investments
- Develop and implement a comprehensive public health workforce strategy

Nigeria has made tremendous progress in response to PHEs-Ebola, Lassa Fever, Meningitis, Cholera etc. but will need additional efforts to:

- Formulate, cost, implement, monitor and evaluate a national action plan for health security that is aligned with sector strategies, addresses all hazards and is based on a comprehensive risk assessment and mapping
- Enhance the EOC/IMS system at federal level and strengthen sub-national RRTs supported by an all hazard risk communication strategy/plan
- Strengthen inter-sectoral collaboration for emergency response particularly between human and animal health, the environmental sectors and security agencies underpinned on an all hazards approach

Nigeria has several PoEs that are already doing commendable routine (screening, have holding areas) & emergency actions, etc. Major setback is not officially designating the PoE:

- Designate, before the end of 2017, a few PoEs-Airports, Ports and some ground crossings
 - Airports
 - Abuja International Airport
 - Lagos International Airport
 - Kano International Airport
 - Lagos Sea Port
 - High volume ground crossings
 - Benin border
 - Cameroun border
 - Niger border
- Finalise PH contingency plan for PoEs that is linked to the national plan for health security
- Establish and sustain capacities for routine and emergency preparedness and response for the designated PoEs

Technical area	Indicators	Indicator Description	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)	1
	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)	1
Priority Areas for action	<ul style="list-style-type: none"> Comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations Advocate for revision of legal instruments and policies to address existing gaps and challenges within the national administrative environment Completion of pending legislative actions (NCDC Bill, 2017; Public Health Bill, 2013) in order to give key public health institutions (e.g. Nigeria Centers for Disease Control) the legal mandate needed to accomplish national goals National government should articulate specific policies, guidance, and guidelines to States and Local Governorate Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014) Streamline roles and responsibilities in the various Ministries and Agencies that have responsibilities in IHR implementation to minimize duplication within their respective mandates 		
	P.2.1	A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	2
IHR coordination, communication and advocacy	<ul style="list-style-type: none"> Establish legislative foundation for NCDC as National Focal Point Establishment of a national One Health platform for intersectoral collaboration of outbreak responses that involve the human health, animal health and environmental sectors Develop all hazard standard operational procedures for IHR coordination between IHR NFP and stakeholders 		
	<ul style="list-style-type: none"> P.3.1 Antimicrobial resistance detection P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens P.3.3 Health care-associated infection (HCAI) prevention and control programmes P.3.4 Antimicrobial stewardship activities 		
Antimicrobial resistance	P.3.1	Antimicrobial resistance detection	2
	P.3.2	Surveillance of infections caused by antimicrobial-resistant pathogens	2
	P.3.3	Health care-associated infection (HCAI) prevention and control programmes	2
	P.3.4	Antimicrobial stewardship activities	2

Technical area	Indicators	Indicator Description	Score
Priority Areas for action		<ul style="list-style-type: none"> • Implement the Nigeria NAP on AMR • Strengthen the "One Health" components in the Nigeria NAP on AMR. • Strengthen stewardship on antimicrobial use in humans and food animals. 	
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	1
		<ul style="list-style-type: none"> • Enhance collaboration between Ministry of Health and Ministry of Agriculture at the national, state and district levels • Strengthen linkage between public health and animal health laboratories • Enhance surveillance of zoonotic diseases (including consensus building meetings of appropriate stakeholders to identify the top priority zoonotic diseases to include in zoonotic disease surveillance system) 	
Food safety	P.5.1	Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	2
		<ul style="list-style-type: none"> • Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease • Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response • Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels. 	
Biosafety and biosecurity	P.6.1	Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	1
	P.6.2	Biosafety and biosecurity training and practices	1
		<ul style="list-style-type: none"> • Biosecurity Legislation needs to be enacted • Development of a multi-sectoral, national coordination, oversight and enforcement mechanism for response to and control of dangerous pathogens • Adequate funding and training be provided for Biosafety and Biosecurity programs • Perform an audit of institutions and locations with dangerous pathogens; and toxin control in order to develop a plan for consolidation 	
Immunization	P.7.1	Vaccine coverage (measles) as part of national programme	3
	P.7.2	National vaccine access and delivery	4

Technical area	Indicators	Indicator Description	Score
Priority Areas for action		<ul style="list-style-type: none"> Dedicate resources to information management system for vaccine data, in order, to ultimately improve data quality (completeness, timeliness and reliability of administrative data) Develop strategies to improve national coverage, especially focusing on historically low coverage areas Include vaccines for zoonotic disease, particularly in special populations such as health care workers and veterinarians 	
National laboratory system	D.1.1	Laboratory testing for detection of priority diseases	3
	D.1.2	Specimen referral and transport system	1
	D.1.3	Effective modern point-of-care and laboratory-based diagnostics	2
	D.1.4	Laboratory quality system	2
Priority Areas for action		<ul style="list-style-type: none"> Enhance the laboratory infrastructure and resources available to sustain an integrated national laboratory network Implement Strengthening Laboratory Management Toward Accreditation (SLMTA) Program for the national laboratory network with a focus on biosafety, biosecurity and quality assurance Develop a robust sample and specimen transportation system which ensures an effective cold chain To adopt basic laboratory information sharing system among the relevant stakeholders 	
Real-time surveillance	D.2.1	Indicator- and event-based surveillance systems	3
	D.2.2	Interoperable, interconnected, electronic real-time reporting system	2
	D.2.3	Integration and analysis of surveillance data	3
	D.2.4	Syndromic surveillance systems	3
Priority Areas for action		<ul style="list-style-type: none"> Systematically build capacity for surveillance at all levels (HF, LGA, state and national), expanding surveillance to all health facilities including private facilities for both human and animal health Develop real-time surveillance capability for animal health and promote a ONE-Health approach. Establish linkage between the surveillance and public health laboratory systems Establish an electronic reporting system that is inter-operable and integrated to other systems and also linked to DHIS2 Enhance monitoring and evaluation capacity for IDSR, including supportive supervision and data quality assessment 	
Reporting	D.3.1	System for efficient reporting to FAO, OIE and WHO	3
	D.3.2	Reporting network and protocols in country	2

Technical area	Indicators	Indicator Description	Score
Priority Areas for action		<ul style="list-style-type: none"> • Strengthen and improve consistency, completeness (including from private sector) and timeliness in reporting from the local and state levels • Establish a framework for multi sectoral coordination in reporting and communication that will enable information sharing • Establishment of central data base that integrates data from all sectors for all 41 priority diseases under IDSR • Instituting monitoring and evaluation of reporting against set IDSR and IHR indicators 	
Workforce development	D.4.1	Human resources available to implement IHR core capacity requirements	3
	D.4.2	FETP ¹ or other applied epidemiology training programme in place	4
	D.4.3	Workforce strategy	2
Priority Areas for action		<ul style="list-style-type: none"> • Develop a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce in order to reach the goal of one trained field epidemiologist (or equivalent) per 200,000 population • Launch the Intermediate FETP and fully implement Frontline FETP so that there is an 'appropriately' trained field epidemiologist in every Local Government Area • Define career path for specialized public health expertise within the Nigerian civil service structure 	
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
		<ul style="list-style-type: none"> • Develop an all-hazards multi-sectoral PH emergency preparedness plan, linking existing agency-specific and disease-specific plans • Where indicated NCDC should lead in preparation of memoranda of understanding between response agencies in different sectors • Strengthen the technical and administrative capabilities of NCDC and Nigeria Emergency Management Agency to develop national vulnerability maps that involve military, media, wildlife and animal health sectors to address zoonotic and emerging infections • Pre-position equipment and other resources to strategic locations consistent with vulnerability maps (e.g. remote hard-to-access areas) 	
Emergency response operations	R.2.1	Capacity to activate emergency operations	2
	R.2.2	EOC operating procedures and plans	2

¹ FETP: Field epidemiology training programme

Technical area	Indicators	Indicator Description	Score
Priority Areas for action	R.2.3	Emergency operations programme	3
	R.2.4	Case management procedures implemented for IHR relevant hazards	2
		<ul style="list-style-type: none"> • Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach) • Establish standard operative procedures for EOC activation and operation • Establish standard training protocols for EOC operation and for emergency response • Enhance the NCDC EOC physical space, equipment, and logistic support 	
Linking public health and security authorities	R.3.1	Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	1
		<ul style="list-style-type: none"> • Review, revise and seek assent to old or existing laws (or bills) relating to health security • Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms • Integrated and continuous capacity development on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements. • Development and harmonization of appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi sectoral health preparedness and response. • Reporting and information sharing mechanisms including cross border collaboration 	
Priority Areas for action	R.4.1	System in place for sending and receiving medical countermeasures during a public health emergency	1
	R.4.2	System in place for sending and receiving health personnel during a public health emergency	1
		<ul style="list-style-type: none"> • Development of a national framework for deployment and receipt of medical countermeasures and HWs during emergencies • Updating the national plan for procurement, stockpiling and managing logistics for Medical Countermeasures <ul style="list-style-type: none"> ○ Including MOUs with regional and international players (countries, manufacturers) • Development of the national capacity for production of vaccines and antibiotics 	
Risk communication	R.5.1	Risk communication systems (plans, mechanisms, etc.)	1
	R.5.2	Internal and partner communication and coordination	3
	R.5.3	Public communication	2

Technical area	Indicators	Indicator Description	Score
Priority Areas for action	R.5.4	Communication engagement with affected communities	3
	R.5.5	Dynamic listening and rumour management	3
	<ul style="list-style-type: none"> Coordination: Develop a multi-sector and multi-hazard risk communication and emergency plan and implement the communication strategy Capacity Building: Conduct training on multi-sector and multi-hazard risk communication which should include social science. Establish continuous monitoring and evaluation of risk communication activities: 		
Points of entry	PoE.1	Routine capacities established at points of entry	1
	PoE.2	Effective public health response at points of entry	1
Priority Areas for action	<ul style="list-style-type: none"> Designation of PoEs within the prescription of the IHR (2005) Review the legislation and policies on PoEs and advocate for revision of appropriate legislation e.g. Quarantine law Build/sustain IHR capacities as set forth in Annex 1a and 1b of the IHR (2005) Build technical capacity for port health service Develop the national public health emergency Contingency plan for PoEs 		
	CE.1	Mechanisms established and functioning for detecting and responding to chemical events or emergencies	1
Priority Areas for action		Enabling environment in place for management of chemical events	2
<ul style="list-style-type: none"> Establishment of Poison Information Control and Management Centres (PICMC) in the Country Collaboratively map risk and implement routine surveillance for Chemical events Develop guidelines and protocols for Chemical surveillance with relevant stakeholders Establish required multi-sector capacity for Chemical response Perform an inventory of chemicals with the Toxicology Laboratory of Nigeria in collaboration with INTOX 			
Radiation emergencies	RE.1	Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	3
	RE.2	Enabling environment in place for management of radiation emergencies	3
	<ul style="list-style-type: none"> Test the National Nuclear and Radiological Emergency Plan (NNREP) Improve detection and response capability by training staff, equipping & training designated hospitals and enhancing detection capabilities with radiation monitors and other detection equipment 		

Technical area	Indicators	Indicator Description	Score
		<ul style="list-style-type: none"> • Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point 	

Annex 3: Performance of Veterinary Services (PVS) Assessment and Recommendations - 2010

Critical Competencies	Level	Priority Actions
1. Professional and technical competence of the personnel of veterinary services (VS)		
1a. Veterinary and other professionals (university qualification)	3	<ul style="list-style-type: none"> • Create at federal and state levels adequate vacancies to employ additional veterinarians and other professionals.
1b. Veterinary paraprofessional and other technical personnel	3	<ul style="list-style-type: none"> • Considering the scheme established by PACE, develop appropriate schemes to promote private veterinary practice. • Introduce “sanitary mandates” to allow private veterinarians to participate in vaccination and disease control and surveillance.
2. Continuing education	3	<ul style="list-style-type: none"> • Create adequate vacancies including remuneration to employ additional paraprofessionals in the public service to fill and to motivate staff
3. Technical independence	3	<ul style="list-style-type: none"> • Develop a legal framework for registration of paraprofessionals by the VCN
4. Stability of policies and programme	4	<ul style="list-style-type: none"> • DVPCS to develop specific training programmes for its staff and budget provision for this activity
5. Coordination capability of the sectors and institutions of the VS (public and private)	3	<ul style="list-style-type: none"> • Empower the Director of the DVPCS to take all technical decisions independently.
6. Funding	2	<ul style="list-style-type: none"> • Reinforce the capacity (staff, vehicles and adequate funding) of the DVPCS and States in the monitoring of policy implementation and supervision of field operations.
		<ul style="list-style-type: none"> • Allocate to livestock sector of a minimum of 30% of the 10% budgetary allocation to agriculture in conformity with the decision of the Heads of State of African Union countries of July 2003 at Maputo. • Provide vehicles for field operations.

7. Contingency funding	2	<ul style="list-style-type: none"> Establish appropriate contingency funds to be administered directly by the Director of DVPCS
8. Capacity to invest and develop	2	<ul style="list-style-type: none"> Need to provide support for the improvement and development of VS infrastructure during the formulation of strategic plan.
9. Laboratory disease diagnosis	3	<ul style="list-style-type: none"> Draft a programme for improvement of equipment, supplies and consumables at NVRI and State and Veterinary Faculties laboratories. Network NVRI and State and Veterinary Faculties laboratories. Introduce quality assurance in the laboratory procedures. Accredit NVRI as a regional/international reference laboratory e.g. for HPAI.
10. Risk analysis	2	<ul style="list-style-type: none"> Formulate and implement risk analysis programmes Create core capacity within the DVPCS for risk A will be necessary
11. Quarantine and border security	2	<ul style="list-style-type: none"> Building of quarantine facilities at all border points. Creation of additional veterinary quarantine stations Increase and train veterinary quarantine services staff on quarantine facilities and procedures and surveillance strategies. Implement of international standards for certification of animals and animal products for import and export.
12. Epidemiological surveillance	3	<ul style="list-style-type: none"> Enforce the <i>Animal Diseases (control) Act N° 10, 1988</i> regarding the disease reporting in particular by the private sector. Train more staff in epidemio-surveillance. Improve feedback to stakeholders and follow-up reports to the OIE. Need to reinforce data collection at federal, state and local government levels.
13. Early detection and emergency response	3	<ul style="list-style-type: none"> Provide vehicles and equipment for field operations to facilitate early detection and emergency response.
14. Emerging issues	2	<ul style="list-style-type: none"> Develop procedures in DVPCS in order to identify, monitor and review emerging issues.

		<ul style="list-style-type: none"> • Prepare appropriate national preparedness plans.
15. Technical innovation	1	<ul style="list-style-type: none"> • Establish a database of technical innovations and international standards. • Subscribe to scientific journals for updating knowledge of staff.
16. Veterinary medicines and veterinary biologicals	2	<ul style="list-style-type: none"> • Create capacity in the DVPCS to monitor standards and control of veterinary medicines and veterinary biologicals. • Need for NVRI to update types of vaccines and to develop capacities to carry out quality control of imported vaccines and biological products.
17. Communication	3	<ul style="list-style-type: none"> • Improve the capacity of the communication staff. • Provide up to date information via the internet • Update the DVPCS website on regular basis • Provide effective intranet and internet facilities at federal and state levels.
18. Consultation with stakeholders	2	<ul style="list-style-type: none"> • Institute formal and regular consultation and feedbacks with stakeholders. • List all existing associating stakeholders' representatives at federal and state levels and encourage their establishment where such organisations do not yet exist.
19. Official representation	2	<ul style="list-style-type: none"> • Improve consultation with stakeholders.
20. Accreditation / Authorisation / Delegation	2	<ul style="list-style-type: none"> • Establish "<i>sanitary mandates</i>".
21. Veterinary Statutory Body	4	<ul style="list-style-type: none"> • VCN to develop a legal framework to register and regulate paraprofessionals.
22. Implementation of joint programmes	2	<ul style="list-style-type: none"> • Develop joint programmes with stakeholders and partner organisations.
23. Preparation of legislation and regulations, and implementation of regulations	3	<ul style="list-style-type: none"> • Designate a multidisciplinary committee to update the main law regarding animal disease control and zoonosis. • Ensure the harmonisation of legislation and regulations regarding animal disease control and zoonosis enacted at the state level.
24. Stakeholder compliance with legislation and regulations	1	<ul style="list-style-type: none"> • Enforce existing regulations for stakeholders to comply.

		<ul style="list-style-type: none"> • Develop programme to ensure stakeholder compliance with relevant regulations
	2	<ul style="list-style-type: none"> • Designate team in charge to monitor the establishment of new and revised international standards, guidelines and periodically review national legislation, regulations and sanitary measures in order to harmonise them, as appropriate, with international standards.
25. International certification		<ul style="list-style-type: none"> • Implement international standards for certification of animals and animal products for import and export.
26. Traceability	2	<ul style="list-style-type: none"> • Create capacity to identify and trace animals and animal products at federal and state levels.
27. Transparency	3	<ul style="list-style-type: none"> • Improve on submission of follow up reports.
28. Zoning	1	<ul style="list-style-type: none"> • Improve biosecurity in traditional production system and in live animal markets.
29. Compartmentalisation	2	<ul style="list-style-type: none"> • Develop compartmentalisation strategy.

Annex 4: Participant List

Participants of either the February Preparatory Workshop or the July Costing and Validation Workshop:

Name	Organisation
Dr Patrick Nguku	AFENET
Augustine Dada	AFENET
Mahmood Dalhat	AFENET
Ajani Oyetunji G	AFENET
Muhammad Shakir Balogun	AFENET
Abatta Emmanuel	DHPRS
Ayodele Ayemo	ehealth Africa
Ahmed Matane	FAO
Dr Zainab Abdulkareen	FMARD
Dr Maryam I. Buba	FMARD
Dr Muh'd Aligana	FMARD
Dr Mairo Kachalla	FMARD
Dr. O Alabi	FMARD
Dr Kwaghe A. V	FMARD
Vivien Idogho	FMF
Femi Stephen	FMOH
Dr Welle Sc	FMOH
Dr Alex-Okoh M.O	FMOH
Dr Bibilari Ngozika	FMOH
Fatai Olarenwaju S.	FMOH
Ogunlesi Zaynab	FMOH
Dr James Balami	FMOH
Perpetual Ezediunor	FMOH
Olaoluwa Ajoni	FMOJ
Makama Sani	FMT
Sarah Mengesha	GIZ
Dr Godswill C. Okara	MLSCN
Ajaero Chike	MMSD
Wg Cdr Jm Nalazai	MODHIP
E. M Dickson	MPR
Dr Barthlomew Ibeh	NABDA
Ogu Amoge	NABDA
Dogara Ashikeni	NAEC
Dauda D. Gimba	NAFDAC
Godwin Akwa	NAFDAC
Dr Momodu Aisha M	NAQS
Dr. Nyodee B.G	NAQS
Dr Chikwe Ihekawazu	NCDC
Akinbiyi Gbenga	NCDC

Yennan Sebastian	NCDC
Sadiq Garba	NCDC
Dim Munachimso V	NCDC
Amina Mohammed	NCDC
Ayoola Olufemi	NCDC
Nanpring D. Williams	NCDC
Safiya Musa	NCDC
Oguanuo Emeka	NCDC
Dr Igbodo Gordon	NCDC
Dr Okunromade Oyeladun	NCDC
Nwando Mba	NCDC
Olaolu Aderinola	NCDC
Dr Adesola Yinka-Ogunleye	NCDC
Chimezie Anueyiagu	NCDC
Olubunmi Ojo	NCDC
Oyeronke Oyebanji	NCDC
Oguniyi Abiodun	NCDC
Nwachukwu Williams	NCDC
Joseph Gbenga	NCDC
Emmanuel Agogo	NCDC
Chibazo Eneh	NCDC
Dr Aku Anwe Sunday	NCS
Inusa Ezra	NEMA
Cdr Bralti (Rtd)	NEMA
Aremu A. Agaka	NESREA
Obinna Kelechi C.	NESREA
Adeola Jegede	NIPRD
Dr S.O Funsho	NIS
Ali Mohammed Jidda	NNRA
Idoko Simon	NOA
Dr Abubakar I.S	NPA
Nwokolo C.R	NPA
Saudat Oluwatoyin Adeka	NPA
Dr Nonye Welle	NPF
Dr Eugene Ivase	NPHCDA
M. M Abubakar	NPHCDA
Dr L.T Damisah	ONSA
Dr Sola Aruna	PHE
Samuel Alabi O.	PHI
Christopher Lee	Resolve to Save Lives
Winifred Ukpunu	UMB
Saiki A. Musa	UMB
Daniel Stowell	US CDC
Daniel J. Duvall	US CDC
Richard Garfield	US CDC

Daniel Yota	WHO (AFRO)
Antonio Oke	WHO (AFRO)
Talisuna A.O	WHO (AFRO)

Annex 5: Inventory of Costed Activities, 2018–2022

P1: National Legislation, Policy, and Financing

P1.1: Legislation, laws, regulations, administrative requirements, policies or other government instruments in place for implementation of IHR

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Complete pending legislative actions for “Nigeria Centre for Disease Control Bill” to give key public health institutions the legal mandate needed to accomplish national goals.	<ul style="list-style-type: none"> • NCDC, FMoH, FMARD, MoE (Health promotion division): High powered advocacy team of e.g. perm sec, hon min. of state, head of MDAs e.g. DG NCDC on Follow-Up consultations with the Senate Committee on Primary Health at the National Assembly. Phone calls cards at =N= 15,000 SMS, and Physical Visit. • Public Relation by Legal Unit at the National Assembly Senate Committee on primary Health for speedy transmission of the Bill to the Presidency for assent: Develop a ToR for a team of 3 consultants (NCDC HRM); • Hire a Team of 3 Consultants, (1 Retired Judge/SAN, 1 Lawyer, 1 Political Journalist and outstanding bureaucrats); • Consultants Debrief to DG NCDC and Legal Team; Documentation of these process for Institutional learning; Report on outcome and passage of Bill NCDC Legal Call cards, Internet access off work hours and out of office, 	NCDC		16,432,000	16,432,000
Review of the “National Health Act of 2014” to define roles/responsibilities of key public health institutions across the three tiers of government.	<ul style="list-style-type: none"> • Develop TOR to hire 1 consultant by NCDC HR, who will review the National Health Act, 2014. 5 Working days to hold a 1-Day Stakeholders consultative meeting of 20 people to appraise and validate the Review, Develop a Policy Statement on the Health Act 2014. • The Reviewed Health Act 2014 Presentation to Federal Executive Council for approval • Transmission of Bill to National Assembly, by High Powered Delegation of Minister of health, Perm Sec Health, NCDC DG, Heads of Parastatal of FMoH to the national assembly for Passage of Bill • Transmission of Bill to The Presidency for Presidential Assent. 	NCDC		390,000	390,000
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	<ul style="list-style-type: none"> • Identify Focal Persons/ Desk officers at various MDAs and Partners • Giving the Polling system in MDAs, NCDC develop an inventory of focal persons and Desk officers, for continuity and institutional learning. Managed by NCDC online for easy access by Desk officers. • Review of the existing provisions on financing of various IHR Policies and statutory provisions at relevant MDAs • Review the financial impediments to the implementation of the statutory provision and administrative activities on IHR in relevant MDAs • Training of key stakeholders on work-plan development for IHR Policy Financing 	NCDC		1,974,000	1,974,000
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	<ul style="list-style-type: none"> • Hire 2 consultants for 2 weeks each to Review Draft Document revised: Desktop review of existing Legislative, policy and Financing Laws • Identify stakeholders and circulate the NHA 2014 and the IHR 2005 guidelines to stakeholders and partners • Organize a 2-day workshop to analyses the NHA 2014 in line with the IHR 2005, Of 8 persons to identify gaps in NHA that its compliance with IHR 2005 • Identify IHR Focal Persons and Desk officers • Inform FMOH of the gaps and the need to amend the NHA 2014 in line with the HIR 2005 • Disseminate document to Federal, States and Local MDAs for Review and Analyze of gaps base on needs assessments, to identify and collate existing legal structures and policy framework relevant to IHR. • Reviewed Document sent back to NCDC by Email 	NCDC		1,974,000	1,974,000

	<ul style="list-style-type: none"> • Develop a report on the finding from the meeting • Identify the gaps that prevent effective compliance with IHR at all tiers of government, at Point of entry and agree on modalities to address them using the IHR as a guideline • Develop a monitoring Structure at the three tiers of Government, that does not only impose a legal duty to comply but to also enforce implementation of IHR • Create budget mechanism to support effective implementation of IHR (Policy, legislative framework and Financing). • Reward states that follow IHR in policy and funding. 			
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014).	<ul style="list-style-type: none"> • Hire 1 Health Consultant who specializes on Health Policy and Financing. 1 week to review existing Documents and research on health Financing, 1 week for preparing the meeting and the Final week to revise and present the result • Conduct 1-day stallholders review meetings of 8 persons • Develop and Disseminate guidelines and Policies 	NCDC		216,000 216,000
	<ul style="list-style-type: none"> • Technical committee not excluding Legal unit of NCDC and relevant legal MDAs (MOHD, FMARD, MoE, FMF) Related relevant agencies 	NCDC		1,380,000 1,380,000
Conduct comprehensive assessment of existing legislative and policy frameworks to identify gaps that impede compliance with the International Health Regulations	<ul style="list-style-type: none"> • Technical committee not excluding Legal unit of NCDC and relevant legal MDAs (MOHD, FMARD, MoE, FMF) Related relevant agencies 	NCDC		2,119,200 2,119,200
	<ul style="list-style-type: none"> • FMOH, FMARD, Fen, FMJ, FMF, Development partners 	NCDC		1,506,800 1,506,800
Develop specific policies, guidance, and guidelines to States and Local Government Areas regarding obligations, roles and responsibilities to increase their respective ownership and implementation of the provisions of the National Health Act, and for accountability in allocation and application of resources for public health in line with the Basic Health Provision Fund (2014).	<ul style="list-style-type: none"> • FMOH, FMARD, Fen, FMJ, FMF, Development partners 	NCDC		990,000 990,000

P1.2: Legislation, policies and administrative arrangements enable compliance with the IHR (2005)

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop an inventory of the administrative and statutory provisions relevant to IHR in relevant Ministries, Departments and Agencies (MDAs)	<ul style="list-style-type: none"> • Identify Focal Persons/ Desk officers at various MDAs and Partner • Giving the Polling system in MDAs, develop a system of training and retraining of focal persons and Desk officers, for continuity and institutional learning • Call for meeting of Focal Persons to take an inventory of existing administrative and statutory provisions relevant to IHR • Review of the existing provisions on financing of various IHR Policies and statutory provisions at relevant MDAs 	NCDC		5,800,000	23,200,000

	<ul style="list-style-type: none"> Review the financial impediments to the implementation of statutory provision and administrative activities on IHR in relevant MDAs Training of key stakeholders on work-plan development for IHR Policy Financing. Development, Production and dissemination of specific policies, guidance, and guidelines. 				
Develop the strategic and operational plan for animal health policy and programmes implementation	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop the strategic and operational plan for animal health policy and programme implementation 	FMARD		690,000	690,000
	<ul style="list-style-type: none"> Conduct 2-day stakeholder meeting of 20 participants for the review and validate of the draft strategic and operational plan (non-residential) 	FMARD		0	0
	<ul style="list-style-type: none"> Print and disseminate 500 copies of validated strategic and operational plan 	FMARD		250,000	250,000
Support advocacy for budgetary allocation to livestock sector	<ul style="list-style-type: none"> Conduct 2-day state engagement workshop of 100 participants (state governors and National and state assembly committee chairman on agriculture, civil society, Press) on budgetary allocation to the livestock sector 	FMARD		6,800,000	6,800,000
Review the international standards for certification of animal and animal products	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to review the international standards for certification of animal and animal products 	FMARD		930,000	930,000
	<ul style="list-style-type: none"> Conduct 2- day stakeholder meeting of 30 persons for validation 	FMARD		2,266,000	2,266,000
	<ul style="list-style-type: none"> Conduct 5-day training for 50 participants on international standards for certification of animal and animal products 	FMARD		9,024,000	9,024,000
	<ul style="list-style-type: none"> Print 100 copies of the revised certification standards 	FMARD		150,000	150,000
Support Technical workgroups in animal health emerging issue and develop guidelines, and procedure addressing emerging issue such as ethical clearance, emerging diseases (monkey pox, rift valley ,etc.)	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop guidelines, and procedure addressing emerging issue such as ethical clearance, research etc. 			1,297,050	1,297,050
	<ul style="list-style-type: none"> Set up 15 technical working groups (TWGs)of 5 members each to identify in advance emerging issues 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct training of 15 TWGs on the procedure in identifying emerging issues advances 			5,557,000	5,557,000
	<ul style="list-style-type: none"> Support monthly meeting of the 15 TWGs 			37,884,000	151,536,000
	<ul style="list-style-type: none"> Print 500 copies of the procedure in identifying emerging issues 	FMARD		750,000	750,000
Support Biannually review and feedback of implementation of policy and programmes	<ul style="list-style-type: none"> Conduct 2-days multi-stakeholder meeting of 100 persons biannually on feedback of implementation of policy and programmes 	FMARD		9,440,000	9,440,000
Support Biannually consultative meeting to consolidate on different views from the stakeholders on animal health policies and programmes	<ul style="list-style-type: none"> Conduct 1-day consultative meeting of 40 people bi-annually to consolidate on different views from the stakeholders 	FMARD		3,964,000	15,856,000
	<ul style="list-style-type: none"> Create an e- platform email group to share updates with relevant stakeholder 	FMARD		0	0

Review the existing animal health laws, regulation and policy	<ul style="list-style-type: none"> Hire a consultant for 4 weeks to review the existing animal health laws, regulation and policy annually 	FMARD		1,770,000	1,770,000
	<ul style="list-style-type: none"> Conduct 5-day multi-stakeholder meeting of 40 persons to validate the amendment 	FMARD		7,166,000	7,166,000
	<ul style="list-style-type: none"> Printing 1000 copies of the amendment to be presented to National Assembly 	FMARD		2,000,000	2,000,000
	<ul style="list-style-type: none"> Provide support for legislative process 			0	0
	<ul style="list-style-type: none"> Printing and disseminate 50,000 copies of animal legislation 	FMARD		1,000,000	1,000,000
Conduct consultative and sensitization meetings for the revised law with the animal health policy makers	<ul style="list-style-type: none"> Conduct 3 days consultative stakeholder meeting with 40 people with the hired consultant (Residential) 	FMARD		4,666,000	4,666,000
	<ul style="list-style-type: none"> Conduct 2-days sensitization meeting of 60 participants of the revised law with animal health policy makers (Residential) 	FMARD		4,360,000	4,360,000
Conduct town hall meeting of the livestock value actors on compliance with animal laws and regulation	<ul style="list-style-type: none"> Conduct 1 day town hall meeting of 200 per state with all the livestock value actors on compliance with animal laws and regulation 	FMARD		111,370,000	111,370,000
	<ul style="list-style-type: none"> Upload the animal law and regulation to the ministry website for public domain 	FMARD		10,000	10,000
Conduct sensitization workshop for the revised law with the animal health officers in DVPCS	<ul style="list-style-type: none"> Conduct 2 -day sensitization workshop of 100 persons on the revised law with animal health relevant stakeholder (Residential) 	FMARD		9,440,000	9,440,000
Conduct sensitization workshop for the updated PVS with the animal health officers in DVPCS and state DVS	<ul style="list-style-type: none"> Conduct 2 -day sensitization workshop of 100 persons on the revised law with animal with relevant stakeholder (Residential) 	FMARD		9,624,000	9,624,000

P2: IHR Coordination, Communication, and Advocacy

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

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Complete pending legislative actions for "Nigeria Centre for Disease Control Bill" to give key public health institutions the legal mandate needed to accomplish national goals. (See National Legislation)	<ul style="list-style-type: none"> Costed in National Legislation 	NCDC, FMoH, FMARD, FMoF		0	0
Establish One Health platform at the national level, state level, and LGAs (See Zoonotic Disease)	<ul style="list-style-type: none"> Develop a concept note that provides a model for communication between various MDAs under IHR coordination, and identifies stakeholders. IHR NFP will write to the stakeholder agencies and ask them to identify focal persons for IHR coordination. 	NCDC		10,000	10,000
	<ul style="list-style-type: none"> Hold a 1-day stakeholders meeting of 30 persons to validate the concept note (10 persons from outside Abuja) and establish a new technical working group 	NCDC		2,152,000	2,152,000
	<ul style="list-style-type: none"> Convene the technical working group twice a year 	NCDC		7,084,200	21,252,600
	<ul style="list-style-type: none"> Convene the IHR stakeholders twice a year to review implementation status 	NCDC		4,173,600	12,520,800
	<ul style="list-style-type: none"> Support for IHR NFP secretariat 	NCDC		320,000	1,040,000
Develop All-hazards Standard Operating Procedures (SOPs) and guidelines for IHR coordination between IHR NFP and stakeholders	<ul style="list-style-type: none"> Within each IHR-related stakeholder identify existing SOPs pertinent to IHR coordination and communication (IHR NFP already has SOPs available for coordination, communication between IHR NFP and other stakeholders, and notification); SOPs on the side of the other stakeholders need to be developed 	NCDC		0	0
	<ul style="list-style-type: none"> Use existing biannual stakeholders meeting for each IHR stakeholder to present analysis of existing SOPs and gaps where SOPs need to be developed 	NCDC		0	0
	<ul style="list-style-type: none"> Within the IHR stakeholders, SOPs will have to be improved or developed. 			0	0
Develop database of stakeholder and partners supporting animal health programmes	<ul style="list-style-type: none"> Designate an officer in DVPCS to update and compile the list of partners and other relevant stakeholder supporting animal health activities 	FMARD		0	0
Support the multi-sectoral meeting for joint animal health programme such as AMR, Zoonotic diseases control, border security, laboratory issues	<ul style="list-style-type: none"> Conduct 1-day quarterly meeting of 30 persons with relevant MDAs on joint animal health programme such AMR, Zoonotic diseases control, border security, laboratory issues) 	FMARD		4,420,000	15,028,000
Procurement of Consultants to support Project Implementation	<ul style="list-style-type: none"> Engage 1 consultant per thematic area to develop project strategic plans and support the project implementation 	NCDC	Yes	94,080,000	376,320,000
One Health Stakeholders meeting/IHR quarterly review meeting	<ul style="list-style-type: none"> One day meeting Participants: NCDC IHR focal point (10), FMARD (5), FMOH (5), FMOE (2) IHR 19 thematic area partners (19), international Partners (5) (CDC, PHE, GIZ, WHO, RCDC): Hall, tea break, lunch, water - 45 Participants 	NCDC	Yes	1,689,400	1,689,400
Recruitment of Safeguard consultants to develop a plan for the project addressing (i) compliance	<ul style="list-style-type: none"> Consultancy to provide safeguard, waste management and grievance support to the REDISSE project 	NCDC	Yes	4,158,000	4,158,000

level required (ii) how the treatment of medical waste management					
Monthly Project Review meeting	<ul style="list-style-type: none"> Hold 2-day meeting in Abuja 20: Participants (PCU (6) NCDC each thematic area - (5), FMoH - 2, FMoE - 2, FMoF - 2, FMARD 2) 	NCDC	Yes	871,200	3,484,800
Hold quarterly National Technical Committee	<ul style="list-style-type: none"> Conduct quarterly Technical committee meetings in Abuja hall, accommodation, lunch, tea break, stationery 	NCDC	Yes	30,370,080	30,370,080
Biannual National Steering Committee Meetings	<ul style="list-style-type: none"> Hold biannual steering committee meetings 	NCDC	Yes	6,826,070	27,304,280
Performance Incentive	<ul style="list-style-type: none"> Project Consultants, Monthly communication allowances and travel support t for PCU 	NCDC	Yes	60,600,000	60,600,000
NCDC 2019 Work Plan development	<ul style="list-style-type: none"> 2-day NCDC Leadership/top management retreat to REVIEW STRATEGIC PLAN, develop the goals, objectives and activities for 2019 	NCDC	Yes	1,197,730	1,197,730
Project Management training	<ul style="list-style-type: none"> Support for in-country Project management training and procurement of PM software 	NCDC	Yes	7,635,080	7,635,080
Procurement activities and tenders board meetings	<ul style="list-style-type: none"> Conduct monthly procurement review/tenders board meeting; advertisement of procurement; 	NCDC	Yes	9,711,240	9,711,240
Procurement Consultant	<ul style="list-style-type: none"> Consultancy to support procurement activities of REDISSE 	NCDC	Yes	13,320,000	13,320,000
Support for REDISSE project logistics	<ul style="list-style-type: none"> Running costs for the project office for 12 months 	NCDC	Yes	7,364,500	29,458,000
Attendance of relevant nation and international events	<ul style="list-style-type: none"> Support to NCDC staff to attend local and international conferences and workshops 	NCDC	Yes	30,476,250	30,476,250
World Bank Project management training and project start up workshop	<ul style="list-style-type: none"> Programme start-up workshop with World Bank Team 	NCDC	Yes	16,733,690	16,733,690
Monitoring and Evaluation visits to project sites	<ul style="list-style-type: none"> Quarterly M/E visits to project sites to assess project performance and monitor activities on the field for 6 teams of 2 people 	NCDC	Yes	13,235,904	13,235,904
Establish One Health platform/coordination mechanism at the national and all states	<ul style="list-style-type: none"> Constitute a One Health TWG of 5 persons to draft MOU for the surveillance, laboratory and response including budgetary allocation for priority zoonotic disease across the relevant MDAs 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Conduct multi-stakeholder meetings to review and validate the drafted MOU with 20 participants for 1-day 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Signing of MOU by the relevant stakeholders 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Support the One Health TWG quarterly meetings with 20 participants for 1-day (n-Residential) 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Support the National One Health annual meetings with 100 participants for 3 day (Residential) 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Designate One Health focal point in the relevant MDAs 	NCDC	Yes	0	0
IHR coordination/One Health	<ul style="list-style-type: none"> Support the One Health TWG to develop the roles and responsibilities of the identified One Health focal points for 1-day (To be done at one of the TWG quarterly meetings) 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Support to the REDISSE PCU; Support in development of NAPHS 	NCDC	Yes	45,750,000	45,750,000

P3: Antimicrobial Resistance

P3.1: Antimicrobial resistance (AMR) detection system in place

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish a national steering committee to advise the Honourable Ministers	● Set up a steering secretariat at FMOH/NCDC	NCDC		0	0
	● Identify all stakeholders	NCDC		0	0
	● Develop a TOR for the steering committee: a 1-day meeting for 40 people in Abuja. Representatives will be from MDAs, Regulatory Bodies, the private sector, academia from human, animal, environmental health and food safety institutions and partners (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		5,270,000	5,270,000
	● Facilitate bi-annual 1-day meeting for 40 people (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		10,438,000	41,752,000
Convene regular meeting with all Departments/parastatals to discuss the report, the quarterly AMR activity mapping meeting and areas of integration between partners and agencies	● Advocacy visit to the deputy speaker house committee on health (6 persons will take 1-day visit to the senate; 2 would be from outside Abuja)	NCDC		865,000	1,730,000
	● Disseminate report of the WHO AMR case investment study (Print out and disseminate 1000 copies of report to all stakeholders)	NCDC		750,000	750,000
	● Workshop with 60 stakeholders discuss next steps after AMR case study report, review the ToR for the AMR technical working group via a 2-day workshop held in Lagos and review the NAP to develop operational plan for activities to be implemented in 2018 (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		9,374,000	9,374,000
	● 4-monthly AMR TWG workshop to review progress on NAP implementation (1-day residential workshop of 60 people)	NCDC		22,677,000	90,708,000
	● Virtual monthly meetings from June to September and 1 face-to-face meeting in October annually to plan for Annual National Antibiotic Awareness Week; in the third and sixth month, stakeholders from other States will be invited to Abuja (This includes cost for feeding for all and travels/per diem/accommodation for invited stakeholders etc.)	NCDC		8,051,200	20,128,000
Develop a framework for partnership on pharmaceutical research	● Meetings with NIPRD to develop a framework for partnership for pharmaceutical research convened (1-day meeting, 15 people)	NCDC		2,151,000	2,151,000
Strengthen the “One Health” components in the Nigeria National Action Plan on AMR.	● Collaborate with FMARD to establish a voluntary certification program on rational use of antibiotics in the Agriculture sector by convening annual meetings with FMARD on framework for the program and regular updates on progress made (Two meetings of 30 people from FMOH, NCDC and FMARD will be held in Abuja)	FMARD		4,794,000	19,176,000
	● Hold annual meetings with FMEvN, PMGMAN, PCN, NESREA on tracking healthcare waste and pharmaceutical effluent discharge into the environment	MOE		5,063,000	20,252,000
Establish and implement a Monitoring & Evaluation framework for AMR surveillance	● Engage 2 consultants (1 human, 1 animal) to develop M&E framework/plan for AMR response in human, animal and environmental health	NCDC		1,722,100	1,722,100
	● Hold a 1-day workshop on the validation/implementation of M&E plan for 40 AMR stakeholders (human, agriculture, environment) (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.)	NCDC		1,675,000	1,675,000

Create a database for AMR and AMU Surveillance from human health facilities, farms, feedmills, vet clinics and environment	<ul style="list-style-type: none"> Engage an IT consultant for 10 days to set an electronic data storage and sharing system on AMR and AMU surveillance and Research in humans, creating interface for human, animal and environment Engage IT consultant to develop mobile platform and online database for data storage (3 month) for animal and environment AMR surveillance Print National AMR response and control research in high-impact journal and showcase in newspapers (Publish in newspaper twice a year in two national dailies and 5 articles per year) 	NCDC		1,796,000	2,694,000
		FMARD		898,000	1,796,000
		NCDC		1,700,000	6,800,000

P3.2: Surveillance system for infections caused by AMR pathogens

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish and integrate national surveillance system on AMR across human, animal and environment	<ul style="list-style-type: none"> Organise a 4-day training workshop with 30 stakeholders on human AMR surveillance system to provide structure, guide operations; training on antimicrobial susceptibility testing, data analysis and WHONET reporting (This includes cost for travels/per diem/feeding/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) Engage a consultant for 10 days to develop protocol/guideline/tools development for human AMR surveillance system Printing and distribution of 400 copies each (AMR surveillance for human health) of developed guidelines/protocols/tools Organise a 2-day annual workshop of 15 lab stakeholders in six geopolitical zone to review progress on the implementation of AMR surveillance integration (This includes cost for travels/per diem/feeding/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) 	NCDC		8,582,000	8,582,000
		NCDC		898,000	898,000
		NCDC		600,000	600,000
		NCDC		15,100,000	60,400,000
Conduct AMR diagnostic capacity assessment of laboratories to selected sentinel sites for reporting into GLASS across human, animal and environmental health institutions and designate AMR National Reference Laboratory for human and animal health	<ul style="list-style-type: none"> 5-person team to visit 5 human, animal and environment laboratories in 2018 and 10 laboratories from 2019 to 2022 should be assessed for AMR surveillance 	NCDC		1,374,600	4,123,800
	<ul style="list-style-type: none"> Procure equipment, materials, antibiotic panels, consumables and data reporting tools biannually, to support the 30 human health facilities, 6 labs from animal health and 2 environmental health laboratories 	NCDC		0	0
Establish internal and external Quality Assurance programs at designated laboratories	<ul style="list-style-type: none"> Procure EQAs for human health laboratories for Bloodstream, enteric and urinary infections via enrollment in EQA 	NCDC		0	0
Establish terms and concept an AMR Reference Laboratory and network system for animal and environmental health laboratories	<ul style="list-style-type: none"> Set up a 6-man task team to compile documents, develop TOR 	FMARD		0	0
	<ul style="list-style-type: none"> Engage a consultant to conduct an assessment of existing statutory instruments, to identify related gaps 	FMARD		494,000	494,000
	<ul style="list-style-type: none"> A workshop of 20 legal officers from agriculture, health and environment and other Ministries, Department and Agencies and organisations to review reports, propose an amendment, and draft new regulations where none exists 	FMARD		482,000	482,000
	<ul style="list-style-type: none"> High-level stakeholders meeting to review and approve the proposed amendment and/or new regulations with a press corps 	FMARD		450,000	450,000

	<ul style="list-style-type: none"> ● Advocacy visits and engagement with the legislature and executive arms of government for buy-in and legal backing ● Designate National Veterinary Research Institute (NVRI) as AMR reference Lab for animal health ● Engage a consultant for 10 days to develop and finalize AMR surveillance system guidelines for animal AMR surveillance system ● Organize a 4-day workshop to train 20 lab personnel in animal AMR surveillance system to provide structure, guide operations; training on antimicrobial susceptibility testing, data analysis and reporting ● Procurement of Lab equipment (2 HPLC machine, antimicrobial sensitivity discs, dispensers, reagent and other consumables) for animal health ● Procure EQAs for animal health laboratories for Blood stream, enteric and urinary infections via enrollment in EQA programs (ensure costing is captured under JEE National Lab system technical area) 	NCDC		267,000	267,000
		FMARD		0	0
		FMARD		898,000	898,000
		FMARD		6,256,000	6,256,000
		FMARD		0	0
		FMARD		0	0

P3.3: Healthcare-associated infection (HCAI) prevention and control programs

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen HCAI surveillance and prevention programmes	<ul style="list-style-type: none"> ● Inaugurate National Infection Prevention and Control (IPC) Technical Working Group across human, animal and environmental health sector and develop draft of harmonized National IPC policy and review the National IPC training manual and module for frontline human healthcare workers by holding a 3-day workshop with 20 stakeholders ● Finalise/validate harmonized National IPC policy by holding a 2-day workshop with 40 stakeholders 	NCDC		4,232,000	4,232,000
	<ul style="list-style-type: none"> ● Organise a 2-day annual workshop of 15 frontline healthcare workers (per state) in IPC committees of public hospitals to develop IPC action plan in six geopolitical zones (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) ● Train 10 frontline health workers at human hospitals on surveillance system for HCAI in 37 government hospitals for 3 days by geopolitical zones to monitor and evaluate IPC measures including surveillance for HCAI and outbreak response 	NCDC		6,222,000	6,222,000
Support, monitor and evaluate infection prevention and control programs in collaboration with National IPC focal point and stakeholders	<ul style="list-style-type: none"> ● Organise a 2-day annual workshop of 15 frontline healthcare workers (per state) in IPC committees of public hospitals to develop IPC action plan in six geopolitical zones (This includes cost for travels/per diem/food/accommodation/venue for invited stakeholders, stationeries, writing materials etc.) ● Train 10 frontline health workers at human hospitals on surveillance system for HCAI in 37 government hospitals for 3 days by geopolitical zones to monitor and evaluate IPC measures including surveillance for HCAI and outbreak response 	NCDC		15,376,000	15,376,000
	<ul style="list-style-type: none"> ● Train 10 frontline health workers at human hospitals on surveillance system for HCAI in 37 government hospitals for 3 days by geopolitical zones to monitor and evaluate IPC measures including surveillance for HCAI and outbreak response 	NCDC		38,814,000	77,628,000
Assess infection prevention and control facilities and advocate for resources to support IPC nationally and in all healthcare facilities	<ul style="list-style-type: none"> ● Adapt IPC assessment tool and review with assessors pre-evaluation ● Advocacy/Sensitization meeting to Director PH, State Epidemiologist, CMD, CMAC and HODs and assessment of IPC programs in 37 healthcare facilities by 2-man team for 1-day 	NCDC		3,443,000	10,329,000
	<ul style="list-style-type: none"> ● Advocacy/Sensitization meeting to Director PH, State Epidemiologist, CMD, CMAC and HODs and assessment of IPC programs in 37 healthcare facilities by 2-man team for 1-day 	NCDC		3,443,000	10,329,000
Introduce IPC programme in veterinary practice at the veterinary hospitals/clinics and biosecurity at farm level in aquatic and terrestrial animal husbandry.	<ul style="list-style-type: none"> ● Conduct sensitization on IPC and animal biosafety in veterinary practice, aquatic and terrestrial animal husbandry via a 1-day stakeholder meeting with 40 representatives in Abuja 	FMARD		1,072,000	3,216,000
	<ul style="list-style-type: none"> ● Establish/strengthening existing IPC/Biosafety committees /teams within existing committees in tertiary hospitals. Constitute IPC/Biosafety committees in each of the 9 Veterinary Teaching Hospitals (VTH). Organize a 2-day training workshop for 50 members of the committee (5 per VTH, 5 from national) 	FMARD		9,476,000	9,476,000
	<ul style="list-style-type: none"> ● To introduce IPC measures into veterinary practice and aquatic and terrestrial animal husbandry and implement biosecurity measures at all levels of animal production (terrestrial and aquatic) and feed milling. Hold a 2-day sensitization workshop on the importance of biosecurity measures on farms and feed mills at the 6 geopolitical zones (45 persons per geopolitical zone) 	FMARD		21,297,000	42,594,000

	<ul style="list-style-type: none"> Develop specific biosecurity/IPC guidelines, protocols and SOPs for terrestrial and aquatic animal husbandry, and in veterinary practice. Two 5-day workshops for 20 persons in Abuja to develop/adapt biosecurity/IPC training materials for animal health and animal production (terrestrial and aquatic). Training and re-training of Veterinarians & para-veterinary staff, feed millers, farmers, transporters, live-bird-markets, surveillance and communication agents on biosecurity/IPC measures. 2-Day training workshops for 45 persons per geopolitical zone (7 persons per State) Distribute 1000 printed bio-security and biosafety guidelines for animal health and animal production (terrestrial and aquatic) for terrestrial and aquatic animals and in veterinary practice to the 36 States and FCT Promote biosafety, personal hygiene at animal farms, Veterinary outfits and food animal processing plants and feed millers. 6 groups of a team of 3 (FMARD, NAQS, NAFDAC) to pay supervisory visits to farms and feedmills in the 6 geopolitical zones at 2-day/state Develop IPC/Biosafety program for Animal Health Clinics/ Hospitals (with the inclusion of environmental management and hospital waste management components) A) Hire a consultant to support the IPC/Biosecurity Program for Animal Health for 1 month Conduct a 5-day meeting to develop guidelines for the Biosafety/IPC Program for Veterinary Clinics/Hospitals and Vet laboratories x 15 people in Abuja A 2-days validation workshop for 40 people in Abuja (15 persons from outside Abuja) 	FMARD		7,380,000	7,380,000
Improve hand hygiene, food hygiene and waste disposal across all sectors	<ul style="list-style-type: none"> Develop guidelines and IEC materials to ensure proper waste disposal and management and guideline for wholesome and hygienic, fish, meat, dairy & dairy products, terrestrial & aquatic animal transporters, handlers and feed/feed milling. A) Conduct a 5-day workshop to develop guidelines for wholesome and hygienic, fish, meat, dairy & dairy products, terrestrial & aquatic animal transporters, handlers and feed / feed milling x 10 people in Abuja Advocacy to government to provide safe potable water for animal production & processing. A team of 5 to pay advocacy to government. Development of advocacy tools for Advocacy visit Sensitization and awareness campaigns to farming communities to provide safe potable water for animal production & processing. Organize 2-days sensitization workshops for 45 people per geopolitical zones with a 2-man team Control centers (NCDC and Ministry of Labour) organize workshops and training on occupational safety for waste collectors and tertiary hospital staff. Organize 2-days sensitization workshops for 45 people per geopolitical zones Training on occupational safety for waste collectors and their employers as well as hospital staff. 2-days Training workshops for 45 persons per geopolitical zone (7 persons per State) Print and distribute 4000 copies IEC materials annually to schools Promotion of Hand hygiene at the community and in schools. Annual sensitization of teachers. 1-day sensitization for 15 Principals per State, 2 teachers from UBE per state and 3 from National. Cost for Refreshments, DSA and local transportation 	FMARD		4,310,000	4,310,000
Improve access to safe and potable water	<ul style="list-style-type: none"> Conduct advocacy to relevant stakeholders on provision of potable water at all healthcare facilities and communities Conduct advocacy to relevant stakeholders to provide logistic support for safe healthcare waste management Provision of water quality test-kits and routine laboratory testing of water for aquatic and terrestrial animals 	MOE		13,526,000	40,578,000
		MOE		13,526,000	40,578,000
		MOE		600,000	600,000
		MOE		8,470,000	31,339,000
		MOE		0	0
		MOE		0	0
		FMARD		0	0

P3.4: Stewardship Activities

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop and Implement antimicrobial stewardship programs across human, animal and environmental health	<ul style="list-style-type: none"> Hold 5-day national workshop with 50 stakeholders to define TOR, develop AMS Policy for Nigeria to develop antimicrobial stewardship working manuals for hospitals, Vet clinics and community pharmacies in Nigeria. (This includes cost for travels/per diem/feeding/accommodation/venue for invited stakeholders etc.) 	NCDC		12,526,000	12,526,000
Promote optimal prescribing and dispensing of antimicrobials in humans and animals and Support participation of tertiary health facilities in Nigeria in AMS point prevalence survey	<ul style="list-style-type: none"> 3-day Workshop for 40 stakeholders in animal health to adapt treatment guidelines for animals in accordance with OIE terrestrial and aquatic code and develop essential veterinary antimicrobial list into the veterinary formulary. 	FMARD		3,116,000	3,116,000
	<ul style="list-style-type: none"> Printing and distribution of 1,000 updated EDL, STGs for human health workers and 1,000 updated treatment guidelines and veterinary formulary to Vet workers at all levels of care 	FMARD		3,000,000	3,000,000
Conduct Assessment (Survey) of current practices of AMU in humans and animals	<ul style="list-style-type: none"> Engage two consultants and 4 data collectors for one-month to obtain baseline data on antimicrobial consumption in 1 tertiary, 1 secondary, 1 primary health facilities, 1 Veterinary facility and 2 community pharmacies in the 6 geopolitical zones of the country. (This includes cost for travel/per diem/food/accommodation etc.) Develop and implement education and training on rational drug use for human and animal health in line with updated STGs. <ul style="list-style-type: none"> Hold a 1-day workshop meeting with 30 stakeholders from Family Health department in the FMOH to incorporate AMR prescribing competencies into the education (train the trainer) programs within Mother and Child health clinical activities, Department of Hospital services & Food and Drug Services in FMOH, NPHCDA A 2-day meeting with 50 stakeholders to develop one health training materials and manuals on Rational Drug Use Hold a 3-day Training workshop for 30 participants/State with NPHCDA for human and animal health workers are secondary and tertiary levels of care to cascade to facilities and to integrate rational antibiotic use into the PHC PAC guidelines 4-person team visit 37 states 2-days annually monitoring visits to evaluate compliance and impact, antimicrobial PPS report and conduct twice yearly evaluation visits to facilities. 	NCDC		10,236,000	10,236,000
Pilot AMS program including PPS in 12 health institutions in the 6 geo political zones (1 tertiary and 1 secondary) and scale up to 27 tertiary and secondary health facilities respectively.	<ul style="list-style-type: none"> Procure information communication devices such as computers and install required antimicrobial consumption monitoring software at the pilot facilities and scale up to the other facilities. 	NCDC		12,975,000	51,900,000
	<ul style="list-style-type: none"> Engage consultant for 10 days to develop protocol for the training of AMS Committees on data collection protocols; PPS, antimicrobial use/resistance reporting, auditing and information sharing mechanisms in humans 	NCDC		898,000	898,000
	<ul style="list-style-type: none"> Create and maintain an online continuous educational module on Antimicrobial stewardship for one health workers. 	NCDC, FMARD		0	0
Organize 2-day workshop with 30 stakeholders to develop and update relevant prescribing policies and legislative framework of VCN, PCN on antimicrobial use and AMR control.	<ul style="list-style-type: none"> Organize 2-day workshop with 30 stakeholders to develop and update relevant prescribing policies and legislative framework of VCN, PCN on antimicrobial use and AMR control. 	NCDC		4,976,000	4,976,000

1-day advocacy visit to policy makers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation)	<ul style="list-style-type: none"> 1-day advocacy visit to policymakers with two stakeholders each from PCN, VCN and NAFDAC to ensure complete enforcement of restriction on over the counter sale of antibiotics. (This includes cost for advocacy kits and transportation) 	NCDC		64,000	64,000
Conduct a nationwide baseline behavioural study on AMR awareness, KAPP. Use baseline findings to develop and disseminate an AMR SBCC materials in English, Pidgin haus, Igbo and Yoruba.Activity	<ul style="list-style-type: none"> Assessment of Antibiotics awareness in 10 geopolitical zone. 5 teams of 2 persons per team 	NCDC		5,280,000	10,560,000
Develop and print risk communication tools for AMR awareness in Humans and animals	<ul style="list-style-type: none"> Pretesting of SBCC materials by 2 man-team per geopolitical zone for 60 participants Development of 10000 SBCC materials on AMR in humans and animals in English, Pidgin, Igbo, Hausa and Yoruba for the community (This includes cost for pretesting, development and dissemination of 100000 copies) 	NCDC		1,344,000	1,344,000
Review of school curricula (primary, secondary and tertiary) and training guidelines for teachers and health professionals in human, animal and environment to ensure appropriate inclusion of AMR, IPC, biosecurity and antimicrobial stewardship	<ul style="list-style-type: none"> 1-days review meeting with 50 relevant stakeholders to update school curricula and training guidelines with Ministry of Education and NYSC (This includes cost for travel/per diem/ feeding/accommodation/venue for the invited stakeholders. 	NCDC		1,306,000	1,306,000
Organise seminars and training for relevant stakeholders such as media, PPMV, animal health inspectors, clinical veterinarians, livestock producers, aquaculture farmers, toll milers, feed manufacturers, etc.	<ul style="list-style-type: none"> Conduct a 1-day seminar of 120 relevant Stakeholders to raise awareness on human, animal and environment antibiotics resistance including NAFDAC focal person to discuss integration of AMR messages in TV programs and channels conducted and AMR National Behaviour Change Communication Consultative Group (NBCCCG), Sensitise drug retailers, life stock/ fish marketers and butchers on AMR 	NCDC		3,086,000	3,086,000
Incorporate AMR activities into through existing WASH programs within NPHCDA and Family health and other agencies	<ul style="list-style-type: none"> Meeting with UNICEF/GARP/WHO to plan on how WASH can be used to create awareness conducted AMR messaging integrated into the National Cholera WASH Campaign in 2018 Coordinate social media activities with other agencies to promote hand hygiene in the community during campaigns Record review of vet clinics/ hospitals for data on drug use in the treatment of animals. Quarterly sampling of animal feeds, water, meat, milk, eggs, fish, honey in 6 big farms, abattoirs, feed mills per state (2 man team for 5-days/state) 			0	0
Conduct nationwide active surveillance for AMR in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops	<ul style="list-style-type: none"> Engage a consultant to develop a surveillance protocol for AMU in farms, abattoirs, feed mills, veterinary teaching hospitals, fish farms, fish markets and meat shops (1 consultant to work over 10 days Training of State Ministry of Agriculture staff and LGA, veterinarians (public and private), veterinary paraprofessionals on AMR, AMU surveillance and sample collection and transportation (50 participants over 5-days each) 	FMARD		4,750,000	17,575,000
		FMARD		898,000	898,000
		FMARD		57,760,000	213,712,000

P4: Zoonotic Diseases

P4.1: Surveillance systems in place for priority zoonotic diseases/pathogens

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Update list of top priority zoonotic diseases through a "One Health" deliberation process	<ul style="list-style-type: none"> Conduct multi-stakeholders meetings of 35 participants to review key priority zoonotic diseases annually for 2-day. (Residential) 	NCDC		0	0
	<ul style="list-style-type: none"> Conduct multi-stakeholder meetings of 20 participants to validate the reviewed key priority zoonotic diseases annually for 1 day. (Residential) 	FMARD		0	0
Develop integrated zoonotic disease surveillance system	<ul style="list-style-type: none"> Engage a consultant for 4 weeks to assess the existing animal disease surveillance system (NADIS/ARIS) and to also develop the operational plan for the integration of zoonotic disease surveillance system 	FMARD, NCDC		0	0
	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop SOPs, guidelines and protocols for reporting priority zoonotic disease of PHEIC to the IHR NFP 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct multi-stakeholder's meetings of 20 participants review and validation of the draft SOPs, guidelines and protocols for reporting priority zoonotic disease of PHEIC to the IHR NFP. 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct a 2-day training of 50 animal disease reporting officers in 2 batches (37 Federal and 37state Epid officers, 10 veterinary teaching hospital staff, 2 NVRI staff, 6 Quarantine and 8 private veterinarians on the core activities of the integrated zoonotic disease surveillance system 	FMARD		0	0
	<ul style="list-style-type: none"> Procure 100 laptops for the animal disease reporting officers 	FMARD		0	0
	<ul style="list-style-type: none"> Engage one consultant for 4weeks to develop the risk mapping for priority zoonotic disease 	FMARD		1,706,000	1,706,000
Develop risk mapping for four priority zoonotic diseases using one health approach	<ul style="list-style-type: none"> Conduct expert elicitation of 40 participants workshop for 5-days to support the consultant in developing risk mapping 	FMARD		11,853,000	11,853,000
	<ul style="list-style-type: none"> 1-day stakeholder meeting with 20 participants to validate the report of the risk mapping 	FMARD		5,829,000	5,829,000
	<ul style="list-style-type: none"> Printing of 500 copies of the validated risk mapping 	FMARD		500,000	500,000
	<ul style="list-style-type: none"> Dissemination of 400 copies of the validated risk mapping 	FMARD		740,000	740,000
	<ul style="list-style-type: none"> Constitute a One Health TWG of 5 persons to draft MOU for the surveillance, laboratory and response including budgetary allocation for priority zoonotic disease across the relevant MDAs 	NCDC		0	0
Establish One Health platform/coordination mechanism at the national and all states	<ul style="list-style-type: none"> Conduct multi-stakeholder meetings to review and validate the drafted MOU with 20 participants for 1-day 	NCDC		0	0
	<ul style="list-style-type: none"> Signing of MOU by the relevant stakeholders 	NCDC		0	0
	<ul style="list-style-type: none"> Support the One Health TWG quarterly meetings with 20 participants for 1-day (n-Residential) 	NCDC		0	0
	<ul style="list-style-type: none"> Support the National One Health annual meetings with 100 participants for 3-day (Residential) 	NCDC		0	0
	<ul style="list-style-type: none"> Designate One Health focal point in the relevant MDAs 	NCDC		0	0
	<ul style="list-style-type: none"> Support the One Health TWG to develop the roles and responsibilities of the identified One Health focal points for 1-day (To be done at one of the TWG quarterly meetings) 			0	0

Strengthen laboratory detection for priority zoonotic diseases/pathogens (● Hire a consultant to conduct needs assessment for human laboratories, six VTH laboratories across the geopolitical zones for the diagnosis of zoonotic diseases	NCDC/F MARD/F MOH		0	0
	● Procurement of reagents, consumables, and equipment for the six VTHs (Reagents – 2000 RDT kits; Lassa fever, Rabies, Brucellosis and Avian Influenza; consumables – 100,000 needle and syringes, 40,000 litres of disinfectant, 10,000 vacucontainers, 20,000 test tubes, 20,000 gloves, 5000 PPEs; Equipment – 6 PCR machines, 10 bio-safety cabinets, 20 electron microscope etc.	FMARD		423,400,00 0	423,400,000
	● Conduct training of 25 laboratory personnel on detection of priority zoonotic diseases	NCDC		13,450,000	33,625,000
	● Engage a consultant for 4 weeks to develop Laboratory Information Management System (LIMS) for animal health	FMARD		1,290,000	1,290,000
	● Train 40 laboratory information officer on LIMS	FMARD		0	7,658,000
	● Provision of ICT infrastructural facilities (40 laptops, 40 modems	FMARD		0	10,400,000
	● Monthly internet subscriptions for 40	FMARD		0	2,400,000

P4.2: Animal Health and Veterinarian Workforce

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen technical capacity for animal health workforce (Zoonotic disease control, communications, RDTs, etc.)	● Engage a consultant for 1 week to conduct gap analysis on the technical capacity of the animal health work force in the area of zoonotic disease control, risk communication, diagnoses etc.	FMARD		1,438,000	1,438,000
	● Conduct multi-stakeholder meeting to validate the gap analysis report with 20 participants for 2days	FMARD		3,534,000	3,534,000
	● Training of 100 animal health workers for 5-days in 2 batches (Residential)	FMARD		29,270,000	29,270,000
Advocate/Support for the recruitment and deployment of animal health epidemiologists into the Public Health sector at the State and national levels	● Conduct multi-stakeholders meeting with the 37 state commissioners' of agriculture and 37 directors of veterinary services to discuss on the sustainability plan for the advanced and frontline FETP program, recruitment and other relevant workforce issues for 2-days (Residential)	FMARD		13,659,000	13,659,000

P4.3: Mechanisms for responding to infectious zoonoses are established and functional

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish One Health platform for responding to infectious zoonotic diseases (1 – 3 have been captured under indicator P 4.1 activity 5)	<ul style="list-style-type: none"> • Constitute a One Health TWG to draft MOU for response activities including budgetary allocation for priority zoonotic disease across the relevant MDAs • Conduct multi-stakeholder meetings to review and validate the drafted MOU with 20 participants for 1-day • The signing of MOU by the relevant stakeholders • Engage a consultant to develop One Health emergency and response plan for selected priority zoonotic diseases • Training of One Health response team (1 Medical 6) Epidemiologist, 1 Veterinarian, 2 Laboratorian, 1 environmental health officer, 1 wildlife officer and 1 communication officer) in 37 states and at federal level during outbreak situation for 5-days • Conduct simulation exercises for 20 teams to test the emergency and response plan for 2 selected zoonotic diseases • Conduction after action review for at least two major zoonotic disease outbreaks to improve the response mechanism with 40 participants for 2-days (residential) 	FMARD, NCDC, MoE		0	0
Build technical capacity for zoonotic disease of Disease Surveillance Officers and Animal Surveillance Officers at LGA level	<ul style="list-style-type: none"> • Identify and designate animal disease surveillance points/officer based on the report of the risk mapping from 591 to 1000 surveillance points • Training of 1001 existing and new vet surveillance for agents on response to infectious zoonotic diseases • Engage a consultant for 1 week to develop and design SOPs, guidelines and protocols on selected priority zoonotic disease for 1 week 	FMARD		0	0
Develop and implement a national strategy for multi-sectoral response to zoonoses	<ul style="list-style-type: none"> • See under IHR & preparedness and response 			102,943,400	102,943,400
Conduct prioritization of TADs and zoonotic diseases	<ul style="list-style-type: none"> • Engage consultants to conduct expert, elicitation exercise, review and update the list of priority zoonotic diseases and TADs for human and animal health surveillance system 2. Conduct two multi-stakeholder meetings of 50 & 65 persons for the adoption and validation of the report respectively (3 days residential) and 14. Print 2500 copies and disseminate 2000 copies of the report 	FMARD Yes		494,000	494,000
				14,748,284	14,748,284

P5: Food Safety

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

Strategic Action	Detailed Activities	MDA	Funded	Cost (N)	Cost (N)
				2018-2019	2018-2022
Strengthen inter-sectoral and interdisciplinary collaboration, coordination and information-sharing on food safety and foodborne disease.	● Quarterly meetings of 40-member Food Safety Committee.	FMOH		15,228,000	35,532,000
	● Bi monthly sensitization of the parliamentarians at the upper and lower house.	FMOH		288,000	288,000
	● Printing 2000 copies of Food Safety & Quality Act	FMOH		4,658,000	4,658,000
	● Dissemination of the Act to 36 states of the federation.	FMOH		131,200	393,600
	● Engage a communications consultant to develop draft SOP for Food Safety, IEC materials in English	FMOH		3,600,000	3,600,000
	● Conduct a stakeholders' meeting of 20 persons for 1-day to validate the SOP.	FMOH		1,444,000	1,444,000
	● Engage a web development consultant to develop prototype website on food safety (for publications, reports, research, interventions etc.).	FMOH		3,600,000	3,600,000
	● Consultant to work with Food Safety Programme (FMOH) to develop a draft web content	FMOH		0	0
	● Conduct stakeholders' meeting of 30 people for 2-days to validate web content and site structure.	FMOH		2,556,000	2,556,000
	● Upload files to registered domain.	FMOH		0	0
Strengthen food safety capacity including relevant laboratory capacity in the public health, food safety, and agriculture and veterinary sectors at central, state and district levels.	● Engage consultant to perform baseline assessment of laboratory capacities and identify at least 1 laboratory per state (37 labs) for standardization and accreditation to ISO certification for foodborne disease detection	NCDC		0	0
	● Consultant to work with foodborne illness detection & response collaborative team to develop draft SOPs for sample collection, transportation, storage and laboratory testing requirements for food safety threats.	NCDC		0	0
	● Conduct stakeholders' meeting of 40 persons for 2-days to validate the draft SOPs	NCDC		0	0
	● Training of 2 laboratory personnel in each of the 37 laboratories to ensure capacity and adherence to protocols	FMOH		5,876,800	17,630,400
	● Engage consultant to perform baseline assessment of laboratory capacities to detect, report and survey animal samples at least 1 laboratory per state (37) for standardization and accreditation to ISO certification for foodborne disease detection	FMARD		0	0
	● Consultant develop draft SOPs for analysis of animal samples for detection, reporting and surveillance	FMARD		0	0
	● Conduct stakeholders' meeting of 40 persons for 2-days to validate the draft SOPs	FMARD		0	0
	● Biannual review of foodborne disease and animal disease laboratory by the National Food Safety Committee.	FMARD		0	0
	● Review of the laboratory assessment for food safety capacity specifically, and defining specific needs for laboratory equipment and capacity upgrades (animal health and human health)	FMOH		0	1,380,000

	<ul style="list-style-type: none"> • Equipment upgrades and procurement for food safety capacity based on the results of the above report 	FMOH		0	300,000,000
Strengthen surveillance of foodborne disease and monitoring of contamination in the food chain and enhance foodborne outbreak and emergency investigations and response.	<ul style="list-style-type: none"> • Establish a foodborne illness detection & response collaborative team • Inaugurate of the team • Conduct 1-day quarterly meetings of the 20 member committee. • Engage two consultant, in collaboration with the foodborne illness detection & response collaborative team, to develop draft reporting format and draft SOPs for: <ul style="list-style-type: none"> (a) Surveillance foodborne diseases; (b) Monitoring foodborne disease; (c) Detection of foodborne diseases; and (d) Responding to foodborne disease events • Conduct Stakeholders' meeting to validate the drafted reporting format and SOPs. • Validated documents presented to the National Council on Health • Conduct a 10-man sensitization exercise to 36 State and FCT on the use of the reporting SOP to ensure prompt response to food safety events. • Quarterly review of the foodborne disease surveillance, detection and response system by the National Food Safety Committee. • Conduct periodic training for foodborne illness detection & response collaborative team members and other key frontline officers (40 persons). • Engage a consultant to oversee the assessment of the current state of the National Animal Disease Information System (NADIS). • Consultant to work with FMARD to review and develop draft checklists, SOPs and guidelines to ensure proper surveillance of foodborne diseases of animal origin. • Conduct stakeholders' meeting of 40 persons for 2-days to validate the draft checklists, SOPs and guidelines. • Presentation and approval of the validated documents at the National Council on Agriculture & Rural Development (NCARD) • Regional ToT for 30 agricultural extension workers & veterinarians in 6 geopolitical zones (i.e. 5 per state) on the use of the approved documents • Production and Dissemination of the documents nationwide • 16. Quarterly review of the system by the National Food Safety Committee • Engage a consultant to conduct a nationwide assessment on Drug Residues in Meat, Milk, Eggs, Honey, Fish and other Agricultural products. • Consultant to work with FMARD to develop zero-draft National Drug Residue Monitoring plan • Conduct stakeholders' meeting of 40 persons for 2-days to validate the zero-draft National Drug Residue Monitoring plan • Presentation and approval of the validated plan at the National Council on Agriculture & Rural Development for nationwide implementation 	FMOH	Yes	4,800,000	4,800,000
Develop the certification protocol, guideline for the inspection of facilities to export live animal, animal byproducts and animal; and procure inspection vehicle	<ul style="list-style-type: none"> • Hire a consultant to develop the certification protocol, guideline for the inspection of facilities to export live animal, animal products and animal byproducts 	FMARD		1,297,050	1,297,050

	<ul style="list-style-type: none"> ● Procurement of 4 inspection and monitoring vehicle for certification of facility use for export of animal, animal products and animal byproducts ● Conduct periodic active surveillance for all the facilities use for export of animal, animal products and animal byproducts biannually 	FMARD		140,000,000	140,000,000
Develop animal identification and traceability system for animal and animal product as requirement for diseases control and food safety purpose	<ul style="list-style-type: none"> ● Hire a consultant for 4 weeks to develop animal identification and traceability system for animal and animal product as requirement for diseases control and food safety purpose ● High level consultative meeting with internet service provider (MTN, GLO,) to develop strategy and MOU for the implementation of animal identification and traceability ● Conduct 2-day meeting of 30 persons to validate the system ● Procurement of tools for the traceability (cyber, 2 tracker machines, 10 laptops, identification bio-chips,) ● Procurement of office facility (5 table, 10 chair, 5 cabinet) ● Procurement of band width and internet subscription) ● Conduct 5-day training of 20 persons bi-annually on animal identification and traceability 	FMARD		1,770,000	1,770,000
		FMARD		1,074,000	1,074,000
		FMARD		2,266,000	2,266,000
				0	0
		FMARD		2,300,000	2,300,000
		FMARD		15,540,000	62,160,000
		FMARD		4,458,000	4,458,000

P6: Biosafety and Biosecurity

6.1: Whole-of-government biosafety and biosecurity system is in place for human, animal, and agriculture facilities

Strategic Action	Detailed Activities	MDA	Funded	Cost (N)	Cost (N)
			2018-2019	2018-2022	2018-2022
Develop multi-sectoral legislation and regulations on biosafety and biosecurity, including sustainable funding mechanisms	<ul style="list-style-type: none"> Initiation of institutional community to support professionals working on biosecurity and laboratory biosafety and enlisting of new ones by holding a residential stakeholders meeting of 30 people for 1-day with office of the national security adviser(ONSA) as the lead organisation . Hire staff to oversee drafting of the national policy, must coordinate stakeholders between all sectors Hire an international consultant for one week to draft a laboratory Biosafety and Biosecurity bill for submission to the legislature. Submission of draft bill for legislature Hold a 2, 3-day residential expert meetings of ten(10) invited experts to review draft of B/B bill. Hold a 1-day non-residential relevant stakeholders meeting of eight (8) MDAs on identifying budgets and their complementarity for B/B 	ONSA		3,096,800	3,096,800
Establish a multi-sectoral national coordination, oversight and enforcement mechanism for response and control of dangerous pathogens.	<ul style="list-style-type: none"> Set up a Ten(10) man multi-organisational, multidisciplinary task force on biosecurity pending the assent to proposed draft bill coordinated by ONSA who will hold a bi-monthly meeting for each year. Invite one (1) Consultant to develop indicators for an appropriate database for inventorying and tracking dangerous pathogens nationwide and to create a coordination mechanism for the sharing of information between human and animal health facilities Invite two(2) experts to guide in developing an adoptable SOP for nation-wide response procedure and prepare facility audit reporting framework Hold a1-day meeting for 20 persons to finalize and adopt the draft SOPs and the recommended software. SOPs - printing and dissemination costs 	NCDC ONSA		3,168,000	3,168,000
Perform an audit of institutions and locations with dangerous pathogens and toxin control in order to develop a plan for consolidation.	<ul style="list-style-type: none"> Organise and hold a one-day pre-takeoff workshop for six (6) audit survey teams of 3 members each, coordinated by the national task force survey team Conduct a nationwide survey by the six(6) audit survey teams on institutions/facilities that deal on highly dangerous & infectious agents in the country within 20 days; Hire an IT specialist to develop an inventory/database of all institutions and facilities that deal with dangerous pathogens and other hazardous agents. IT costs for hosting and running database Hold a1-day non-residential workshop of 15 persons to review activity and test run the inventory/database developed. Conduct an annual independent audit visit to the institutions and facilities in the 6 geopolitical zones of the country by selected team of 2 experts for 5days. Hold a 2-day residential annual meeting of all (30) stakeholders to finalize report on the audit of the facilities. 	ONSA		2,858,000	2,858,000
				28,632,000	28,632,000
				14,490,000	28,980,000
				4,674,228	18,696,912
				1,504,600	3,009,200
				22,385,000	89,540,000
				3,880,000	15,520,000

Conduct needs assessment to identify gaps in current biosafety and biosecurity training	<ul style="list-style-type: none"> Set up a sub-task force team of 6 persons on biosecurity and laboratory biosafety training programmes coordinated by the national team. 	ONSA		837,200	837,200
	<ul style="list-style-type: none"> Hire a consultant for 1 month to develop emergency response plans for events involving dangerous pathogens: use of high containment facilities, accidental exposure etc. 	ONSA		0	1,290,000
	<ul style="list-style-type: none"> Hold a 1-day multi-stakeholder meeting of 20 participants to review and validate the above (non-residential) 	ONSA		0	1,847,200
	<ul style="list-style-type: none"> Hold a 1-day meeting of sub taskforce (10 persons) to draft a guide on setting up institutional biosecurity training programs. 	ONSA		0	2,324,000
	<ul style="list-style-type: none"> Hold a 1-day multi-stakeholder meeting of 25 participants to review and validate the guide (non-residential) 	ONSA		841,000	3,364,000
	<ul style="list-style-type: none"> Hire a consultant for 24 weeks to develop online training programmes on biosecurity and biosafety and network with other developed and international institutions. 	ONSA		7,290,000	7,290,000
	<ul style="list-style-type: none"> IT needs for online training programme 	ONSA		15,250,000	30,500,000
	<ul style="list-style-type: none"> Hold a 1-day multi-stakeholder meeting of 20 participants to review and validate the assessment report (non-residential) 	ONSA		706,000	706,000
	<ul style="list-style-type: none"> Provide a 3 day training workshop of 30 participants from relevant institutions on global best practices for facilities where dangerous pathogens are handled resulting to national recommendations on continuous training and re-training.(Residential) 	ONSA		5,250,000	21,000,000
		ONSA		690,000	690,000
Establish training and oversight for personnel reliability programs and ensure compliance to biosafety and biosecurity rules and regulations.	<ul style="list-style-type: none"> Hire a consultant to develop a database of National and international experts in Biosafety and Biosecurity for training and national capacity building 	ONSA		690,000	690,000
	<ul style="list-style-type: none"> Conduct two(2) inspections and monitoring exercise (initial and midterm) by a 12 man compliance team to ensure compliance with regulations, procedures and terms and conditions. 	ONSA		0	44,770,000
	<ul style="list-style-type: none"> Set up a sub-task force team of 6 persons on biocontainment and specimen repository 	ONSA		410,000	410,000
	<ul style="list-style-type: none"> Set up a sub-task force team of 6 persons to develop certification, building and renovation standards for high containment facilities 	ONSA		0	0
	<ul style="list-style-type: none"> Procurement of equipment for facilities identified for refurbishing; freezers, HVAC system, stabilizers, UPS, converters, temperature monitoring system, LIMS system, liquid nitrogen plant, PPE, biosafety hoods, generators, water supply, restricted access control panels, 	ONSA		0	1,566,480,00

D1: National Laboratory System

D1.1: Laboratory testing for detection of priority diseases

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Identify public health Laboratories that constitute the network and create database	<ul style="list-style-type: none"> Hire a consultant to adapt existing questionnaire from JICA assessment for all public health laboratories over 5-days; Consultant to develop ODK tool for mobile data collection and M&E over a period of days; Conduct training 40 data collectors on the use of ODK and questionnaire over a period of 2-days (Residential) Conduct field visits to all public health laboratories; 40 data collectors, over 5-days nationwide Consultant to clean, analyze the data and write report over a period of 5-days; Stakeholders meeting to validate the assessment report for 1-day, 20 participants Hire a consultant to create interface for interactive database over a period of 2 weeks; Hire a consultant to create SOP with eHA for updating database annually using follow-up phone calls or questionnaire over a period of 5-days Stakeholders meeting to validate the interactive database and SOP for 1-day, 20 participants Consultant to develop minimum requirements for operating standards for laboratory diagnosis of priority diseases within the network laboratories 	NCDC		494,000	494,000
Develop plan with MoH, MoA, and other stakeholders for developing the capacity needed to meet diagnostic and confirmatory requirements for priority diseases in human and animal health laboratories.	<ul style="list-style-type: none"> Conduct Stakeholders meeting of 30 persons over 2-days (Residential) to set objectives, get buy-in and to review existing assessments of laboratory capacity for diagnostic testing of priority diseases, including JEE & PVS; Establish technical working groups in human and animal health to draft plans for capacity development for priority diseases;(two day meeting with 30 persons, non-residential) ; TWGs decide on information sharing needs between human and animal health; TWG create strategies for laboratory information sharing between human and health for priority zoonoses (one day meeting with 30 persons, non-residential for sub activities 3 and 4) TWG annual meeting (1-day residential meeting) 	NCDC		6,022,000	6,022,000
Develop strategy to set up a central Repository and coordinated dissemination/distribution of core reagents and consumables of the priority	<ul style="list-style-type: none"> Supply chain stakeholder meeting between immunizations, HIV, TB, malaria, polio to discuss existing supply store networks and determine whether existing assets can be leveraged on, or a new system needs to be developed; (2-days stakeholders meeting of 30 persons, Residential) 	NCDC		3,166,000	3,166,000

diseases to the laboratory network to improve existing supply chain					
	● Advocacy efforts to HMH to support this as a priority;	NCDC		0	0
	● Series of trainings at national and zonal levels for supply chain management on logistics, biosafety; (Conduct a National training of trainers of 40 participants over 3 days (residential),	NCDC		6,828,000	6,828,000
	● Training of 774 LGAs supply chain managers at geopolitical zone levels over a period of 3 days, Residential)	NCDC		46,873,600	46,873,600
Adopt and implement one Laboratory Information sharing system by all laboratories	● Establish routine mechanisms for procurement of reagents and consumables for NVRI & NRL/CPHL. (1-day residential Workshop of 20 persons)	NCDC		1,442,000	1,442,000
	● Review mapping assessment activity to determine which systems are used where; (Stakeholders meeting 40 persons over 2-days, Residential)	NCDC		4,196,000	4,196,000
	● Hire a consultant over 2 weeks to conduct an analysis of the existing needs and interoperability requirements [incl. with DHIS2] & costs; determine if a partner with NCDC is needed to customize solutions to domesticate;	NCDC		1,588,250	1,588,250
	● Present analysis results at stakeholder meeting of 30 persons over 2-days (residential) to select or adopt a platform for LIMS;	NCDC		3,166,000	3,166,000
	● Pilot LIMS system at national level, 1 NCDC affiliate lab, and 1 state;	NCDC		2,600,000	2,600,000
	● Training on LIMS at national & state TOT; (Training of 70 persons on LIMS over a period of 3 days, Residential)	NCDC		11,223,200	11,223,200
	● Initial rollout of LIMS at the national level NRL; Second rollout at 10 NCDC-affiliated labs;.....	NCDC		67,034,000	67,034,000
	● Progressive rollout at state labs (one lab per state, 10 state per year) includes procurement of hardware, software, and network connection	SMOH		0	225,478,000

D1.2: Specimen referral and transport system

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish a comprehensive, integrated National policy, guidelines, and SOPs on sample management for human, animal, food, and environmental	● Engage one consultant for each of these agencies (human, animal, food, environmental) to draft operational guidelines for specimen management; (4 consultants, for one week) and identify one focal person from each agency	NCDC		1,680,000	1,680,000
	● Conduct a stakeholders meetings to review the SOPs, find linkages; (2-days stakeholders Workshop of 40 participants, Residential)	NCDC		4,196,000	4,196,000
	● Finalize SOPs(1-day stakeholders meeting of 20 participants, non-residential)	NCDC		706,000	706,000

Establish a specimen transportation system at all levels	<ul style="list-style-type: none"> Conduct a national workshop reviewing subnational specimen transport systems in other African countries; 	NCDC		10,647,400	10,647,400
	<ul style="list-style-type: none"> Identify and sign contract with a private courier for specimen transportation from communities to 37 state capitals and onward to Reference laboratories 	NCDC		47,520,000	
	<ul style="list-style-type: none"> Conduct 2-day stakeholders Workshop for all states to review existing intra-state specimen transportation system and needs, and discuss possible public-private partnership for state courier services; (3-day meeting of 50 persons, Residential. NB: this addresses sub-activities 2 and 3) 	NCDC		5,070,000	5,070,000
	<ul style="list-style-type: none"> Financing assessment, advocacy, for state funds to implement courier services (Advocacy visit of 3 senior staff of NCDC and NVRI to 37 states, spending 2-days/state) 	NCDC		16,457,600	16,457,600
	<ul style="list-style-type: none"> Consultant to map existing certified international couriers for infectious substances AND the appropriate regional reference laboratories for confirmation by pathogen; develop a transportation plan for international shipments from 2 hubs (Abuja and Lagos) 	NCDC		600,000	600,000
	<ul style="list-style-type: none"> International shipments of specimens to regional referral labs 	NCDC		18,300,000	73,200,000
	<ul style="list-style-type: none"> Infectious substance training for 2 national staff 	NCDC		4,000,000	16,000,000
Establish a tracking system for specimen referral and transportation [pre-requisite is the establishment of public health network for specimen transport at state/LGA level]	<ul style="list-style-type: none"> Contract a vendor for 5-days to develop a platform or modify a platform for an ODK-based barcode tracking system that can connect to LIMS; find out from Uche 	NCDC		300,000	300,000
	<ul style="list-style-type: none"> Procure software and hardware for tracking of samples and linkage to LIMS 	NCDC		10,675,000	10,675,000
	<ul style="list-style-type: none"> Hire a consultant for 10 days to create technical guidelines for all levels (courier person, laboratory management); 	NCDC		898,000	898,000
	<ul style="list-style-type: none"> Align specimen collection and tracking system with IDSR guidelines and surveillance SOPs 	NCDC		0	0
	<ul style="list-style-type: none"> One day stakeholders meeting of 20 persons to validate the guidelines (non-residential) 	NCDC		706,000	706,000
	<ul style="list-style-type: none"> Conduct training for a pilot of the system in FCT; (Training of 20 persons over 2-days, non-residential) 	NCDC		1,392,000	1,392,000
	<ul style="list-style-type: none"> Pilot specimen tracking system in FCT; (support for 2-days field activities of 20 persons) 	NCDC		225,600	225,600
	<ul style="list-style-type: none"> Analyze implementation and evaluate effectiveness (One day stakeholders meeting of 30 persons) 	NCDC		884,000	884,000
Build sample management capacity for public health network laboratories for priority diseases	<ul style="list-style-type: none"> Conduct hands-on trainings/simulations for 40 laboratory personnel over a period of 5-days, Residential, (specimen processing, laboratory managers, laboratory scientists) for network public health laboratories, and courier services on sample management; 	NCDC		8,966,000	35,864,000
	<ul style="list-style-type: none"> Conduct hands on training for states in each geopolitical zone (6 zones) -- 2 participants per state + 2 national facilitators per meeting 	NCDC		22,668,000	90,672,000
	<ul style="list-style-type: none"> Procure and distribute sample transportation materials to NCDC network labs 	NCDC		5,000,000	12,500,000
	<ul style="list-style-type: none"> Pre-position specimen collection supplies for priority diseases at state level (in state labs) 	SMOH		7,500,000	30,000,000

	<ul style="list-style-type: none"> Hire a consultant for 10 days to develop refresher training modules for frontline health workers 	NCDC		898,000	898,000
	<ul style="list-style-type: none"> One day stakeholders meeting of 20 persons to validate the training modules 	NCDC		706,000	706,000
Establish monitoring and evaluation mechanism for collection, packaging, and transport of specimens	<ul style="list-style-type: none"> NRL network/referral focal point to develop M&E indicators, including specimen transport times, specimen quality/integrity at reception; specimen chain of custody; biosafety events; packaging practices for high consequence pathogens by conducting 2 meetings of 10 people from national * 3 days 	NCDC		3,128,000	3,128,000
	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to integrate recommendations from aforementioned high level meetings and draft SOPs for specimen collection/packaging/transport M&E 	NCDC		600,000	600,000
Provide refresher training for network labs to develop technical competency	<ul style="list-style-type: none"> 1 week residential training hosted at designated national expert lab for 2 persons per network lab for 6 diseases 	NCDC		69,294,000	277,176,000
Procurement of key reagents and consumables for 6 priority diseases	<ul style="list-style-type: none"> all network labs for 6 priority diseases 	NCDC		1,096,920,064	2,742,299,904
Annual equipment maintenance for network labs	<ul style="list-style-type: none"> annual maintenance costs for hoods, PCR machines 	NCDC		365,640,000	914,099,968

D1.3: Effective modern point of care and laboratory-based diagnostics

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop an integrated syndromic and laboratory-based point of care diagnostics algorithm; Establish supply chain management system for point of care diagnostics	<ul style="list-style-type: none"> Convene a 2-day residential workshop of 15 persons to develop the algorithm; for EACH priority disease 	NCDC		4,876,000	7,314,000
	<ul style="list-style-type: none"> Print and disseminate 6 reports (1 report/dx) to 48 labs * 5 copies each 	NCDC		0	432,000
Conduct a review of novel RDTs for VHF and other priority diseases, determine which have the highest needs for RDT/POC testing	<ul style="list-style-type: none"> no cost 	NCDC		1,221,200	1,221,200
Develop protocol for national in field evaluation of selected commercial RDTs for priority diseases	<ul style="list-style-type: none"> host stakeholder meeting, 10 participants to discuss draft protocol and approve 	NCDC		1,046,000	1,046,000
Conduct laboratory-based validation at Gaduwa with QA panel, comparing the RDT with the known conventional tests (PCR, culture, ELISA) and assessing sensitivity and specificity of the RDT	<ul style="list-style-type: none"> Procure RDT kits for validation: cholera, CSM, dengue, malaria, influenza 	NCDC		14,000,000	14,000,000
Training laboratory staff on GCLP practices	<ul style="list-style-type: none"> national training 1 week with 10 staff 	NCDC		2,600,000	2,600,000

Sourcing of QA panels for validation of RDT kits & POC Technologies	● Source QA panels for validation from universities, research institutes (domestic and international); these might come from LUTH or Institute Pasteur (Dakar), Côte d'Ivoire etc.	NCDC		10,000,000	10,000,000
	● National TOT for field validation; 5-days with 15 participants, 8 away participants from network laboratories	NCDC		0	4,551,400
Conduct field validation of RDTs/POC	● Pay for shipment of the RDTs to field sites (1 field site per geopolitical zone)	NCDC		0	305,000
	● Conduct training of use of test kits at 6 field sites (trainers come from labs that were trained earlier)	NCDC		0	2,932,800
	● Monitoring and evaluation at field sites	NCDC		0	900,000
	● Conduct a review meeting of the validation process (laboratory and field); develop an algorithm	NCDC		0	3,166,000
	● Hire consultant to draft SOPs for review by NCDC laboratory staff	NCDC		0	1,200,000

D1.4: Laboratory Quality System

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Obtain accreditation for National Reference Lab - Abuja	● Register for MLSCN mentoring plan	NCDC		4,800,000	4,800,000
Implement SLMTA in all labs in the public health laboratory network	● Conduct SLMTA training	NCDC		40,476,800	121,430,400
Develop plan with MoH, MoA, and other stakeholders to support the implementation of national quality standards that are consistent with international standards.	● Conduct a 2-days stakeholder meeting of 40 persons to identify the responsible officers in FMoH, FMARD, NCDC, MLSCN and obtain agreement on the adoption of international instruments that have been domesticated by various organizations, including MLSCN;	NCDC		4,940,000	4,940,000
Implement the annual MLSCN assessment of public Health labs across all 36 States.	● Annual laboratory quality assessment overseen by MLSCN for public health laboratories (A team of 5 persons over 2-days per state for the 37 states)	NCDC		26,817,600	107,270,400
Develop (regulatory) system to license public health laboratories which includes mandatory inspections and supported by national policy.	● Policies, guidelines, tools already exist. Some funding needed to sustain ongoing activities.	NCDC		600,000	1,500,000
	● Convene awareness meetings of stakeholders (one day stakeholders meeting of 40 persons, Residential)	NCDC		1,062,000	1,062,000
	● Roll out implementation plan in 37 states (i.e., begin the licensing process in state public health laboratories) -- Field visits (NCDC network labs + state public health labs)	MLSCN		186,240,000	744,960,000
Register NCDC & VTH labs in the MLSCN EQA program.	● Expand existing national EQA program run by MLSCN from healthcare to public health laboratories; (10 NCDC affiliated laboratories, NVRI and 6 VTH labs)	MLSCN		0	7,650,000
Establish additional National EQA program for non-RDTs to address human, animal, and	● Influenza (WHO-funded EQA RNA panel @ NRL - no specific training needed); Shipping for 10 labs for WHO EQA influenza panel (influenza network labs) YF assessment (AFRO program that hasn't yet started for serology); joining an international EQA costing for 7 labs - 1 international shipment + 1 cost for buying the EQA + 6 national transportation costs	FMOH FMARD MLSCN		0	26,401,242

environmental at public health network laboratories	<p>Lassa Fever - international RNA EQA procurement for 4 labs - 1 international shipment + 1 cost for buying the EQA + 3 national transportation costs</p> <ul style="list-style-type: none"> ● CSM - budget for 20 states running a CSM EQA ● Cholera - budget for 20 states running EQA ● Dengue/Chik: 5 labs 	NCDC			
	<ul style="list-style-type: none"> ● Laboratory-based development of panels, including procurement of consumable (reagents, solutions, equipment); 4. International travel for training on panel development in countries that have domesticated EQA programs for the same pathogens; 	FMOH FMARD MLSCN NCDC	8,100,000	16,200,000	
Infrastructure Upgrades	● Procure and install solar system for National Reference Labs 20KVA(HH-CPHL,NRL)	NCDC	92,000,000	92,000,000	
	● Procurement and installation of solar system for 13 VTHs and 22 NVRI out-station labs	FMARD	805,000,000	805,000,000	
	● Procure solar power solutions for 6 regional NCDC laboratories	NCDC	138,000,000	138,000,000	
	● Maintenance contract and 3 year warranty for inverters	NCDC	17,000,000	51,000,000	
	● infrastructural upgrade at the National Reference Lab, Abuja	NCDC	20,000,000	50,000,000	
	● Lab furniture for NRL, Abuja (micro, virology, PCR suite, chemistry)	NCDC	9,000,000	9,000,000	
	● Lab furniture for CPHL, Lagos (micro. Virology, heam, chemistry)	NCDC	9,000,000	9,000,000	
	● Lab furniture for NVRI, VOM (micro. Virology, PCR, heam, chemistry)	FMARD	9,000,000	9,000,000	
	● Renovation / Remodeling of health facilities CPHL	NCDC	10,000,000	10,000,000	
	● Minor upgrades and renovation at regional laboratories for human and animal health (2 HH and 1AH per geo zone)	NCDC	18,000,000	18,000,000	
	● Procurement and installation and annual maintenance contract for fire alarms and fire retardant systems at CPHL and NRL, Guduwa including external conduct of fire drills and	NCDC	50,000,000	50,000,000	
	● Support to security charges at (HH-CPHL,NRL, 6 regional labs)	NCDC	2,400,000	9,600,000	
	● Support to security charges at (AH- NVRI and 6 ref labs)	FMARD	2,100,000	8,400,000	
	● Procurement of Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs	NCDC	200,000,000	200,000,000	
	● Procurement of Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs	FMARD	175,000,000	175,000,000	

	<ul style="list-style-type: none"> Maintenance and warranty for Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs 	NCDC		20,000,000	20,000,000
	<ul style="list-style-type: none"> Maintenance and warranty of Rotary kiln incinerators to (HH-CPHL,NRL, 6 regional labs 	FMARD		17,500,000	17,500,000
	<ul style="list-style-type: none"> Maintenance of BSL3 laboratory (2020 onwards) 	NCDC		0	500,000,000
	<ul style="list-style-type: none"> Hire 10 short service staff (5x at grade 10 , 3x at grade 14, 2x at grade 8) 	NCDC		406,617,664	1,016,544,192
Maintain operations of existing mobile labs and procure additional 3 labs. Mobile facilities to be operational in 6 geopolitical zones	<ul style="list-style-type: none"> Maintenance of existing 2 mobile labs; equipment and vehicle 	NCDC		10,000,000	40,000,000
Procure 2 additional mobile labs; 1x virology and 1x bacteriology	<ul style="list-style-type: none"> bacteriology unit virology unit 	NCDC		0	69,280,000
Develop training programme for staff that cover biosafety and best practices within a mobile labs	<ul style="list-style-type: none"> TOT for 12 people on biosafety and GLP in mobile laboratory. Residential training. DTA @16,000/day X 7 nights X 12 persons = 1,344,000 + Local Travel @30% DTA = 403,200 for 12 persons.+ Air fare @ 100,000/person X12 =1,200,000 + airport taxi @ 20,000/person X12= 240,000 	NCDC		0	3,187,200
Infrastructure upgrades for specimen repository procurement Freezers	<ul style="list-style-type: none"> Infrastructure upgrade is ongoing as part of the CDC/FMOH NAIIS sample repository 	–			
LIMS system for specimen repository	<ul style="list-style-type: none"> Procure additional 12 pcs -80 degrees freezer @ 5,673,600 each 	NCDC		22,694,400	68,083,200
Running costs (liquid nitrogen, electricity)	<ul style="list-style-type: none"> Set up a 20-cubic meter liquid nitrogen plant 	NCDC		0	3,600,000
Procure equipment, materials, antibiotic panels, consumables and data reporting tools biannually, to support the 30 human health facilities, 6 labs from animal health and 2 environmental health laboratories	<ul style="list-style-type: none"> Procure sample collection materials (sample bottles, swap sticks, transport media, cold boxes) (774 cold boxes, 10,000 sample bottles, triple packaging kit, Procure laboratory consumables (gloves, cotton wool, methylated spirits for 774 LGAs) 			0	0

D2: Real-Time Surveillance

D2.1: Indicator and Event-Based Surveillance

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Asses the baseline proportion of reporting public and private health facility private health facilities in all states	<ul style="list-style-type: none"> Designate NCDC officer to contact SMOH and FMoH planning department for needed data (denominator of the total number of private and public health facilities), and numerator (states should have the data on how many health facilities report, on average, weekly to IDSR) 	NCDC		40,000	100,000
	<ul style="list-style-type: none"> Analysis of data to determine reporting heath facilities (public and private) 	NCDC		0	0
Develop IDSR training curriculum incorporating training on all the existing surveillance tools and system	<ul style="list-style-type: none"> Designate existing officers and partners to draft the curriculum 	NCDC		0	0
	<ul style="list-style-type: none"> Conduct a three day workshop of 20 people to review and validate document 	NCDC		7,708,000	7,708,000
Expand the number of reporting sites to include private health facilities (and private veterinary clinics.)	<ul style="list-style-type: none"> See plan under reporting 	NCDC, FMARD		0	0
Build capacity for surveillance among human and animal health workers in both public and private sectors	<ul style="list-style-type: none"> Every health facility must designate an IDSR focal person, and that focal person must be recorded by the DSNO; NCDC can work via the state epidemiologists to continue to put pressure on this activity 	NCDC FMARD SMOH		0	0
	<ul style="list-style-type: none"> TOT modular trainings at the national level with 35 participants over 5-days on IDSR for each training. 	NCDC		6,633,000	6,633,000
	<ul style="list-style-type: none"> National trainers will then conduct state TOT in 37 states, for 3 modules 	NCDC		257,002,00	257,002,00
	<ul style="list-style-type: none"> Health facility-level training conducted by State and LGA officers who were trained in the above. 	SMOH		1,138,000,00	2,642,436,096
	<ul style="list-style-type: none"> Training of tertiary care facilities on IDSR 	SMOH		83,250,000	83,250,00
	<ul style="list-style-type: none"> Supportive supervision by national staff for the tertiary care facility trainings 	NCDC		2,308,800	2,308,800
	<ul style="list-style-type: none"> 1.Hire a consultant to review and develop training manual, guideline, SOP for epidemic-surveillance, preparedness and response, and disease reporting and reporting tools (ARIS) 	FMARD		0	0
	<ul style="list-style-type: none"> 2. Conduct 2-day meeting of 30 participant to validate the training manual, guideline, SOP for epidemic-surveillance, preparedness and response, and disease reporting and reporting tools (ARIS) 	FMARD		0	0
	<ul style="list-style-type: none"> 3. Conduct 5-day training of 80 participants (1 federal and 1 state Vet Epid. Officer) on epidemic-surveillance, preparedness and response, and disease reporting and reporting tools (ARIS) 	FMARD		0	0
	<ul style="list-style-type: none"> 4. Printing of 500 copies of training manual 	FMARD		0	0

	<ul style="list-style-type: none"> • Hold 1 TOT training at the national level with 40 participants over 5-days on ARIS in Abuja (36 away participants; 1 from each state) 	FMARD		12,018,800	12,018,800
	<ul style="list-style-type: none"> • Hold 2 TOT trainings at the regional level with 37 participants over 5-days on ARIS for each training. (2 people per state) 	FMARD		18,398,000	18,398,000
	<ul style="list-style-type: none"> • Hold 37 step down trainings at the state level with 30 participants over 5-days on ARIS for each training. 	FMARD		70,072,000	136,456,000
	<ul style="list-style-type: none"> • Hire national consultant to oversee the compilation of data on community based surveillance structures for 20 days, including support staff. 	NCDC		1,200,000	1,200,000
	<ul style="list-style-type: none"> • Hold 2 stakeholders consultative meeting on community based surveillance structures and inform strategy with 40 participants over 2-days for each meeting. 1st meeting is for consultation. 2nd meeting is for compiling partner data. 	NCDC		2,266,000	2,266,000
	<ul style="list-style-type: none"> • Hold workshop to review and validate results with 30 participants over 1-day with key stakeholders. 	NCDC		1,252,000	1,252,000
	<ul style="list-style-type: none"> • Print (guidelines, SOPs, Reporting forms, treatment protocols) and distribute to state, LGAs, health facilities 	NCDC		151,600,000	606,400,000
Integrate priority zoonotic diseases into routine human and animal surveillance	<ul style="list-style-type: none"> • Host workshop with 40 participants over 3 days to review, validate, and accept national priority zoonotic diseases. AND also will review IDSR priority disease list 	NCDC		5,170,400	5,170,400
	<ul style="list-style-type: none"> • Update guidelines and SOPs (human and animal) for the new priority zoonotic diseases by Dec 2018. 	NCDC, FMARD		0	0
	<ul style="list-style-type: none"> • Integrate into IDSR and ARIS trainings mentioned above. 	NCDC, FMARD		0	0
Pilot national event-based surveillance system for animal health sector in the context of One Health by December 2019	<ul style="list-style-type: none"> • Hire consultant to develop national level event-based surveillance system (media monitoring and call center) for animal health. 	FMARD		1,200,000	1,200,000
	<ul style="list-style-type: none"> • Procure ICT equipment for 6 staff 	FMARD		2,890,000	2,890,000
	<ul style="list-style-type: none"> • Hold 1 consultative meeting to leverage on the existing event based surveillance system in human health with 40 participants over 3 days 	FMARD		8,822,800	8,822,800
	<ul style="list-style-type: none"> • Hold 1 training on EBS system at the national level with 40 participants over 5-days 	FMARD		0	12,018,800
Review of IDSR list of priority diseases	<ul style="list-style-type: none"> • Appoint a committee of 4 to Develop a Delphi process for review of Priority disease list 	NCDC, FMOH		0	0
	<ul style="list-style-type: none"> • Conduct a 3-day workshop of 40 participants to review and adopt the priority list. 	NCDC, FMOH		0	0
	<ul style="list-style-type: none"> • Recommend the list to the DG, HMH and NCH for approval 	NCDC, FMOH		0	0
Adapt the WHO Afro IDSR guidelines as soon as concluded	<ul style="list-style-type: none"> • Hire a consultant with 4 designated officers to adapt the Guideline 	NCDC		1,740,000	1,740,000
	<ul style="list-style-type: none"> • Share document with stakeholders for review. 	NCDC		40,000	40,000

	<ul style="list-style-type: none"> Convene a 5-day stakeholders workshop with 30 participants for review and validation of the guidelines 	NCDC		13,711,000	13,711,000
	<ul style="list-style-type: none"> Print and disseminate new guidelines up to health facility level 	NCDC		0	0

D2.2: Interoperable, interconnected, electronic real-time reporting system

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Review IDSR surveillance governance, national systems architecture, and monitoring and evaluation components.	<ul style="list-style-type: none"> Hire a consultant for 25days to conduct an assessment of animal and human health data systems and develop data standards and also support the review process 	NCDC		1,500,000	1,500,000
	<ul style="list-style-type: none"> Hold national meeting to review surveillance governance, national systems architecture and M&E with 30 participants over 3 days. 	NCDC		0	0
Enhance utilization of ARIS Platform in all states	<ul style="list-style-type: none"> Hold 1 stakeholders meeting of 60 participants for 2-days with State Directors of Vet. Services and Directors of Vet. Teaching Hospitals to ensure compliance with use of ARIS platform 	FMARD		0	0
	<ul style="list-style-type: none"> Procure 100 laptops for Federal and State Veterinary Officers 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct national refresher training with 100 federal and state staff over 3 days 	FMARD		0	0
Establish public-private partnership mechanisms for surveillance of human and animal health at national and state levels (Human Health)	<ul style="list-style-type: none"> Stakeholder mapping (internal meetings) 	NCDC		0	0
	<ul style="list-style-type: none"> Hold annual national stakeholder meetings to identify gaps and opportunities with 50 participants over 1-day 	NCDC		3,142,000	12,568,000
	<ul style="list-style-type: none"> Develop ToR for public-private partnership group 	NCDC		0	0
Establish public-private partnership mechanisms for surveillance of human and animal health at national and state levels (Animal Health)	<ul style="list-style-type: none"> Hold multi-Stakeholder meetings with private animal health service providers to discuss the PPP in surveillance, adopt and validate the PPP mechanism 	FMARD		3,451,600	3,451,600
	<ul style="list-style-type: none"> Develop ToR for public-private partnership group 	FMARD		0	0
Implement integrated human health surveillance system at health facility level countrywide	<ul style="list-style-type: none"> Develop SOP for the surveillance data entry on IDSR at the health facility 	NCDC, SMOH		0	0

D2.3: Integration and analysis of surveillance data

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022

Improve ICT to support data analysis for surveillance at all levels	● Conduct needs assessment of surveillance architecture, including ICT at state and LGA levels (see activity D2.2)	NCDC		0	0
	● Procure 1000 laptop computers for national, state, and LGA staff for human health surveillance	NCDC		0	0
	● Procure internet modems for 1000 staff members	NCDC		0	0
	● Provide voice and data credits for staff members per year	NCDC		0	0
	● Procure 1,500 tablets for SORMAS deployment at LGA level	NCDC		0	0
	● Conduct needs assessment of ICT at health facility level by December 2019	NCDC		0	0
	● Procure 800 printers and toner for all LGAs and States (assumes training on data analysis accomplished in the above activities)	NCDC		328,000,000	328,000,000

D2.4: Syndromic surveillance systems

Objective: Enhance the performance of the IDSR and technical capacity of the workforce by 2021

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen capacity for syndromic surveillance in Private sector and tertiary/referral health facilities	● Print and disseminate SOPs/guidelines on syndromic surveillance to all tertiary/referral and private health facilities	NCDC		0	0
	● Train designated 2-3 health workers on IDSR in all tertiary/referral Health facilities	NCDC		0	0
	● Publish designated laboratories for confirmation of specific priority diseases	NCDC		0	0
	● Hire a consultant to link surveillance and Laboratory data platform	NCDC		0	0
Enhance monitoring and evaluation capacity for IDSR	● Develop/review existing M&E strategy and tools for monitoring on ODK	NCDC		0	0
	● Hold annual IDSR review meeting with 300 participants over 3 days	NCDC		60,610,000	242,440,000
	● Hold 37 state visits for 3 national staff over 3 days for supportive supervision biannually	NCDC		36,630,000	146,520,000
	● Hold quarterly IDSR indicator review meetings in all 37 States over 1-day with LGAs	SMOH		274,724,992	934,065,024
	● Quarterly visit by 2 state officers to all LGAs within the state (774 total) over 1-day for supportive supervision	SMOH		123,840,000	421,056,000

Develop a system of routine (10 events) After Action Reviews annually to enhance reporting	● Consultant and 1 designated staff to domesticate/adapt WHO AAR guidance for Nigerian AAR	NCDC		600,000	600,000
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D3: Reporting

D3.1: System for efficient reporting to WHO, FAO and OIE

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Expand the number of reporting health facilities	<ul style="list-style-type: none"> ● Human Health ● Hold 1-day national awareness and advocacy meetings with stakeholder on disease surveillance and reporting with 50 participants (Stakeholders: NMA, SMOH, AGPMN, MDCN, MOD etc.). ● Draft a memo to the Honorable Minister , Health to the NCH on enforcement of reporting on IDSR by all health facilities (Public and private)and linking it to health facility license renewal ● Develop video clips and IEC materials on disease reporting for health care workers ● Publicize video clips and IEC materials via traditional and social media ● Print 100,000 disease reporting IEC materials to all health facilities ● Dissemination to 36 states and 36,000 health facilities ● Hold 1-day State level awareness for both public and private health facilities in 37 states with 200 participants each ● Surveillance department and ICT unit of NCDC develop an e registry of all health facilities with focal point in all states and LGAs ● Hold 1-day meeting of 10 participants to adapt and compile all the SOP for reporting into single document ● Print 50,000 booklets of the SOP ● Disseminate 40,000 booklets of the SOP ● Print 500,000 of IDSR reporting tool() ● Animal Health ● Hold 2-day national awareness and advocacy meetings with stakeholder on disease surveillance and reporting with 50 participants (Stakeholders: NVMA, State DVS, VCN, Private Vet Rep.NAQs). ● Draft a memo to the Honorable Minister , Agriculture to the NCA on enforcement of reporting on ARIS by all animal health facilities (Public and private)and linking it to practicing permit / license renewal ● Hold 1-day State level awareness for both public and private veterinary health facilities in 37 states with 100 participants each ● Department of Veterinary Services develop an e registry of the vet health facilities with focal point in all states and LGAs ● Hold 1-day meeting of 10 participants to adapt and compile all the SOP for reporting into single document 	NCDC NCDC, FMOPH, FMARD		12,674,000 0	31,685,00 0
		NCDC		0	0
		NCDC		0	0
		NCDC		0	0
		NCDC		0	0
		NCDC		129,078,20 0	129,078,2 00
		NCDC		100,000	250,000
		NCDC		528,000	528,000
		NCDC		37,500,000	37,500,00 0
		NCDC		740,000	740,000
		NCDC		300,000,00 0	300,000,0 00
		NCDC		8,167,000	8,167,000
		FMARD		0	0
		FMARD		76,168,200	76,168,20 0
		FMARD		100,000	250,000
		FMARD		528,000	528,000

	<ul style="list-style-type: none"> Print 20,000 copies of the SOP 	FMARD		15,000,000	15,000,000
	<ul style="list-style-type: none"> Disseminate 15,000 copies of the SOP 	FMARD		740,000	740,000
	<ul style="list-style-type: none"> Print 50,000 of animal disease reporting tool 	FMARD			
	<ul style="list-style-type: none"> Disseminate 40,000 of animal disease reporting tool 	FMARD			
Provide electronic reporting tools to all Health facilities	<ul style="list-style-type: none"> captured under surveillance 	NCDC, SMOH		0	0
Build capacity for IDSR reporting among human health workers in both public and private sectors	<ul style="list-style-type: none"> Hold 3 national stakeholder meetings for animal health with 40 participants over 2-days to develop and implement strategy (Stakeholders: NVMA, VCN). The 1st meeting is for advocacy and strategy development. The 2nd meeting is for validation and roll out of strategy. The 3rd meeting is for after action review of implementation. 	NCDC		0	0
Build technical capacity among the National IHR Focal Point and OIE teams.	<ul style="list-style-type: none"> Train health facility surveillance focal persons on e-IDSR and provide electronics tools for reporting to the LGA DSNOs 	NCDC		0	0
Develop a system for routine simulation exercise (3) annually for rare diseases to build capacity for case detection and reporting	<ul style="list-style-type: none"> Hold 3 1-day table top exercise with 40 participants on priority disease with high impact and low probability 	NCDC		22,404,000	56,010,000
Enhance utilization of ARIS Platform in all states	<ul style="list-style-type: none"> Hold 1 stakeholders meeting of 60 participants for 2-days with State Directors of Vet. Services and Directors of Vet. Teaching Hospitals to ensure compliance with use of ARIS platform 	NCDC		9,487,600	9,487,600
	<ul style="list-style-type: none"> Procure 100 laptops for Federal and State Veterinary Officers 	FMARD		29,250,000	29,250,000
	<ul style="list-style-type: none"> Conduct national refresher training with 100 federal and state staff over 3 days 	NCDC		0	20,332,000
Improve ICT to support data analysis for surveillance at all levels	<ul style="list-style-type: none"> Conduct needs assessment of surveillance architecture, including ICT at state and LGA levels (see activity D2.2) 			0	0
	<ul style="list-style-type: none"> Procure 1000 laptop computers for national, state, and LGA staff for human health surveillance 	NCDC		330,000,000	330,000,000
	<ul style="list-style-type: none"> Procure internet modems for 1000 staff members 	NCDC		37,500,000	37,500,000
	<ul style="list-style-type: none"> Provide voice and data credits for staff members per year 	NCDC		20,000,000	80,000,000
	<ul style="list-style-type: none"> Procure 1,500 tablets for SORMAS deployment at LGA level 	NCDC		33,750,000	33,750,000
	<ul style="list-style-type: none"> Conduct needs assessment of ICT at health facility level by December 2019 	NCDC		12,200,000	12,200,000

D3.2: Reporting network and protocols in country

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen the reporting capacity for intersectoral involvement through One Health	● Constitute a 10 member intersectoral OH TWG working group to drive implementation and coordination of OH.	NCDC		0	0
	● TWG to develop a framework for intersectoral reporting of key priority diseases	NCDC		0	0
	● Conduct a 2day stakeholders meeting to review and adopt the below	NCDC		4,654,400	4,654,400
Establishment of a central surveillance and laboratory database that sources and integrate data from other sector	● Hire a consultant to find linkages between IDSR and ARIS reporting and establish a system that is able to detect animal or human events and can be used to investigate in human and animal health sectors. AND develop a monitoring and evaluation framework for reporting of listed zoonoses.	NCDC		3,600,000	3,600,000
Adapt IHR 2005 after enactment of NCDC bill	● Constitute a 5 man team to adapt the IHR 2005 after enactment of NCDC bill	NCDC		0	0
	● Review and validate the adapted document in a 2-day meeting with 40 participants	NCDC		0	0
Establish disease free zones for 5 selected food animals	● Hire a consultant for 4 weeks to develop the protocol and guideline for establishment of diseases free zone	FMARD		0	0
	● Conduct 2-day meeting in conjunction with consultant in identification of free zone for 5 selected food animals (Pig, poultry, sheep, goat, cattle)	FMARD		8,720,000	8,720,000
	● Conduct the certification process for the 6 selected zones each in geopolitical zone (collection of sample for screening, facilities inspection etc.)	FMARD		9,990,000	9,990,000
	● Conduct periodic surveillance and monitoring quarterly for the selected zone	FMARD		6,960,000	27,840,000
	● Conduct 5-day training of 30 participants on operational framework of diseases free zone	FMARD		5,812,000	5,812,000
	● Printing of 500 copies of the protocol.	FMARD		1,000,000	1,000,000
Establish compartment for 5 selected food animals	● Hire a consultant for 4 weeks to develop the protocol and guideline for the establishment of compartments	FMARD		1,770,000	1,770,000
	● Conduct 2-day meeting in conjunction with consultant in identification of compartment in state for 5 selected food animals (pig, poultry, sheep, goat, cattle)	FMARD		3,750,000	3,750,000
	● Conduct the certification process for the 6 selected compartments in each state (collection of sample for screening, facilities inspection etc.)	FMARD		27,269,000	27,269,000
	● Conduct periodic surveillance and monitoring quarterly for the selected compartments	FMARD		12,888,000	51,552,000
	● Conduct 5-day training of 30 participants on operational framework of diseases compartments	FMARD		5,812,000	5,812,000
	● Printing of 500 copies of the protocol.	FMARD		0	0

Provision of Animal Surveillance kits	<ul style="list-style-type: none"> Procurement of surveillance kit for 1000 surveillance agents (sampling materials- test tube, anticoagulant, needle and syringes, disinfectants, gloves, markers, polythene bags, cool-boxes) 	FMARD		50,000,000	100,000,00
Conduct gap analysis of the existing surveillance system for Transboundary Animal Diseases and zoonotic diseases	<ul style="list-style-type: none"> Engage a consultant to conduct gap analysis for the existing animal diseases surveillance system, 2. Conduct two multi-stakeholder meetings of 50 & 65 persons for the adoption and validation of the report respectively (3 days residential) and I 4. Print 2500 copies and disseminate 2000 copies of the report 	FMARD	Yes	21,824,384	21,824,384
Scale up and training of Animal Disease Surveillance Agents (DSA) from 591 to 1,000;	<ul style="list-style-type: none"> Hire a consultant to develop training manual and 2. Conduct multi-stakeholder, meeting 3. Hire 4 facilitators to train the surveillance agents on core surveillance activities; (case definition and recognition, response to outbreak, reporting),,, and 4. Print training manual 	FMARD	Yes	76,213,832	76,213,832
Establishing, deployment, licensing and training of an enterprise management software for procurement, audit and financial management	<ul style="list-style-type: none"> Procurement of consultancy for installation, licensing and training of an enterprise management system for financial procurement and audit management 	FMARD	Yes	54,149,624	54,149,624
Logistics and utilities support for the NCDC	<ul style="list-style-type: none"> Cost sharing to support running costs for NCDC HQ 	FMARD	Yes	120,750,000	120,750,000
Procurement of vehicles, insurance and running cost	<ul style="list-style-type: none"> Procurement of vehicles for REDISSE project office 	FMARD	Yes	211,034,992	211,034,992
Embark on targeted advocacy for ownership of influenza surveillance	<ul style="list-style-type: none"> Pay annual high-level 2-days advocacy visit to the Chief Medical Directors of 4 sites and their corresponding State MOHs management 	NCDC	Yes	655,140	655,140
Strengthen sample and data collection activities	<ul style="list-style-type: none"> Carry out annual 3-day supportive supervisory visits to 4 sentinel sites 	NCDC	Yes	954,040	954,040
Review, update, print and distribute NISS protocol and collection tools.	<ul style="list-style-type: none"> Convene meeting to review and update National Influenza Surveillance Protocol with the data collection tools 	NCDC	Yes	901,580	901,580
	<ul style="list-style-type: none"> Print 200 protocols and 2000 data tools and distribute to sentinel sites and MOHs 	NCDC	Yes	1,677,500	1,677,500
Strengthen One Health approach to influenza surveillance	<ul style="list-style-type: none"> Convene1-day meeting of 15 Human Health and Animal Health on joint influenza surveillance and outbreak response 	NCDC	Yes	203,740	203,740
Carry out active surveillance for influenza among human contacts of Avian influenza infected birds and provide early response to the resulting human cases.	<ul style="list-style-type: none"> Hold 2 meetings ii. Review protocols iii. Provide necessary data tools iv. Carry out investigations v. Ship samples from outbreaks to NRL vi. Write reports. 	NCDC	Yes	2,006,900	2,006,900
Carry out routine shipment of samples from sites to the National Reference Laboratory	<ul style="list-style-type: none"> Ship weekly ILI and SARI samples including Epidemiological records from the sentinel sites to the reference laboratory 	NCDC	Yes	915,000	915,000
Carry out clearing of goods, reagents and consumables for influenza testing shipped to the National Reference Laboratory	<ul style="list-style-type: none"> initiate clearing of reagents and items for influenza received from International Reagents Resource (IRR) and other partners from the nation's ports 	NCDC	Yes	732,000	732,000
Share Influenza data with local and international partners	<ul style="list-style-type: none"> Promptly submit epidemiologic data to FluiD and Virologic data to FluNet 	NCDC	Yes	0	0
Share influenza samples with relevant authorities	<ul style="list-style-type: none"> Ship positive and unsubtypable influenza samples to Global Influenza Surveillance and Response System (GISRS) via the WHO Collaborating Centers (WHOCC). WHO CC 	NCDC	Yes	0	0

Attend meetings, share data with/at international forum	<ul style="list-style-type: none"> Present data on influenza surveillance at local and international workshops 	NCDC	Yes	1,021,750	1,021,750
Ensure continuous influenza testing	<ul style="list-style-type: none"> Procure quality reagents and materials for influenza specimen collection, processing and rt-PCR testing 	NCDC	Yes	4,364,550	4,364,550
	<ul style="list-style-type: none"> Participate in External Quality Assurance Programme 	NCDC	Yes	0	0
Provide for unbudgeted expenses for keeping the laboratory	<ul style="list-style-type: none"> Make available monthly expense for the running of the laboratory 	NCDC	Yes	292,800	292,800
Ensure funds are spent in accordance with the rules and regulations of the donor (US-CDC)	<ul style="list-style-type: none"> Engage the services of a Fiscal Agent to guide on transactions on the project activities 	NCDC	Yes	1,525,000	1,525,000
Develop risk mapping for four priority zoonotic diseases using one health approach	<ul style="list-style-type: none"> Engage one consultant for 4 weeks to develop the risk mapping for priority zoonotic disease 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Conduct expert elicitation of 40 participants workshop for 5-days to support the consultant in developing risk mapping 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> 1-day stakeholder meeting with 20 participants to validate the report of the risk mapping 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Printing of 500 copies of the validated risk mapping 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Dissemination of 400 copies of the validated risk mapping 	NCDC	Yes	0	0
Strengthen laboratory detection for priority zoonotic diseases/pathogens (<ul style="list-style-type: none"> Hire a consultant to conduct needs assessment for human laboratories, six VTH laboratories across the geopolitical zones for the diagnosis of zoonotic diseases 	NCDC	Yes	0	0
	<ul style="list-style-type: none"> Procurement of reagents, consumables, and equipment for the six VTHs (Reagents – 2000 RDT kits; Lassa fever, Rabies, Brucellosis and Avian Influenza; consumables – 100,000 needle and syringes, 40,000 litres of disinfectants, 10,000 vacuum-containers, 20,000 test tubes, 20,000 gloves, 5000 PPEs; Equipment – 6 PCR machines, 10 bio-safety cabinets, 20 electron microscope etc. 	NCDC	Yes	0	0

D4: Workforce Development

D4.1: Human resources are available to implement IHR core capacity requirements

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop career path for specialized public health expertise within the Nigerian civil service structure	Hire a consultant for 60 days (retired high-level civil servant) to drive process and advocacy;	NCDC		4,938,000	4,938,000
	NCDC team guide consultant to draft and review the concept note	NCDC		143,000	143,000
	Establish a workforce career path development secretariat/committee between FMOH and FMARD to conduct a 2-day non-residential workshop for 10 persons to review existing civil service rules/policies and draft proposed career paths with consultant	NCDC		2,276,000	2,276,000
	Residential stakeholder workshop for 20 persons including high level officials FMOH, FMARD, OHSF to review and revise the draft policy	NCDC		4,430,000	4,430,000
	Advocacy visits to heads of relevant MDAS on the proposed career path	NCDC		930,000	930,000
	Support the four (4) sittings of national committee of 15 persons and advocacy visit of relevant stakeholders at the national and state level to develop the career path for specialized public health expertise within the Nigerian civil service structure.	NCDC		1,600,000	1,600,000
	Convene a 2-day national stakeholder meeting of the Heads of Civil Service Commission to review and adopt career path for specialized public health expertise within the Nigerian civil service structure (50 persons)-residential	NCDC		7,662,800	7,662,800

D4.2: Field Epidemiology Training Program or other applied epidemiology training program in place

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Increase national workforce of epidemiologists through sustainment of Frontline and Advanced FETP (Scale up)	<ul style="list-style-type: none"> Advocacy for sustained funding for existing programs from external donors; Conduct 3-day residential workshop to develop sustainability and advocacy strategy for GoN to incorporate programs into Federal budget 	NCDC		0	0
frontline public health workforce)	<ul style="list-style-type: none"> Conduct 3 days multi-stakeholder workshop of 40 people to review, harmonize and integrate the relevant trainings for frontline public health workforce including IDRS, frontline FETP, SOMARS, WARDS, and ARIS (residential) Conduct training of one public health professional per LGA (774) on Frontline IDSR over a period of 3 months (residential) in 6 batches/geopolitical zones Engage at least one NFEITP graduate per state to supervise and mentor the trained frontline public workforce over a period of 4 weeks 	NCDC		5,710,000	5,710,000
		NCDC		7,850,000	7,850,000
		NCDC		1,048,769,984	1,048,769,984
		NCDC		89,628,000	224,070,000

	<ul style="list-style-type: none"> Enrollment of 50 public health professionals in advance FETP across the states yearly 	NCDC		1,680,999,936	4,202,500,096
Establish Intermediate FETP in Nigeria or through an agreement with another country	<ul style="list-style-type: none"> Conduct advocacy to stakeholders on need for intermediate FETP, draft and sign MOU with stakeholders 	NCDC		3,539,000	3,539,000
	<ul style="list-style-type: none"> Establish a technical team within NCDC to oversee trainings 	NCDC		160,389,216	400,973,024
	<ul style="list-style-type: none"> Conduct 2-days multi-stakeholder residential meeting of 40 persons to validate and adopt the curriculum of intermediate FETP (residential)NCDC/AFENET/Academia) 	NCDC		3,786,000	3,786,000
	<ul style="list-style-type: none"> Advertise and select 2 sets of trainees (2 per state) in Intermediate-level FETP over a period of 6 months (residential) 	NCDC		11,032,000	27,580,000
	<ul style="list-style-type: none"> Recruit and train 72 intermediate FETP trainees/year 	NCDC		417,600,000	1,670,400,000

D4.3: Workforce strategy

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop and implement a comprehensive national public health workforce strategy for expansion, diversification, financial sustainment, and retention of the existing public health workforce	<ul style="list-style-type: none"> Conduct 1-day residential multi-stakeholder meeting of 5 persons to discuss the establishment of national public health workforce strategy and develop the TOR for the engagement of consultant to develop the public health workforce strategy 	NCDC		373,000	373,000
	<ul style="list-style-type: none"> Hire a consultant to draft the national public health workforce strategy over a period of 4 weeks 	NCDC		1,706,000	1,706,000
	<ul style="list-style-type: none"> Conduct 2-days multi-stakeholder meeting of 40 persons to validate and adopt a national public health workforce strategy (residential) 	NCDC		2,890,000	2,890,000
	<ul style="list-style-type: none"> Presentation of national public health workforce strategy at the relevant council; Nation Council on Health and Agriculture for approval 	NCDC, FMOH		0	0
	<ul style="list-style-type: none"> Convene 2-days stakeholder meeting (50 participants) of Federal and State Heads of Civil Service Commission to develop implementation plan for the national public health workforce strategy (residential) 	NCDC		7,662,800	7,662,800
Define public health workforce roles, and map human resources at state and LGA levels	<ul style="list-style-type: none"> Develop an e –registry database for public health workforce by the in-house ICT unit in NCDC and update quarterly 	NCDC		2,514,000	2,514,000
	<ul style="list-style-type: none"> Training of state-level people to use the template properly 	NCDC		29,544,000	73,860,000
	<ul style="list-style-type: none"> Disseminate information to all public health professional in state through the national and state relevant public health organization for e -data entry 	NCDC		150,700	602,800
Conduct advocacy to employ additional veterinarians in the state	<ul style="list-style-type: none"> Conduct 2- day state engagement workshop of 100 participants with the commissioner of state ministry of Agriculture and state Head of civil services commission as an advocacy to employ additional veterinarians. (Residential) 	FMARD		9,440,000	9,440,000

Support Revolving scheme for Private veterinarians and paravets	<ul style="list-style-type: none"> 1. Support 774 Private veterinarians and paravets with veterinary toolkits (veterinary equipment and drugs) 	FMARD		1,548,000,00	1,548,000,00
Establish Sanitary Mandate Programme	<ul style="list-style-type: none"> Conduct 5-day training workshop for 774 private veterinarians on sanitary mandate in 37 states (Residential) 	FMARD		0	0
Develop an in-service training programme for the staff of DVPCS and leadership training of veterinary officers in managerial cadre	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to develop an in-service training programme for the staff of DVPCS 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct 3-day stakeholder meeting to validate the in services training (50 persons, residential) 	FMARD		0	0
	<ul style="list-style-type: none"> Conduct 3-day quarterly training of 45 person on risk analysis, surveillance, preparedness and response , leadership, etc. (residential) 	FMARD		28,780,000	115,120,00
	<ul style="list-style-type: none"> Conduct 5-day training of 50 participants (DVS, DVPCS, VTHS) on management and leadership(residential) 	FMARD		12,190,000	12,190,000
Support the supervision, monitoring and evaluation and report writing of animal health policy and programmes implementation	<ul style="list-style-type: none"> Conduct 2-day intensive training of 50 staff on supervision, monitoring and evaluation and report writing of animal health policy and programmes implementation 	FMARD		5,484,000	5,484,000
	<ul style="list-style-type: none"> Procurement of 37 four runner vehicles for supervision, M&E 	FMARD		1,295,000,064	1,295,000,064
	<ul style="list-style-type: none"> Logistic support (fueling and maintenance of vehicle, communication allowance) for 50 supervisory staff 	FMARD		21,000,000	84,000,000
Develop Community Animal Health Worker Programme (CAHW)	<ul style="list-style-type: none"> Hire a consultant to review and develop CAHW training manual, guideline, SOP for epidemic surveillance, disease reporting and reporting tools and basic animal care services 	FMARD		1,297,050	1,297,050
	<ul style="list-style-type: none"> Conduct 2-day meeting of 30 participant to validate the CAHW training manual, guideline, SOP for epidemic-surveillance, disease reporting and reporting tools and basic animal care services 	FMARD		2,714,000	2,714,000
	<ul style="list-style-type: none"> Conduct 5-day training of 3,096 CAHVs (4 per LGAs) on epidemic-surveillance, disease reporting and reporting tools and basic animal care services 	FMARD		178,770,000	178,770,000
	<ul style="list-style-type: none"> Printing of 500 copies of training manual 	FMARD		750,000	750,000
Support Adhoc Animal Health Officer in state with inadequate human resources	<ul style="list-style-type: none"> Support 5 NYSC members and Hire 20 ad hoc Veterinarians for the states 	FMARD	Yes	48,900,000	195,600,00
Support Animal Health Sector of the PCU	<ul style="list-style-type: none"> Capacity Building, Coordination Program Specialist/Officer, Monitoring & Evaluation Officer, Finance/Accountant, Procurement Officer, Communications + Advocacy Officer, intern and component focal person 	FMARD	Yes	33,600,000	134,400,00
Support attendance of relevant nation and international events (seminars, short courses, workshops , conferences and OIE session)	<ul style="list-style-type: none"> Attendance of 10 staff in relevant nation and international events for 1 week 	FMARD	Yes	20,317,500	40,635,000
Conduct PVS gap analysis and assessment	<ul style="list-style-type: none"> Support 2 OIE delegates with DSA, airfare for 2 weeks) to conduct PVS, conduct 2 multi-stakeholder meeting for validation and g for 2-days residential meetings and 4. print and disseminate PVS report 	FMARD	Yes	23,832,344	23,832,344

R1: Preparedness

R1.1: Multi-hazard national public health emergency preparedness and response plan is developed and implemented

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop an all-hazards multi-sectoral public health emergency preparedness plan (PHEPPP), linking existing agency-specific and disease-specific plans.	<ul style="list-style-type: none"> Six members team to Identify intersectoral and interdependence stakeholders, outlined potential contribution, roles and responsibilities of the different stakeholders to constitute an all-hazard TWG (a day meeting in Abuja) Inaugurate TWG at the national to plan for the development of all hazard multi-sectoral public health emergency preparedness and response plan. Present detailed potential contribution of different stakeholder. A day meeting in Abuja (30 persons selected across interdependent stakeholders) 3-day advocacy at the national level to heads of MDAs in Abuja for the development of the all-hazard multi-sectoral PHEPP (FMARD, FMoH, FMOEv, NEMA and other relevant stakeholders) (Max of 7persons for 3-day) Engage a consultant for 30 days to develop a zero draft of the all hazards PHEPP 3-day Stakeholder meeting for maximum of 40 participants in Kaduna to review zero draft and adopt input from stakeholders. Consultant updates draft with the input from all stakeholders Printing and dissemination of the national PHEPP to relevant stakeholders. Engage a consultant for 30 days to develop training module on risk reduction and emergency preparedness and response in the health 2-day, 20 member team to review the zero draft of the training module on risk reduction and EPR in Nasarawa (maximum of 10 participants) 5-day training and simulation on multiple (two hazard) hazard in Lagos for health worker at the national level (80 Participants). Engage a consultant for 14days to develop first draft of MOU that guide operation (Consult the Legal officer). 	NCDC		19,200	19,200
Develop memoranda of understanding with relevant MDAs. (Preparedness and response)	<ul style="list-style-type: none"> 1-day meeting of PHEPRP TWG in Abuja to develop a memo to National council on health to address coordination, collaboration and support among relevant stakeholders. (25 participants). 1-day meeting in Abuja to review and adapt the MOU for signing (30 participants) A day meeting in Abuja for Signing of MOU by head of MDAs. 	NCDC		771,000	771,000
		NCDC		682,000	682,000
		NCDC		100,000	100,000

R1.2: Priority public health risks and resources are mapped and utilized

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Conduct national multi-sectoral all-hazards public health risk assessment and resource mapping to inform national public health emergency preparedness plan	<ul style="list-style-type: none"> 5-day National workshop on profiling risk, vulnerability Risk Assessment and resources mapping using STAR and VRAM tools in Lagos. (45 participants) 2-day pre assessment training for data collectors in Nasarawa a week after the national workshop (18 participants) 	NCDC		0	0
		NCDC		2,834,800	2,834,800

	<ul style="list-style-type: none"> Twelve days' assessment phase for data collection and analysis in six geopolitical zones, six states per zone. (two data collectors per zone) Engage a consultant for 30days to collate, analyse and come up with final report. 	NCDC		6,124,800	6,124,800
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	<ul style="list-style-type: none"> Identify, constitute quantification and forecasting team for response materials, laboratory reagents, consumables and all health commodities for all the priority diseases and events. 15 participants , A day meeting in Abuja) 5-day meeting to forecasting for health commodity needed for priority diseases and events and develop procurement plan in Akwanga, Nasarawa state (Response and Laboratory) (15 participants) 5-day meeting to develop SOPs for receiving, storage , Profiling transporter (eligibility) , distribution and preposition of all health commodities including laboratory and response materials in Enugu (35 participants) Meeting to Prepare Procurement plan for commodities required for prevention, detection and response Procurement and deploy Health commodities, Equipment, reagents and Medicines to the points of use based on the procurement plan 	NCDC		122,000	122,000
Develop Plans for surge capacity to respond to public health emergencies of national and international concern	<ul style="list-style-type: none"> Engage a consultant for 30days to develop zero draft of the surge capacity plan. 5-day stakeholders meeting in Lagos to review the draft and buy-in of the stakeholders.(35 participants) Printing and dissemination Identify and constitute EMT team 	NCDC		6,729,000	6,729,000
Capacity development for technical and administrative staffs of Nigeria CDC and relevant MDAs.	<ul style="list-style-type: none"> Develop training module on risk reduction and emergency preparedness and response in the health sector (the same as above) Conduct TOT for health worker at the national Conduct 3-day training in six geopolitical zones(the same in activity one above) 	NCDC		11,097,000	11,097,000
Pre-position Health commodities, equipment and Medicines to strategic locations consistent with vulnerability maps (e.g. remote hard-to access areas)	<ul style="list-style-type: none"> Identify and constitute quantification and forecasting team for response materials, laboratory reagents, consumables and all health commodities for all the priority diseases and events. (A day meeting in Abuja) Four days forecasting and supply planning meeting for priority diseases and public health events in Abuja.(30 participants) 5-day meeting to forecasting for health commodity needed for priority diseases and events and develop procurement plan in Akwanga, Nasarawa state (Response and Laboratory) (30 participants) 5-day meeting to develop SOPs for receiving, storage , distribution and preposition of all health commodities including laboratory and response materials in Enugu (35 participants) 2-day meeting for Profiling transporter, storage facility for inventory management. (15 participants) Prepare Procurement plan, procure and deploy health commodities, equipment, reagents and medicines to the points of use across the country. (all through the year) 	NCDC		1,164,500	1,164,500
		NCDC		0	0
		NCDC		1,500,000	1,500,000
		NCDC		17,182,000	17,182,000
		NCDC		1,608,000	1,608,000
		NCDC		4,294,000	4,294,000
		NCDC		7,324,000	7,324,000
		NCDC		8,253,000	8,253,000
		NCDC		2,011,000	2,011,000
		NCDC		2,000,000,00	8,000,000,00

Develop Plans for surge capacity to respond to public health emergencies of national and international concern	<ul style="list-style-type: none"> Engage a consultant for 30days to develop zero draft of the plan. 5-day stakeholders meeting in Lagos to review the draft and buy-in of the stakeholders.(35 participants) 3-day finalization meeting in Kaduna (35 participants) Printing and dissemination. Identify and constitute EMT team. 3-day meeting to harmonize the link with the workforce for manpower, link with medical countermeasure logistics for resources management and link with coordination for the coordination of the EMT 	NCDC		3,780,000	3,780,000
Develop and maintain database of Subject Matter Experts for preparedness and response (moved from Emergency Response Operations)	<ul style="list-style-type: none"> Develop electronic data base for management of information of rapid responders Quarterly review of the subject matters expert's database. 	NCDC		3,780,000	3,780,000
Develop risk analysis programme for animal health officers	<ul style="list-style-type: none"> Hire a consultant for 4 weeks to develop risk analysis programme for animal health and training manual Conduct 2-day meeting of 30 participants to review and validate the programme and training manual Conduct 5-day training of 100 participants on risk analysis (NAQS, DVPCS, State VS, private vet) 	FMARD		2,137,050	2,137,050
Develop national preparedness plans for emerging and remerging animal diseases and other events	<ul style="list-style-type: none"> Hire a consultant for 4 weeks to develop national preparedness plans for emerging and reemerging animal diseases and other events Set up a national preparedness committee of 10 animal health professionals for emerging and remerging animal diseases and other events Support quarterly meeting of the national preparedness committee of 10 professionals Conduct 2-day stakeholder meeting of 40 participants to review and validate the preparedness plan Conduct 2-day training of 50 participants on preparedness plan for emerging and remerging animal diseases and other events Printing of 500 copies of the preparedness plan for emerging and reemerging animal diseases and other events 	FMARD		1,770,000	1,770,000
Map the hot spots in human, wild and domestic animal species interfaces for zoonotic diseases and TADs	<ul style="list-style-type: none"> Engage consultants to identify and develop the GIS mapping of the hot spots in human, wild and domestic animal interface and for zoonotic diseases and TADs, train data collector to collect the GPS coordinates and upload the GIS mapping with NCDC and Ministry website 2. Conduct two multi-stakeholder meetings of 65 & 60 persons for the adoption and validation of the report respectively (3 days residential) and 14. Print 2500 copies and disseminate 2000 copies of the report 	FMARD	Yes	64,828,756	64,828,756
Consultative Meetings -NLDC and NRCD with relevant stakeholder in the agricultural sector	<ul style="list-style-type: none"> Support for multi-stakeholder meeting of 60 persons to carry out advocacy and sensitization , 2.NLDC and 3. NRCD meeting -3 days residential 	FMARD	Yes	0	0
Procurement of essential veterinary stockpiles and vaccines for Vaccine preventable zoonotic diseases	<ul style="list-style-type: none"> Procure 2 s wildlife capturing tools (darting guns, traps, etc.), 1000 sample materials, (1000 cold box, tubes and bottle) 50,000 syringes and needle, 10,000 vacutainers 	FMARD	Yes	0	0

R2: Emergency Response Operations

R2.1: Capacity to Activate Emergency Operations

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen inter-sectoral collaboration for emergency response particularly between NCDC and the animal health and environment (all hazards approach)	<ul style="list-style-type: none"> Inauguration, and activation of national EPR team taking an all hazards approach involving the animal and environmental health sector. 	NCDC		550,000	550,000
	<ul style="list-style-type: none"> 1-day biannual meeting with Ministries, DGs and Directors from NiMET, NEMA and other stakeholders. 	NCDC		2,226,000	5,194,000
	<ul style="list-style-type: none"> Write to state to activate EPR and RRT teams which would include animal and environmental health component. 	NCDC		216,000	216,000
	<ul style="list-style-type: none"> Conduct 3-day Advocacy to relevant MDAs on the need for One Health in emergency response in Abuja. (15 members advocacy team selected across the stakeholders) 	NCDC		0	0
Enhance the NCDC EOC physical space, equipment, and logistic support	<ul style="list-style-type: none"> Procure a larger EOC physical space- conference room to accommodate 30 persons, 6 meeting (including EOC managers room) rooms to accommodate 10 persons each 	NCDC		0	0
	<ul style="list-style-type: none"> Three (3) 84" smart screen monitors for the conference room and One 84" smart screen monitors for the meeting rooms, Four video teleconference equipment, Two projector and projector screens, Six desktops for workstations and back up, 10 laptops, Two Multipurpose printers, One Photocopier, one scanner, Internet service and modems for back up, 1 Response hilux Conference area Large conference table to seat 15 persons, 30 swivel chairs, Three notice boards, one whiteboard, 2 Flipchart stands Meeting rooms Five conference tables to seat 10 persons each, 50 swivel chairs, 5 fireproof cabinets, 5 flip chart stands, 5 white boards EOC managers office One office desks, Two swivel chairs, one fireproof cabinet 	NCDC		0	0
Develop and maintain database of Subject Matter Experts and RRT for preparedness and response (Move to Preparedness)	<ul style="list-style-type: none"> Develop electronic data base for management of information of rapid responders 	NCDC		300,000	300,000
	<ul style="list-style-type: none"> Quarterly review of the subject matters expert database. 	NCDC		0	0

R2.2: Emergency Operations Centre Operating Procedures and Plan

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen procedures and plans for EOC emergency operations function	<ul style="list-style-type: none"> Appropriate legal instruments are in place to enact critical legal and administrative measures for emergency legislation, administrative regulations, non-legislative guidelines or standards, and non-legislative agreements, or arrangements for PHEOC to manage public health responses 	NCDC		8,494,000	8,494,000

	<ul style="list-style-type: none"> ● 1-day meeting to develop MoU on the establishment and functionality of EOCs at both National and State Level 	NCDC		746,000	746,000
	<ul style="list-style-type: none"> ● 1-day meeting in Abuja to review and adapt the MOU for signing (30 participants) 	NCDC		682,000	682,000
	<ul style="list-style-type: none"> ● A day meeting in Abuja for Signing of MOU by head of MDAs. 	NCDC		100,000	100,000
	<ul style="list-style-type: none"> ● Presentation by the Minister Health to the NCH 	NCDC		0	0
Develop missions, mandates, capabilities, and capacities of participating agencies for PHEOC functioning and response	<ul style="list-style-type: none"> ● 5-days training and mentoring of relevant stakeholders in 36 plus one state (3 from Abuja and 15 at the state level). 	NCDC		29,601,600	67,660,800

R2.3: Emergency Operations Program

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthen capacity for emergency response among EOC staff and surge personnel by developing standard training, simulation exercises, and after action reviews	<ul style="list-style-type: none"> ● Conduct a 5-day meeting to review, harmonise and standardise training protocols of the existing document for EOC operations and for emergency response 	NCDC		3,450,000	3,450,000
	<ul style="list-style-type: none"> ● Conduct joint 30 outbreak investigations with Animal, human and environmental health teams (6 participants) 	NCDC		164,340,000	361,548,000
	<ul style="list-style-type: none"> ● Conduct after action reviews 	NCDC		97,927,200	228,496,800
Hire core public health emergency management staff	<ul style="list-style-type: none"> ● TWG to Conduct a 2-day meeting for needs assessment of human resources needed for response, roles and responsibilities should also be defined (this should be taken into context of the Public Health Workforce resource mapping to be conducted by the Health workforce technical area) 	NCDC		441,500	441,500

R2.4: Case management procedures are implemented for IHR relevant hazards

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop national case management guidelines for priority diseases, SOPs for the management and transport of potentially infected persons and improve infection prevention and control at the national and state levels	<ul style="list-style-type: none"> ● Conduct 3 days meeting to revise existing case management guidelines and SOPs (20 participants; involving the 6 pillar leads; Enugu) 	NCDC		6,696,800	6,696,800
	<ul style="list-style-type: none"> ● Engage consultant for 1 month to harmonise case management guidelines for priority diseases and develop SOP for transportation of potentially infected persons. 	NCDC		1,200,000	1,200,000
	<ul style="list-style-type: none"> ● Convene 5-days stakeholders meeting to validate revised and harmonised guidelines and SOP in conjunction with the IPC team (30 participants; Akwanga). 	NCDC		10,013,200	10,013,200
	<ul style="list-style-type: none"> ● Publication on MDAs website 	NCDC		0	0

	<ul style="list-style-type: none"> • Printing and Dissemination of revalidated case management guidelines, SOPs to relevant stakeholders 	NCDC		2,329,000	2,329,000
Improve infection prevention and control at the national and state levels	<ul style="list-style-type: none"> • Conduct assessment of isolation units in all the states in the country to identify gaps compared to global best practice and develop minimum standards for isolation practice. 2 days per state, 2 person per state for 36 states and FCT 	NCDC		11,277,600	11,277,600
	<ul style="list-style-type: none"> • Conduct 5-days training to build IPC capacity of Health workers in each geopolitical zone 40 participants per zone. 	NCDC		37,344,000	37,344,000
Establish funding mechanism and options for animal disease and transboundary pest outbreaks from the Ecological Fund and others	<ul style="list-style-type: none"> • Conduct 2-day stakeholder meeting for establishment of funding mechanism and options for animal disease and transboundary pest outbreaks from the Ecological Fund and others 	FMARD		0	0
	<ul style="list-style-type: none"> • Printing 200 copies of the memo on establishment of funding mechanism to NCA for approval 	FMARD		0	0
	<ul style="list-style-type: none"> • Conduct 2-day meeting to strengthen collaboration with relevant MDAs . NCDC, NEMA, Security agencies , NGO and partners 	FMARD		1,338,000	1,338,000
Provide 40 operational vehicles for animal health services including response to animal diseases outbreak	<ul style="list-style-type: none"> • Procure 40 operational vehicles for animal health services including response to animal diseases outbreak 	FMARD		720,000,000	720,000,000
	<ul style="list-style-type: none"> • Provide monthly fueling and maintenance of 40 operational vehicles 	FMARD		16,800,000	67,200,000
Support for Emergence and Response Activities	<ul style="list-style-type: none"> • Procure 2s 4 Runner, 6s. 4-Wheel double cabin and 2s Corolla Vehicles 2. Registration and insurance of the vehicles 3. Tracking , fueling and maintenance 	FMARD	Yes	239,680,000	239,680,000
Equipping the Crisis Management Center (animal component office)	<ul style="list-style-type: none"> • Procure 2 LED 60", TV, teleconference, Ups, stabilizer, swivel and visitor chair, printer, cartridge, camera, modem, desk phone, photocopier, window blind, waste bin & shredder 	FMARD	Yes	10,270,000	10,270,000
Refurbishment of REDISSE Animal Health component office at Headquarter	<ul style="list-style-type: none"> • Office portioning, tiling, painting, toilet fitting, procure refrigerator, water dispenser, TV, chair. Cabinet, vehicle, rent, and conference table 	FMARD	Yes	23,989,200	23,989,200
Support for project logistics	<ul style="list-style-type: none"> • Provide utility fees-electricity, water, waste management, l, PMS, detergents, beverage, microwave, freezer, seater, TV, laptop, cutleries and vehicles and attendance of international conference 	FMARD	Yes	14,985,500	14,985,500
Project management costs 6. Staff incentives	<ul style="list-style-type: none"> • Provide monthly incentives/stipends for 6 staff for 9 months 	FMARD	Yes	28,200,000	28,200,000
Engagement of contract staff and consultants	<ul style="list-style-type: none"> • Hire 4 cleaners, security, driver, grievance redressed officer, receptionist 	FMARD	Yes	7,800,000	7,800,000
Exchange visit	<ul style="list-style-type: none"> • Air ticket, accommodation and per diem for 3 NCDC staff for 5-days exchange visit to Robert Koch Institute Berlin Germany 	NCDC	Yes	3,889,018	3,889,018
1st Technical Working Group Meeting(TWG)	<ul style="list-style-type: none"> • 13 TWG MAURICE members, FMoH and NCDC MAURICE team met and: - Justified the need for a harmonised national Infection Prevention and Control (IPC) manual - Agreed on the content and structure of the MAURICE manual 3. Exchanged information on relevant IPC documents and literature for development of the draft manual 	-	NCDC	Yes	1,590,190
2nd Technical Working Group Meeting	<ul style="list-style-type: none"> • Review and incorporation of comments by TWG members into the draft MAURICE manual developed by the NCDC team 	NCDC	Yes	1,580,800	1,580,800
Training Module development Workshop in Abuja	<ul style="list-style-type: none"> • Training of NCDC, FMoH, UATH, NHA, RKI, GIZ staff on the concept of the participatory quality development approach and systemic view • Developed facilitators and participants guide Review of draft IPC MAURICE manual and draft one pagers 	NCDC	Yes	2,288,000	2,288,000

Pilot workshop at the University of Abuja Teaching Hospital (UATH), Gwagwalada	<ul style="list-style-type: none"> Training of 13 UATH staff as "IPC Change Agents" using a participatory quality development approach and system view, 1-day field visit and engagement of UATH for sustainability 	NCDC	Yes	794,269	794,269
Lagos Implementation workshop, part 1	<ul style="list-style-type: none"> IPC training of 28 frontline health care workers from 7 public health facilities and 7 private health facilities with 4 state ministry officials as "IPC change agents" using participatory quality development Approach and systemic view 	NCDC	Yes	13,615,014	13,615,014
Lagos Implementation workshop, part 2	<ul style="list-style-type: none"> Feedback on field phase findings and experiences by change agents Engagement of 11 hospital management (medical directors) for sustainability 	NCDC	Yes	10,758,550	10,758,550
Operational research	<ul style="list-style-type: none"> Systematic evaluation of the efficiency of MAURICE training with regard to IPC interventions in the hospital via supervisory visits 	NCDC	Yes	0	0
Ensure proper administration and operations management of the EOC	<ul style="list-style-type: none"> Engage an EOC planning officer, grants manager and IT maintenance officers 	NCDC	Yes	16,012,549	16,012,549
Convene regular EOC meetings	<ul style="list-style-type: none"> Routine and outbreak response meetings 	NCDC	Yes	1,281,000	1,281,000
EOC Facility Maintenance	<ul style="list-style-type: none"> Provide funds for maintenance of the EOC Facility 	NCDC	Yes	2,111,256	2,111,256
Ensure proper financial management of Co-Ag funds	<ul style="list-style-type: none"> Engagement of a fiduciary agent to ensure Good governance and strong financial practices which will be in compliance with terms and conditions of the cooperative agreement during the implementation of the grant. 	NCDC	Yes	2,954,840	2,954,840
Conduct gap analyses to determine minimum EOC optimal functionality	<ul style="list-style-type: none"> Carry out expert review and assessment of the existing EOC structures, systems and management. 	NCDC	Yes	0	0
Development of a National Medical Counter Measures Strategic Plan	<ul style="list-style-type: none"> Conduct a 5-day stakeholders' workshop to ratify the draft MCM strategic plan 	NCDC	Yes	4,282,200	4,282,200
Capacity building and mentorship of State EOCs during public health/emergency outbreaks of concern	<ul style="list-style-type: none"> Provision of onsite and offsite technical support to State EOCs and emergency response structures during public health/emergency outbreaks of concern 	NCDC	Yes	0	0
Development and Implementation of the NCDC Multi-Hazard Preparedness Plan for key priority diseases (Yellow Fever, CSM, Lassa Fever, Cholera, Avian Influenza, Monkeypox)	<ul style="list-style-type: none"> i. Collation and review of existing preparedness plans for different disease areas ii. Convey stakeholder meetings to integrate collated plans iii. Finalize and disseminate a multi-hazard preparedness plan. 	NCDC	Yes	4,282,200	4,282,200
Support outbreak investigation and response.	<ul style="list-style-type: none"> Deployment of RRTs for investigation and on-site response to rumours/alerts/confirmed reports of epidemic-prone disease outbreaks 	NCDC	Yes	2,793,800	2,793,800
Develop a National HEOC Policy	<ul style="list-style-type: none"> Constitute an 8-member policy drafting committee with members from NPHCDA, WHO, AFENET Conduct several meetings to develop a draft National HEOC policy. Submit the draft HEOC policy to the NCDC Management Committee 	NCDC	Yes	36,600	36,600
Ensure stockpile of sufficient laboratory reagents and other essentials.	<ul style="list-style-type: none"> Procure essential reagents and commodities for laboratories 	NCDC	Yes	2,592,500	2,592,500
Monitoring and supervision of facilities for adherence to standard and brainstorming on challenges	<ul style="list-style-type: none"> Conduct monitoring and supervisory visits to laboratories within the NCDC network. 	NCDC	Yes	2,293,600	2,293,600
Onsite assessment and valuation to identify a suitable facility.	<ul style="list-style-type: none"> Site assessment of proposed facility by the EOC team lead and independent valuation consultant. 	NCDC	Yes	1,300,000	1,300,000

Renovation of facility, equipping/optimisation of the EOC facility	<ul style="list-style-type: none"> Demolition and alteration @ 192,500 Rehabilitation works @ 3,067,963 Purchase of communications and Information Technology equipment @ 6,111, 200 Project Administration (2.5%) @ 287,691 <p>Value Added Tax (VAT) 5% 604,152</p>	NCDC	Yes	102,635,056	102,635,056
Basic PHEOC fundamentals training	<ul style="list-style-type: none"> Transportation of 5 NCDC Personnel to and from State for training activities @ 1,857,632 per state. Stationery@ 500/person X 30 persons and printing of training materials@100x40 itemsX30 persons and Teabreak &Lunch @6,000/person X30 persons X10days and filejackets @500/person X30 and tepads@400/personX30persons @ 1,966,000 	NCDC	Yes	0	0
Conduct an experience sharing workshop for the already established 6 state PHEOCs in Abuja to review the establishment process, what has gone well, and lessons learned. 3 people from each state will be in attendance.	<ul style="list-style-type: none"> DTA @ 16000/day for 2-days for 24 people Flight @ 60,000 per person for 24 people Airport taxi @ 20000/per person for 24 people Local running @ 0.3% of DTA for 24 people Hall hire for 2-days @ 300,000 Lunch for 35 persons @ 3000/day and tea break @ 1500/day. 7) Filejackets @500/person X 35 and tepads@400/person X 35people. This will also include road transport for some states. 	NCDC	Yes	4,200,000	4,200,000
Monitoring and supportive supervision of first 6 newly established state PHEOCs. 3 people will be deployed to the first 6 PHEOCs to provide supportive supervision and conduct simulation exercises.	<ul style="list-style-type: none"> Flight @ 60,000 for 3 people DTA @ 16, 000/day x 3people Airport taxi @ 20000/per person Local transport @1,500 /day Lunch @ 3000 for 10 people Tea Break @ 1500 for 10 people Printing of monitoring materials @ 5000 	NCDC	Yes	3,000,000	3,000,000
6. Personnel wages and salaries for state EOC project and national ICC for 12 months	<ul style="list-style-type: none"> 1 consultant/Team Lead for state PHEOC establishment @ 1,000,000/month 1 project assistant state PHEOC establishment @ 400,000/month 1 Incident Coordination Centre Assistant @ 150,000/month 1 Biomedical Engineer @ N120,000/month 1 Technical Assistant to DG @ 400,000/ month 1 Technical Assistant for (operations) @ 600,000/ month 1 Technical Assistant for Communications @ 400,000 / month 1 Communications Assistant @ 150,000/month 	NCDC	Yes	38,640,000	38,640,000
Onsite assessment and advocacy visits of Polio EOCs in 3 states which aims to understand the scope of operations to enable transition to PHEOCs for 2-days for 3 people	<ul style="list-style-type: none"> Flight @ 60,000 for 3 people Airport taxi @ 20000/per person DTA @ 16, 000/ day x 3 people Local transport @1,500 /day 	NCDC	Yes	1,200,000	1,200,000
Engagement workshop for the polio EOCs as a first step in the transition of polio EOCs into state PHEOC network- 2 persons will be invited from each of the 8 Polio EOCs.	<ul style="list-style-type: none"> DTA @ 16000/day for 2-days for 16 people Flight @ 60,000 per person for 16 people Airport taxi @ 20000/per person for 16 people Local running @ 0.3% of DTA for 16 people Hall hire for 2-days @ 400,000 Lunch for 30 people @ 3000/day and tea break @ 1500/day. filejackets @500/person X30 and tepads@400/personX30persons. This will include road transport for some states. 	NCDC	Yes	3,400,000	3,400,000
Internet services subscription	<ul style="list-style-type: none"> Annual subscription for NCDC internet services @ 1,000,000 	NCDC	Yes	1,000,000	1,000,000
ICC consumables & supplies	<ul style="list-style-type: none"> Printer/Copier ink @ 125,000, kitchenette supplies @ 25,000 	NCDC	Yes	1,800,000	1,800,000
Running of EOC meetings	<ul style="list-style-type: none"> Monthly meeting costs @ 50000 	NCDC	Yes	600,000	600,000

Monthly Cable subscription	● Payment for monthly cable subscription @ 20000	NCDC	Yes	240,000	240,000
Monthly subscription for closed user group (CUG) toll free lines for NCDC response staff, state epidemiologists and local government area district surveillance and notification officers.	● CUG subscription and data bundle rental @ 47,619 VAT @ 2380.95	NCDC	Yes	600,000	600,000
Payment for a data management tool for E-health Africa	● Annual subscription for NCDC disease outbreaks data tool @ 4945644	NCDC	Yes	4,945,644	4,945,644
Engage one consultant for 4weeks to develop conduct the evaluation process, identify research questions for publication and make recommendations for next phase of the EOC project.	● Consultancy fee @ 1,000,000 Travel logistics for evaluation visits X 2 people to 6 states for 2 @ 1,500,000 Focused group discussion and workshop @ 2,500,000	NCDC	Yes	5,000,000	5,000,000
Establish funding mechanism and options for animal disease and trans-boundary pest outbreaks from the Ecological Fund and others	● Conduct 2-day stakeholder meeting for establishment of funding mechanism and options for animal disease and trans-boundary pest outbreaks from the Ecological Fund and others	FMARD		0	0

R3: Linking Public Health and Security Authorities

R3.1: Public Health and Security Authorities, (e.g. Law Enforcement, Border Control, Customs) are linked during a suspect or confirmed biological event

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish a national TWG for linking public health and security authorities	• Set up TWG secretariat at ONSA and Write letters for nomination from all security agencies to constitute the TWG	ONSA		0	0
	• 1-day inaugural meeting of TWG(40 persons) to review TOR and define next steps	ONSA		1,062,000	1,062,000
	• Bi-Monthly meeting of 20 persons	ONSA		4,942,000	4,942,000
Update old statutory instruments to make them compliant with IHR.	• Secretariat to develop TOR and identify 7-man task team to compile available statutory documents	ONSA		0	0
	• Engage a consultant to conduct an assessment of existing statutory instruments, to identify related gaps	ONSA		1,221,200	1,221,200
	• 2-days workshop for Legal officers from all relevant MDAs and organizations to review reports, propose amendment, and draft new regulations where none exists	ONSA		4,196,000	4,196,000
	• High-level stakeholders (Civil + Military +Intel Agencies) 2-days meeting to review and approve the proposed amendment and/or new regulations	ONSA		3,468,000	3,468,000
	• Engagement with the legislative arm for legal backing, working with Ministry of Justice and the LEGISLATIVE TECHNICAL GROUP of JEE	ONSA		0	0
Develop unique protocols and MoUs for security agencies and public health departments to elaborate on the specific roles in clear terms	• Set up a 5 man task team to compile documents, develop TOR for a consultant to coordinate process	ONSA		0	0
	• Hire a consultant (working with the task team) to liaise with legal officers of relevant MDAs and organisations to facilitate the drafting of an MOU	ONSA		1,221,200	1,221,200
	• Stakeholders meetings to review and validate the MOU	ONSA		1,418,000	1,418,000
	• Conduct advocacy to heads of agencies for buy-in and endorsement of the MoU	ONSA		0	0
Integrate and continuously develop capacity on integration and joint working involving relevant security authorities and those in public health to mitigate the normal turnover in positions and retirements	• Ensure routine inclusion of relevant personnel from the security agencies in all public health-related trainings and workshops	ONSA		0	0
	• Identify desk officer for public health emergencies in all relevant MDAs and security agencies	ONSA		0	0
	• Joint capacity building on public health emergencies and disasters (tabletop exercise) for middle cadre officers - one per year	ONSA		21,332,000	53,330,000
	• Joint capacity building on public health emergencies and disasters (simulation exercises) for middle cadre officers - 1 per year	ONSA		36,600,000	91,500,000
	• Conduct biannual/seminars and step down trainings	ONSA		3,720,000	11,160,000
	• Integrate security agencies' personnel as co-editors of periodic epidemiology bulletins	ONSA		0	0
	• Ensure appropriate distribution of the document among stakeholders (Civil + Military +Intel Agencies)	ONSA		0	0

	<ul style="list-style-type: none"> ● Ensure involvement of Security Officials (NIPSS, NDC, ISS, ONSA, Armed Forces) in After Action Review (AAR) post incident. 	ONSA		0	0
Implement appropriate legal, policy instruments and operational package (MOU, SOPs) to ensure multi-sectoral health preparedness and response.	<ul style="list-style-type: none"> ● To involve desk officers on public health emergencies from security agencies and MDAs in NASORM ● Embed military and security agencies in NCDC and other public health agencies, to facilitate inter-agency collaborations, skills exchange and capacity building 	NCDC		0	0
Improve reporting and information sharing mechanisms including cross-border collaboration	<ul style="list-style-type: none"> ● Establish and keep updated, a listserv/database of all the relevant desk officers and key personnel of the security agencies and MDAs , at secretariat (ONSA) ● Establish a mechanism for transmission of risk communication information, situation reports and response activities, to relevant security agencies and MDAs ● To have public health issues discussed during cross-border collaboration meetings (ECOWAS Health Ministers meeting) ● Advocacy to have public health emergency situation reports routinely discussed at national security meetings ● Advocacy to have public health emergency situation reports routinely discussed at national security meetings 	ONSA		0	0
		ONSA		0	0
		ONSA		0	0
		ONSA		0	0
		ONSA		0	0

R4: Medical Countermeasures and Personnel Deployment

R4.1: System is in place for sending and receiving medical countermeasures during a public health emergency

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop a national framework for procurement, deployment and receipt of medical countermeasures during public health emergencies	<ul style="list-style-type: none"> ● 5-day workshop for 40 people to develop SOPs and protocols for planning, placing order, procurement, deployment, emergency commodities for waivers and receiving MCM assets locally and internationally and concept note on MCM framework ● 4-day Workshop for 40 people and Training of stakeholders on MCM logistics at six geopolitical zones by MCM TWG (5 facilitators from Abuja and 35 participants from neighboring states). ● 1-day meeting for 30 people to set up and for the inauguration of the Inter-Ministerial Steering Committee on MCM ● One day bi-annual meetings of 25 people of the Inter-Ministerial Steering Committee on MCM ● 2-days meeting of 6 people to develop database of the donors and suppliers ● NCDC to develop memo to National NCH on the roles and responsibilities with stakeholders/donor for MCM (no cost) 	NCDC		9,406,000	9,406,000
		NCDC		39,310,400	78,620,800
		NCDC		904,000	904,000
		NCDC		2,445,000	5,705,000
		NCDC		907,600	1,815,200
		NCDC		0	0
Support the development of MOUs with international suppliers of medical countermeasures for public health	<ul style="list-style-type: none"> ● Engage one national consultant for 14 days consultancy to support the process of developing the MOUs. ● 1-day review of the first draft of MOU by the consultant by six member team 	NCDC		930,000	930,000
		NCDC		551,200	551,200

emergencies	<ul style="list-style-type: none"> A 2-day residential meeting to validate and adapt MOU (30 residential and 10 non-residential participants; Lagos) Printing of 100 copies of the final document Dissemination of final document 	NCDC		4,292,000	4,292,000
		NCDC		232,900	232,900
		NCDC			
Conduct tabletop simulation exercise to test the medical countermeasures plan	<ul style="list-style-type: none"> Conduct a quarterly 2-day residential meeting of the PD/MCM TWG (30 participants) which will include 1-day simulation exercise (table top exercise) 	NCDC		19,730,000	67,082,000
Promote the adherence to the national pharmaceutical assurance policy by local manufacturers for items required for MCM that can be procured in country	<ul style="list-style-type: none"> FMoH, NAFDAC and NCDC to organize a 3-day annual sensitization workshop to promote the adoption of the practices in the area of the executive order ease of doing business for the pharmaceutical companies (70 participants). 	NAFDAC		2,598,000	2,598,000
	<ul style="list-style-type: none"> Disseminate the PAQP to all stakeholders 	NCDC		20,000	20,000

R4.2: System is in place for sending and receiving health personnel during a public health emergency

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop a personnel deployment plan and legal and regulatory framework for personnel deployment, including sector roles and responsibilities to identify barriers to receiving health personnel during public health emergencies	<ul style="list-style-type: none"> Hire 1 national consultant for 10 working days to review the legal and regulatory framework for personnel deployment including sector roles and responsibilities. 	NCDC		690,000	690,000
	<ul style="list-style-type: none"> Hire 1 National Consultant for 10 working days to draft the national medical personnel deployment plan 	NCDC			
	<ul style="list-style-type: none"> 3 days meeting of 25 people to review zero draft developed by consultants (Akwanga) 	NCDC		4,575,000	4,575,000
	<ul style="list-style-type: none"> Print and dissemination of 500 copies of the final document 	NCDC		1,164,500	1,164,500
Review and establish standards of care including the competencies required - including SoPs, domesticate guidelines etc.	<ul style="list-style-type: none"> Hire an international consultant for a 14-day consultancy to review, establish, draft and adapt the standards of care including the d - including SoPs, domesticate guidelines etc. 	NCDC		0	1,297,050
	<ul style="list-style-type: none"> 3-day meeting of 25 people to review zero draft developed by consultants (Kaduna) 	NCDC		0	4,832,000
	<ul style="list-style-type: none"> Printing and dissemination of 100 copies of the final document 	NCDC			
	<ul style="list-style-type: none"> Dissemination of final document 	NCDC			
Provision of Animal containment equipment and materials during Animal Health crisis	<ul style="list-style-type: none"> Procure 1 loading truck and 1 excavator truck Procure 6 wildlife surveillance vehicle for national wildlife parks Procure wildlife capture materials (capture guns, traps, sedatives, tranquilizer, PPE) 	FMARD			

R5: Risk Communication

R5.1: Risk Communication Systems

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop a multi-sectoral and all-hazards risk communication strategy and emergency plan	<ul style="list-style-type: none"> Identification and mapping of relevant stakeholders across sectors and disciplines Inauguration of the multi-sectoral risk communication group Monthly meeting of the multi-sectoral risk communication working group, 30 persons -local (communication and refreshment, tea break and one lunch) 2-days training for 30 members of risk communication working group on multi-sectoral risk communication covering health system building blocks Conduct 3 days' Workshop for 40 multi-sectoral risk communication group members to develop/collate communication plans of different MDAs (This includes cost for travels/per diem/feeding/accommodation/venue for) 	NCDC		0	0
Develop a Monitoring and Evaluation process to provide feedback into the programme for improvement.	<ul style="list-style-type: none"> Engage a consultant to support the process (This includes cost for travel/per diem/accommodation/food/venue) Conduct 2-days workshop to develop monitoring and evaluation toolkits and research to gather data for analysis. (This includes cost for travel/per diem/accommodation/food/venue) Conduct 3 days training on monitoring and evaluation for 30 multi-sectoral risk communication group members at the national level (This includes cost for travel/per diem/feeding/accommodation/venue) 3 days step down training for the sub-national structures(774 LGA Educators: 2 State health educators per state including FCT) on monitoring and evaluation process (This includes the cost for feeding/travels per diem/accommodation/venue) Pretest monitoring and evaluation tool kit 2-day Finalization meeting by 30 multi-sectoral risk communication group members for the monitoring and evaluation process Dissemination of the tool kit to the states (This includes cost for printing and logistics) Quarterly supportive supervision (This includes cost for travel/per diem/accommodation/food/venue) 	NCDC		2,490,000	2,490,000
		NCDC		1,392,000	2,784,000
		NCDC		0	14,712,000
		NCDC		55,776,000	125,496,000
		NCDC		789,200	3,156,800
		NCDC		2,198,000	8,792,000
		NCDC		1,139,600	2,279,200
		NCDC		11,145,600	33,436,800

R5.2: Internal and Partner Communication and Coordination

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Build capacity for risk communication among human, environmental, and animal health	<ul style="list-style-type: none"> Identify relevant training needs of communication officers across across human, animal, and environmental health MDAs 	NCDC		0	0

workers	<ul style="list-style-type: none"> Develop a training curriculum or training module on risk communication Engage a consultant to support the process Conduct a training of trainers on risk communication for 40 Communication officers across National MDAs (This includes cost for feeding/Local transport /venue/ honourarium for 5 facilitators) Cascade training to the state level across 36 States and FCT for 20 communication officers across MDAs in each State (This includes cost for travels/local transport/per diem/accommodation/feeding/venue) 	NCDC		150,000	300,000
Create and disseminate IEC materials to increase facilities reporting (from reporting technical area)	<ul style="list-style-type: none"> Develop video clips and IEC materials on disease reporting for health care workers Publicize video clips and IEC materials via traditional and social media Print 100,000 disease reporting IEC materials to all health facilities Dissemination to 36 states and 36,000 health facilities 	NCDC		250,000	250,000
		NCDC		1,100,000	1,100,000
		NCDC		10,000,000	10,000,000
		NCDC		1,850,000	1,850,000

R5.3: Public communication

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Build capacity for coordinated public communication at the National and State level	<ul style="list-style-type: none"> Engage consultant to support the process (This includes cost for travels/per diem/accommodation/ feeding/venue) Develop training modules Conduct 3 days Training workshop for Communication officers in the National (30). (This includes cost for travels/per diem/accommodation/ feeding/venue) Support States to Cascade Training (1-day) to other relevant agencies in each of their States (This includes cost for travels/ feeding/venue) Engage a consultant to develop national communication strategy (T actively reach out to variety of media platforms) Conduct 2-days document review workshop Pretest finalised document Printing and Disseminate Documents 	NCDC		0	1,290,000
		NCDC		0	0
		NCDC		3,282,000	3,282,000
		NCDC		0	14,392,800
		NCDC		0	2,490,000
		NCDC		0	4,524,000
		NCDC		0	819,200
		NCDC		0	5,979,200

R5.4: Communication Engagement with Affected Communities

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022

Establish community outreach programs and regularly conduct information education communication (IEC) materials testing with members of the target audience.	• Develop and produce IEC materials	NCDC		11,250,000	11,250,000
	• Mobilize 774 LGA Social mobilization officers to regularly engage members of their communities on different health issues (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	13,438,400
	• Identify and segment target audience	NCDC		0	0
	• Conduct field testing and finalization of IEC materials as soon they are produced (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	1,730,700

R5.5: Dynamic Listening and Rumour Management

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop strategic framework to integrate fragmented event monitoring at the community level	• Conduct 2-days meeting for 20 stakeholders to review existing monitoring tools, and identify ways they can feed into each other (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	4,432,000
	• Engage a consultant to support the process (to develop an integrated framework for monitoring tools)	NCDC		0	2,490,000
	• Conduct a 1-day finalization meeting (This includes cost for travels/per diem/accommodation/feeding/venue)	NCDC		0	0
Develop/strengthen National and State systems to consider communication feedback—including rumours and misinformation from the public—in decision-making processes to improve communication response.	• Capacity building for 2-days for 10 National communication officers and 40 State officers on the collection, collation, analysis, and escalation of feedback to relevant authorities for action (This includes cost for travel/per diem/accommodation/food/venue)	NCDC		0	5,704,000
	• Conduct Advocacy visits to 15 relevant MDAs (This includes cost for Local transport)	NCDC		7,920,000	7,920,000
	• Weekly Collection, collation and analysis of feedback at State and National level	NCDC		0	0
Branding and corporate communication and risk communication strategies for the REDISSE project	• Consultancy to develop, test and disseminate risk communication information for epidemic-prone diseases based on seasonality and prevailing including developing project communication plan and sample communication material	NCDC	Yes	61,043,648	61,043,648
Risk Communication TWG meetings	• Conduct quarterly Technical committee meetings in Abuja hall, accommodation, lunch, tea break, stationery	NCDC	Yes	9,917,660	9,917,660
Set up of project website, set up of the intranet communications and networking of the office	• Consultancy to develop project website and project intranet including overhaul and upgrade of NCDC website and development of REDISSE webpages	NCDC	Yes	18,674,850	18,674,850
REDISSE PCU Office set up	• Procurement of office supplies and equipment	NCDC	Yes	20,715,000	20,715,000

Points of Entry

PoE.1: Routine capacities are established at PoE

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Designate PoEs as guided by IHR (2005) Articles 20 and 21	<ul style="list-style-type: none"> Memo to HMH from Dir. PHS for consideration and approval, and notification to WHO and IHR focal person. Send communication to WHO AFRO via the Nigerian IHR NFP to indicate decision to designate MMIA, NAIA, MAKIA and the Port of Lagos (Papa). 	FMOH		0	0
Conduct IHR assessment for core capacity requirements at designated airports and ports (40-50 persons/site) - Site visits	<ul style="list-style-type: none"> Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for MMIA Conduct IHR assessment for MAKIA Conduct IHR assessment for NAIA Conduct IHR assessment for Port of Lagos (Papa) Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for NAIA Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for MMIA Conduct IHR assessment for MAKIA Conduct IHR assessment for Port of Lagos (Papa) Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for NAIA A final assessment meeting with between 15 and 20 agencies (50 participants) will hold at the PoE. This will require 1 coffee and 1 lunch break. The final assessment meeting will require travel for 4 directorate cadre staff (this is in addition to the 5 IHR consultants). They would require flight tickets to and from Abuja, accommodation and per diems for 3-days (including 2 travel days) Identify and assemble stakeholders to participate in assessment - all agencies at POE; <ul style="list-style-type: none"> Conduct IHR assessment for MMIA Conduct IHR assessment for MAKIA Conduct IHR assessment for Port of Lagos (Papa) A final assessment meeting with between 15 and 20 agencies (50 participants) will hold at the PoE. This will require 1 coffee and 1 lunch break. The final assessment meeting will require travel for 4 directorate cadre staff (this is in addition to the 5 IHR consultants). They would require flight tickets to and from Abuja, accommodation and per diems for 3-days (including 2 travel days) Develop an action plan to address the gaps at each of the selected points of entry. Engage 5 National consultants to meet in Abuja for 5-days Develop an action plan to address the gaps at each of the selected points of entry. <ol style="list-style-type: none"> The consultants will meet in Abuja for 5-days to evaluate the results of the assessment tools, determine the scores of each PoE, identify the gaps and develop action plans to address each of the selected points. They will require renting an office space for the 5-days 1 coffee and lunch break would be required for 5-days Share report of assessment with NAIA -specific and national stakeholders at 'Report Dissemination and Strategy Development Meetings'. (Each IHR assessment requires site visits to and a final assessment meeting with between 15 and 20 agencies) <ol style="list-style-type: none"> The Post-IHR assessment meeting will consist of 15 and 20 agencies (50 participants). This will require 1 coffee and 1 lunch break. 	FMOH		6,000,000	6,000,000
		FMOH		196,000	196,000
		FMOH		1,918,800	1,918,800
		FMOH		1,240,000	1,240,000
		FMOH		6,355,200	6,355,200
		FMOH		1,500,000	1,500,000
		FMOH		1,750,000	1,750,000
		FMOH		1,240,000	1,240,000

	<ul style="list-style-type: none"> c. The assessment meeting will require travel for 4 directorate cadre staff. d. The assessment meeting will require renting a venue. <ul style="list-style-type: none"> • Share report of assessment with MMIA, MAKIA, Port of Lagos Papa -specific and national stakeholders at 'Report Dissemination and Strategy Development Meetings'. (Each IHR assessment requires site visits to and a final assessment meeting with between 15 and 20 agencies) <ul style="list-style-type: none"> a. The Post-IHR assessment meeting will consist of 15 and 20 agencies (50 participants). b. This will require 1 coffee and 1 lunch break. c. The assessment meeting will require travel for 4 directorate cadre staff. d. The assessment meeting will require renting a venue. • Share report of assessment with relevant PoE -specific and national stakeholders at 'Report Dissemination and Strategy Development Meetings'. (Each IHR assessment requires site visits to and a final assessment meeting with between 15 and 20 agencies) <ul style="list-style-type: none"> Engage 5 National consultants to meet in Abuja for 1-day 	FMOH	7,705,200	7,705,200
Build/sustain infrastructure for routine services at identified target ports/airports/ground crossings	<ul style="list-style-type: none"> • Use finding from IHR assessments to determine the resources needed to address gaps and implement action plan. <p>Procurement of equipment Capital Procurement</p> <ul style="list-style-type: none"> • Build 4 temporary human holding areas at each designated PoE using fabricated 2-in-1 40 ft. • container (including full installation) • Each structure should have partitioned area for further assessment of the ill traveler, 1 donning area, 1 doffing area, and two bed spaces - N3,120,000/building • Incinerator for medical waste - N7,930,000 (will serve for both human and animal medical waste) <p>Equipment Procurement: Each facility will have the following -</p> <ul style="list-style-type: none"> • 2 examination couches - N60,000 x2 • 2 hand stretcher - N45,500.00 x2 • 2 wheelchairs - N36,000.00 x2 • 2 hand sanitizer dispenser (purel) - N58,500.00 x2 • 2 air conditioner (1.5 HP) LG - N175,000.00 x2 • 1 Inverter (10KVA) N3,250,000.00 • 2 Stabilizer (5KVA for ACs) - N30,000 x 2 • 1 Stabilizer (2KVA for refrigerator) - N15,000.00 • 1 Mobile Hand wash sink - N595,000.00 • 2 Hospital Screen - N45,500.00 x2 • 1 Office table - N65,000.00 • 2 chairs - N15,000.00 x2 • 2 Hospital bedside locker/rack - N18,500.00 x2 • 2 AED - N494,000.00 x2 • 2 Nebulizer - N45,500.00 x2 • 2 Oxygen Tank (12.5L) - N58,500.00 x2 • 2 Ambu bag - N13,000.00 x2 • 1 Fire Extinguisher - N45,500.00 • 1 refrigerator N97,500.00 • 1 Water Storage tank (GEEPEE) - N156,000.00 • 2 drip stands - N13,000.00 x2 • 2 Digital sphygmomanometer - N32,500.00 x2 	FMOH	0	0

	<ul style="list-style-type: none"> • 2 Manual sphygmomanometer - N45,500 • 2 Littman's Stethoscope - N32,500.00 • Glucometer (Accucheck) - N9,800 • 1 desktop Computer HP Pavilion 570- N279,500 • 1 UPS 2KVA- N45,500 • 1 Printer Laserjet Enterprise - N281,000 • 1 Photocopier (sharp AR6020) + stand - N286,000 • 1 Automatic Hand Driers (Brimix) - N14,500 • 1 Automatic soap dispensers - N35,100 • 5 Infrared Thermometer - N12,000 • 1000 Digital Clinical Thermometer - N2,600/unit • 1 Autoclave Sterilizer - N775,000 • 5 Plastic sharp container - N4,500/container 			
	<p>Supplies for Human Holding Area:</p> <ul style="list-style-type: none"> • 1152 Aprons - N2,000/unit • 240 Disposable gloves - N1,600/pack • 144 Cotton wool - N1,500/roll • 48 Antiseptic - N4,600/L • 120 Syringes & Needles 2cc - N3,500/pack • 120 Syringes & Needles 5cc - N4,600/pack • 120 Syringes & Needles 10cc - N5,200/pack • 48 face masks - N650/pack • 24 N95 Particulate Masks - N9,500/pack • 12 Glucometer strip x50 (accucheck) - N6,500 • 400 Level 3 PPE - N46,787/unit • 4 Mackintosh - N3,300/unit • 12 Hydrogen peroxide (500ml) - N4,700 • 24 Methylated Spirit/2L - N2,000 • 12 Specimen bottles Plain x100 - N5,000/Pack • 12 Specimen bottles EDTA x100 - N5,000/Pack • 12 Surgical gloves x50 - N5,000/pack • 600 Hand sanitisers - N1,200 • 60 Hand sanitisers refill- N3,200/L • 48 Jik - N3,000/carton • 120 Disposable couch drapes - N4,500/pack • 12 Lancets x 200 - N1300/Pack • 12 IV Fluid - N4,600/carton • 600 Bactericidal liquid hand wash (500ml) - N1,950 • 5 Infusion giving set x50 - N4,600 • 5 IV Cannula x50 - N4,600 			
	Procure 4 dedicated, fully equipped ambulances for transfer of ill travellers - N45,500,000.00			
	• Identification of 4-5 directorates to oversee the procurement process			0 0
	Capital Procurement	FMOH	67,619,904	67,619,904

	<ul style="list-style-type: none"> • Build 4 temporary human holding areas at each designated PoE using fabricated 2-in-1 40 ft. container (including full installation) Each structure should have a partitioned area for further assessment of the ill traveller, 1 donning area, 1 doffing area, and two-bed spaces - N3,120,000/building • Incinerator for medical waste - N7,930,000 (will serve for both human and animal medical waste) <p>Equipment Procurement:</p> <ul style="list-style-type: none"> • Each facility will have the following - • 2 examination couches - N60,000 x2 • 2 hand stretcher - N45,500.00 x2 • 2 wheelchairs - N36,000.00 x2 • 2 hand sanitizer dispenser (purel) - N58,500.00 x2 • 2 air conditioner (1.5 HP) LG - N175,000.00 x2 • 1 Inverter (10KVA) N3,250,000.00 • 2 Stabilizer (5KVA for ACs) - N30,000 x 2 • 1 Stabilizer (2KVA for refrigerator) - N15,000.00 • 1 Mobile Hand wash sink - N595,000.00 • 2 Hospital Screen - N45,500.00 x2 • 1 Office table - N65,000.00 • 2 chairs - N15,000.00 x2 • 2 Hospital bedside locker/rack - N18,500.00 x2 • 2 AED - N494,000.00 x2 • 2 Nebulizer - N45,500.00 x2 • 2 Oxygen Tank (12.5L) - N58,500.00 x2 • 2 Ambu bag - N13,000.00 x2 • 1 Fire Extinguisher - N45,500.00 • 1 refrigerator N97,500.00 • 1 Water Storage tank (GEEPEE) - N156,000.00 • 2 drip stands - N13,000.00 x2 • 2 Digital sphygmomanometer - N32,500.00 x2 • 2 Manual sphygmomanometer - N45,500 • 2 Littman's Stethoscope - N32,500.00 • Glucometer (Accuchek) - N9,800 • 1 desktop Computer HP Pavilion 570- N279,500 • 1 UPS 2KVA- N45,500 • 1 Printer Laserjet Enterprise - N281,000 • 1 Photocopier (sharp AR6020) + stand - N286,000 • 1 Automatic Hand Driers (Brimix) - N14,500 • 1 Automatic soap dispensers - N35,100 • 5 Infrared Thermometer - N12,000 • 1000 Digital Clinical Thermometer - N2,600/unit • 1 Autoclave Sterilizer - N775,000 • 5 Plastic sharp container - N4,500/container <p>Procure 4 dedicated, fully equipped ambulances for transfer of ill travellers - N45,500,000.00</p>			
	<ul style="list-style-type: none"> • procurement of equipment <p>Supplies for Human Holding Area:</p> <p>1152 Aprons - N2,000/unit 240 Disposable gloves - N1,600/pack</p>	FMOH	107,812,80 0	323,438,4 00

	<p>144 Cotton wool - N1,500/roll 48 Antiseptic - N4,600/L 120 Syringes & Needles 2cc - N3,500/pack 120 Syringes & Needles 5cc - N4,600/pack 120 Syringes & Needles 10cc - N5,200/pack 48 face masks - N650/pack 24 N95 Particulate Masks - N9,500/pack 12 Glucometer strip x50 (accucheck) - N6,500 400 Level 3 PPE - N46,787/unit 4 Mackintosh - N3,300/unit 12 Hydrogen peroxide (500ml) - N4,700 24 Methylated Spirit/2L - N2,000 12 Specimen bottles Plain x100 - N5,000/Pack 12 Specimen bottles EDTA x100 - N5,000/Pack 12 Surgical gloves x50 - N5,000/pack 600 Hand sanitisers - N1,200 60 Hand sanitisers refill- N3,200/L 48 Jik - N3,000/carton 120 Disposable couch drapes - N4,500/pack 12 Lancets x 200 - N1300/Pack 12 IV Fluid - N4,600/carton 600 Bactericidal liquid hand wash (500ml) - N1,950 5 Infusion giving set x50 - N4,600 5 IV Cannula x50 - N4,600</p> <p>Procurement of equipment</p> <p>Capital Procurement</p> <ul style="list-style-type: none"> • Build 4 temporary animal holding areas at each designated PoE using fabricated 2-in-1 40 ft. container (including full installation) - N3,120,000/building <p>Equipment for animal quarantine facility:</p> <ul style="list-style-type: none"> • 4 Kennels - N80,000 • 1 examination table - N25,000 • 1 Office table - N65,000.00 • 2 chairs - N15,000.00 x2 • 1 air conditioner (1.5HP) N175,000.00 • 1 inverter (10KVA) N3,250,000.00 • 1 Stabilizer(5KVA) - N30,000.00 • Stabilizer(2KVA for refrigerator) - N15,000.00 • 1 water storage tank (GeePee) - N156,000.00 • 1 Mobile Hand wash sink - N595,000.00 • 1 hand sanitizer dispenser (purel) - N58,500.00 • 1 microscope (Olympus) - N455,000.00 • 1 hematocrit centrifuge - N234,000.00 • 1 Refrigerator - N97,500.00 • 1 desktop Computer HP Pavilion 570- N279,500 • 1 UPS 2KVA- N45,500 • 1 Printer Laserjet Enterprise - N281,000 	FMOH	53,237,600	53,237,600
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	<ul style="list-style-type: none"> • 1 Photocopier (sharp AR6020) + stand - N286,000 • 1 Automatic Hand Driers (Brimix) - N14,500 • 1 Automatic soap dispensers - N35,100 • Trocar and Cannula (small size) - N5,000 • Trocar and Cannula (big size) - N10,000 • 1 Autoclave Sterilizer - N775,000 • 2 Animal Stethoscope - N32,500 <p>4 fabricated and equipped ambulances for the transfer of ill animals to designated referral facilities. The animal ambulances will have 4 detachable kennel - N42,800,000.00</p>			
	<p>Supplies for Animal Holding Area:</p> <ul style="list-style-type: none"> • 1152 Aprons - N2,000/unit • 240 Disposable gloves - N1,600/pack • 144 Cotton wool - N1,500/roll • 48 Antiseptic - N4,600/L • 120 Syringes & Needles 2cc - N3,500/pack • 120 Syringes & Needles 5cc - N4,600/pack • 120 Syringes & Needles 10cc - N5,200/pack • 48 face masks - N650/pack • 24 N95 Particulate Masks - N9,500/pack • 400 Level 3 PPE - N46,787/unit • 4 Mackintosh - N3,300/unit • 12 Hydrogen peroxide (500ml) - N4,700 • 24 Methylated Spirit/2L - N2,000 • 12 Specimen bottles Plain x100 - N5,000/Pack • 12 Specimen bottles EDTA x100 - N5,000/Pack • 12 Surgical gloves x50 - N5,000/pack • 600 Hand sanitisers - N1,200 • 60 Hand sanitisers refill- N3,200/L • 48 Jik - N3,000/carton • 120 Disposable couch drapes - N4,500/pack • 12 IV Fluid - N4,600/carton • 600 Bactericidal liquid hand wash (500ml) - N1,950 • 5 Infusion giving set x50 - N4,600 • 5 IV Cannula x50 - N4,600 • 12 Potassium permanganate - N11,000/L 	FMOH	107,966,40 0	323,899,2 00
	<p>Training and re-training of staff;</p> <p>Engage 2 training facilitators who will conduct biannual 2-day trainings at each of the PoEs.</p> <p>20 staff per PoE will be trained for 2-days on the maintenance of temporary holding areas, quarantine facilities and ambulances 80 per quarter for 5 years. Training will involve 1 coffee break and 1 lunch break</p> <p>A venue would need to be rented</p> <ul style="list-style-type: none"> • Periodic evaluation for sustainability. Engage 2 consultants to conduct a 2-day biannual evaluation visits to each of the PoEs • Conduct biannual evaluation for sustainability. 2 consultants and 1 directorate cadre level staff of PHS will be part of the team. • One (1) meeting to harmonize resource needs Engage 2 consultants who would consult a 1-day resource harmonization meeting 	FMOH	12,544,000	37,632,00 0
		FMOH	1,920,000	5,760,000
		FMOH	4,699,200	14,097,60 0
		FMOH	120,000	120,000

PoE.2: Effective Public Health Response at Points of Entry

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Review the legislation and policies on PoEs and advocate for revision of appropriate legislation to develop PoE capacities specified in Annex 1 of the IHR e.g. Quarantine law	<ul style="list-style-type: none"> • Dir. Port Health Services to initiate (identifying the needs) and send a memo to HMH requesting review of legislation • HMH to constitute a multi-sectoral committee to review legislation and policies on POEs and communicate same to National Council on Health • Committee will consist of 10 key stakeholders. Committee to meet 4 times before recommendation for amendment is sent to the HMH and report is sent to the Ministry of Justice. • Committee meeting will require travel per diem, accommodation and flight tickets for 10 directorate level staff for each of the 4 meetings recommended. • 1 coffee break and 1 lunch break will be required. • A venue will be required for the 4 meetings • Committee identifies relevant stakeholders and sends memoranda for their input Committee meeting has been costed in activity above. • Committee to bring up a draft recommendation for the amendment and send to HMH <ul style="list-style-type: none"> ◦ Committee meeting to review recommended amendment has been costed in activity above. ◦ Stationery ◦ Transport of two selected committee members to visit the office of the HMH to submit the draft recommendation. • Report of Committee to be sent to the ministry of justice • Ministry of justice to liaise with the legal dept. of FMOH to get a final draft • Final draft is sent to the Federal Executive Council by FMOH....FEC approves and transmits to NASS as an executive bill • National Assembly holds first, second reading, public hearing and final reading • Committee meeting to review report to be sent to the MOJ has been costed in activity above. • The budget holder will require funds for advocacy and logistics to facilitate this process. • Law is passed by joint assembly(upper and lower chamber) • Bill is sent to President for assent • Assented bill is gazetted by Federal Ministry of Justice 	FMOH		0	0
Develop public health emergency contingency plan for PoEs which includes coordinated, multi-sectoral response actions for access to treatment, isolation, and diagnostics facilities, quarantine of suspect travelers and animals, infection prevention and control, and international alert and response for ill or suspect travelers on board.	<ul style="list-style-type: none"> • Dir. PHS to convene stakeholders meeting to review the Draft National Public Health Emergency Plan for POEs <ul style="list-style-type: none"> ◦ Hold a 3-day review meeting with 30 - 40 participants from 15 - 18 MDAs. ◦ Meeting will require travel flight tickets, per diems and accommodation for 30 - 40 directorate level staff. ◦ There will also be 1 coffee break and 1 lunch break. ◦ Meeting would require renting a venue • Test and validate the plan <ul style="list-style-type: none"> ◦ Conduct a tabletop exercise to test the plan. Exercise will be a 1-day event with about 30 - 40 participants requiring travel and accommodation for 30 - 40 directorate level staff. ◦ Meeting will require travel flight tickets, per diems and accommodation for 30 - 40 directorate level staff. ◦ There will also be 1 coffee break and 1 lunch break. 	FMOH		10,290,000	10,290,000
		FMOH		6,966,000	6,966,000

	<ul style="list-style-type: none"> ○ Meeting would require renting a venue ● 2 document review sessions <ul style="list-style-type: none"> ○ 1-day review meeting with 30 -40 participants from 15 - 18 MDAs. ○ Meeting will require travel flight tickets, per diems and accommodation for 40 directorate staff. ○ There will also be 1 coffee break and 1 lunch break. ● Final approval by HMH and relevant stakeholders <ul style="list-style-type: none"> ○ Will involve 2-week travel by 2 endorsement facilitators ○ Flight tickets, accommodation and per diems required ● Printing of draft and final copies of the Plan (700- 1000 copies). (700- 1000 copies) @ N1750 with 35% markup per copy. ● Guided by the IHR assessment report and the accompanying action plan determine staff strength and knowledge gaps. Engage 2 consultants who will conduct a 1-day evaluation at each of the PoEs to determine staff strength and knowledge 	FMOH		13,932,000	13,932,000
Build technical capacity for port health service	<ul style="list-style-type: none"> ● Guided by the IHR assessment report and the accompanying action plan determine staff strength and knowledge gaps. <ul style="list-style-type: none"> ○ The consultants would require flight tickets to 3 PoEs outside Abuja ○ Accommodation would be required for states about Abuja ○ Car Hire for 6 days required ○ Per Diem for consultants ● Guided by the IHR assessment report and the accompanying action plan determine staff strength and knowledge gaps. This meeting would require: <ul style="list-style-type: none"> ○ The 2 consultants' local transportation to NAIA ○ Car Hire for 1-day ○ 1-day per diem for consultants ● Develop and implement workforce strategy. Engage 2 consultants who will conduct a 2-week workforce strategy development meeting in Abuja with 5 directorate cadre staff ● Develop and implement workforce strategy. <p>The meeting would require 5 directorate cadre level staff There will also be 1 coffee break and 1 lunch break FMOH will provide an office space for the meeting</p> ● Develop, as part of workforce strategy, a comprehensive 3-5-year capacity building and skills transfer program. Meeting already costed above ● Conduct targeted training of personnel. <ul style="list-style-type: none"> ○ Conduct 3-day trainings for 50 PoE staff bi-annually (200 staff per year). ○ 10 of the 50 participants (per quarter) will require directorate level DSA. ○ Training will require the engagement of 2 training consultants and 3 facilitators would be required. ○ There will also be 1 coffee break and 1 lunch break ○ Training would require a training venue ● Conduct targeted training of personnel. <ul style="list-style-type: none"> ○ Conduct 3-day trainings for 50 PoE staff bi-annually (200 staff per year). ○ 10 of the 50 participants (per quarter) will require directorate level DSA. ○ Training will require the engagement of 2 training consultants and 3 facilitators would be required. ○ There will also be 1 coffee break and 1 lunch break ○ Training would require a training venue ● 8 Support personnel (2 from each PoE) to conduct cascaded trainings. <ul style="list-style-type: none"> ○ 2 staff from each PoE will hold 5 cascade training sessions at their PoEs. ○ Each session will require tea break and stationeries and would involve 20 participants per session. ○ Supervision of the training will involve site visits by 4 directorate cadre staff living in the states where each PoE is located. ○ The 4 directorate cadre staff will require per diems and car hire. 	FMOH		199,800	199,800
		FMOH		34,600	34,600
		FMOH		1,200,000	1,200,000
		FMOH		847,000	847,000
		FMOH		0	0
		FMOH		2,880,000	8,640,000
		FMOH		24,462,000	73,386,000
		FMOH		1,702,000	5,106,000

	<ul style="list-style-type: none"> 8 Support personnel (2 from each PoE) to conduct cascaded trainings. <ul style="list-style-type: none"> 2 staff from each PoE will hold 5 cascade training sessions at their PoEs. Each session will require tea break and stationeries and would involve 20 participants per session. Supervision of the training will involve site visits by 4 directorate cadre staff living in the states where each PoE is located. The 4 directorate cadre staff will require per diems and car hire. 	FMOH		596,000	1,788,000
Integrate public health emergency contingency plan with other public health response plans at the local/intermediate/national levels and other emergency operational plans at PoE, and disseminated to IHR NFP, relevant sectors, and key stakeholders.	<ul style="list-style-type: none"> At stakeholder meeting to review the National PHECP, ensure all existing and relevant plans are integrated with the National PHECP which integrates all PoE-specific PHECPs. Costed in activity 2 above. Establish Protocol for all new Plans relevant to PoEs to integrate measures with the National PHECP. Costed in activity 2 above. 	PHS		0	0
Develop triggers and formal communications processes to communicate information on public health threats or other incidents of concern (e.g., chemical, radiological) to IHR NFP, PoE authorities, relevant multi-sectoral agencies, and stakeholders.	<ul style="list-style-type: none"> Communication protocols and frameworks for triggers to be adopted across sectors to be developed as part of the National PHECP Costed in activity 2 above. 	PHS		0	0
Renovation of Animal Quarantine Facilities and procurement of inspection vehicle for border points	<ul style="list-style-type: none"> Renovation of quarantine facilities in 10 border points Procurement of 10 inspection vehicles for border points Procurement 10 tracker for tracking animals Procurement of 10 laptops 	FMARD		150,000,000	150,000,000
Develop training programme for quarantine officers	<ul style="list-style-type: none"> Hire a consultant for 2 weeks to review and develop training programme for quarantine officers Conduct 5 day training for 50 quarantine officers on core activities of procedures and surveillance strategies 	FMARD		930,000	930,000
		FMARD		0	10,290,000

CE: Chemical Emergencies

CE.1: Mechanisms are established and functioning for detecting and responding to chemical events or emergencies

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Strengthening inter-agency chemical emergency response team in collaboration with EOC of Nigeria Centre for Disease Control.	<ul style="list-style-type: none"> Create a 40 members committee on Chemical emergency response (FMOH, NAFDAC, NEMA, ONSA, SGF, FMEnv, NCDC, NESREA, MMSD, FMARD, IPAN, ICCON, partners-WHO, MSF etc.) Inauguration of the Committee consisting 25 people from Abuja and 15 from other states. (20 ministry officials) 			0	0
		FMOH		5,158,000	5,158,000

	<ul style="list-style-type: none"> 1. 2-days biannual meeting of the 40 members Committee in Abuja consisting 25 people from Abuja and 15 people from other states 	FMOH		4,538,000	18,152,000
	<ul style="list-style-type: none"> 1. 2-days biannual meeting of the 40 members Committee in Abuja consisting 20 people from Abuja and 20 people from other states 	FMOH		7,319,200	29,276,800
	<ul style="list-style-type: none"> Engage consultant for a 30 days to develop draft SOPs on chemical risk communication 	FMOH		1,890,000	1,890,000
	<ul style="list-style-type: none"> Meeting of the Committee to make input/in validate the draft SOPs 	FMOH		3,276,000	3,276,000
	<ul style="list-style-type: none"> Finalization of Draft Document by the Consultant (2 days) 			0	0
	<ul style="list-style-type: none"> Production of draft SOPs on chemical risk communication (2000 copies) 	FMOH		4,658,000	4,658,000
Strengthen the capacity to monitor chemicals in air, water, wastewater, soil, sediments, human and Plant specimen and products for purposes of compliance promotion, research, and enforcement by 2020	<ul style="list-style-type: none"> Engage Consultant for 30 days to conduct a baseline assessment on the National preparedness and response to chemical emergencies 	FMOH		28,260,000	28,260,000
	<ul style="list-style-type: none"> Engage 3 Consultants for 25 working days each to develop a strategic plan, SOPs and training manuals with the Chemical Management Programme/ NCDC for risk assessment, (surveillance, laboratory confirmation, event confirmation and notification) and response to chemical events. 	FMOH		4,770,000	4,770,000
	<ul style="list-style-type: none"> Organise a 5-day training of 80 participants at Niger State consisting of 50 participants from FCT and 30 from other states. (Consultants will be facilitators) 	FMOH		24,420,000	97,680,000
	<ul style="list-style-type: none"> Launching of the Strategic Plan, SOPs and Training Manual with 100 people in attendance 	FMOH		8,034,000	8,034,000
	<ul style="list-style-type: none"> 3 days training of toxicologists (34) on analysis, transportation and packaging of specimen from tertiary healthcare facilities in the Country to referral Chemical Laboratory (2 per state including FCT) -Hands-on training on the use of the equipment in Lagos 17 southern states 	FMOH		13,190,800	39,572,400
	<ul style="list-style-type: none"> 3 days training of toxicologists (40) on analysis, transportation and packaging of specimen from tertiary healthcare facilities in the Country to referral Chemical Laboratory (2 per state including FCT) -Hands-on training on the use of the equipment in Abuja for 19 northern states plus FCT 	FMOH		10,187,800	30,563,400
	<ul style="list-style-type: none"> 2-days training of 60 laboratory personnel working in established tertiary healthcare facilities at Abuja (10 in each geopolitical zones) 	FMOH		12,179,800	24,359,600
	<ul style="list-style-type: none"> 3-day Annual review of the risk assessment, surveillance, laboratory confirmation, event confirmation and notification, and response to chemical emergency by the Chemical emergency response team in Abuja for 60 people. 	FMOH		8,624,000	34,496,000
	<ul style="list-style-type: none"> Constitute a technical working group with 15 members (10 from national and 5 experts from states) 	FMOH		20,000	20,000
Develop risk assessment and management framework for pollution and chemical hazard	<ul style="list-style-type: none"> Bi monthly technical working group meeting (15 members) 	FMOH		6,030,000	24,120,000
	<ul style="list-style-type: none"> 40 member stakeholders meeting at Nasarawa (25 from national and 15 from other states) to develop a list of National priority areas of chemical/pollution events in Nigeria for 2-days 	FMOH		8,628,000	8,628,000
	<ul style="list-style-type: none"> Engage a consultant (10 working days) to collate the data being generated from the stakeholders meeting 	FMOH		690,000	690,000
	<ul style="list-style-type: none"> 4-days workshop for TWG to develop the tools for risk assessment and management 	FMOH		2,423,000	2,423,000

	<ul style="list-style-type: none"> ● Conduct risk assessment and mapping of pollution and chemical hazard 5-days, 4 per team 15 states ● Organise a-one day stakeholders workshop to validate information from the stakeholders ● 5-days pilot survey of the tool in the field at Lagos (10 people) 	FMOH		14,145,000	14,145,000
		FMOH		3,276,000	3,276,000
		FMOH		2,441,000	2,441,000

CE.2: Enabling environment is in place for management of chemical events

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Establish required multi-sector capacity for response to chemical events	<ul style="list-style-type: none"> ● Field monitoring and supervisory visit to Chemical hazard/ polluted sites in states to determine the level of contamination (including safer mining practices) in the states two persons per state for 5-days annually to 36 states and FCT ● 5 event per annum visit to respond to large level of chemical event/contamination for 14 days 4 persons per team ● Use developed training manual to train 4 e workers from each state in the six geopolitical zone on response and treatment for 3days (3 trainers from the National per geopolitical zone) 2019, 2020 ● 5-day capacity training at Jos for 60 environmental compliance officer on environmental monitoring and compliance in mining ● 5-day capacity building training on safer mining program 40 ASM zamfara & Niger ● Engage one Consultant to conduct a baseline assessment for transportation of chemical material, samples and wastes from hospitals and healthcare facilities including import and export (15 working days) and develop a National & international plan for transportation of chemical material, samples and wastes from hospitals and healthcare facilities (15 working days) 2020 ● 1-day technical working group workshop to discuss the National & international plan for transportation of chemical material, samples and wastes from hospitals and healthcare facilities For 40 people 2020 ● Convene1-day Validation workshop of 40 stakeholders to validate the draft document (including the technical working group) 2020 ● Procurement of office equipment (20 Laptops, 10 desktops, 2 Printers, 4 scanners 1 Photocopier, 10 office tables and 10 chairs) 	FMOH FMOH FMOH MMSD MMSD FMOH FMOH FMOH FMOH FMOH FMOH		13,875,000 8,162,000 16,378,800 0 0 0 0 0 0 11,685,000	55,500,000 32,648,000 32,757,600 0 0 1,800,000 2,330,000 2,330,000 11,685,000
Perform an inventory of Chemical Toxicology Laboratory in Nigeria and their collaboration with INTOX	<ul style="list-style-type: none"> ● Develop a self-assessment tool for the inventory of chemical toxicology laboratories in the country (no cost) ● Production of a draft copy of the tool (10 tools per state x 36 states and FCT) 2019 ● Distribute tools to all laboratories that perform toxicology analysis. (10 tools per state x 36 states and FCT) 2019,2020 ● Hire consultant for mapping of toxicology laboratories 2019 	FMOH FMOH FMOH		40,700 40,700 1,490,000	40,700 81,400 1,490,000

	<ul style="list-style-type: none"> Visit to toxicology laboratories to conduct verification and assessment of the toxicology labs quarterly. (4 persons per state x36 states) 	FMOH		95,040,000	95,040,000
Conduct a study tour of chemical toxicology laboratory in a developed country.	<ul style="list-style-type: none"> Identify International toxicology lab to visit (The setting up of a chemical toxicology lab, modern equipment required, SOPs required) (4 persons for 5-days) 	FMOH		0	3,030,000

RE: Radiation Emergencies

RE.1: Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Test the National Nuclear and Radiological Emergency Plan	Assignment of Critical Tasks—Who is to do What during an emergency (Stakeholders) <ul style="list-style-type: none"> •Materials for the Meeting, •Logistics for the Meeting •Duration of the Meeting—2days •Refreshment for the Meeting •Number of Participants for the Meeting—40person •Venue of the Meeting..... 	NNRA		1,046,000	1,046,000
	Scenario Development—By NNRA and NEMA with the support of IAEA and it is going to be a real like scenario <ul style="list-style-type: none"> •Materials for the Meeting, •Logistics for the Meeting •Duration of the Meeting—2days •Refreshment for the Meeting •Number of Participants for the Meeting—10person •Venue of the Meeting—NNRA/NEMA Head office 	NNRA		3,095,000	3,095,000
	Conduct of the Exercise and Evaluation(early).	NEMA		0	0
	Table Top Exercise once every year <ul style="list-style-type: none"> •Materials for the Exercise, •Logistics for the Exercise •Duration of the Exercise—2 days •Refreshment for the Exercise •Number of Participants for the Exercise—50 person •Venue of the Exercise..... 	NEMA		7,174,000	14,348,000
Build capacity for radiation and nuclear detection and response among human health workers	Training of Human Health Workers; National Train the Trainers course on Medical Response to malicious events with the involvement of radioactive material in each of the zones where the designated Six (6) Hospitals are located. <ul style="list-style-type: none"> • Minimum of 25–30 participants at each of the Zones University of Nigeria Teaching Hospital, (UNTH), Enugu- SE, Ahmadu Bello University Teaching University (ABUTH), Zaria–NW, University of Maiduguri Teaching University (UMTH)-NE, University of Port-Harcourt Teaching Hospital(UPTH)—SS, University College Hospital, (UCH), Ibadan-SW and National Hospital Abuja (NHA)-NC • Five (5) nos. National Expert and one from IAEA • Training Venue—at the Zone • Refreshment • Duration of the Training Course—5 days • Training Materials for the Training Course • Logistics 	FMOH		0	64,020,000
	Procurement of decontamination equipment; <ul style="list-style-type: none"> • Decontamination Kits (2 nos. for each designated hospital), Total is $2 \times 6 = 12$ nos. • Personal Contamination Monitor (2 nos. for each designated hospital), Total = $2 \times 6 = 12$ nos • Gamma/beta surface contamination monitor (2 nos for each designated hospital), Total is $2 \times 6 = 12$ nos. 	NNRA		27,187,200	27,187,200

	<ul style="list-style-type: none"> Beta counting monitor(2 nos. For each designated hospital), Total is 2x6= 12 nos Decontamination tents (2 nos.for each designated hospital), Total is 2x6=12 nos. 				
	<p>Procurement of detection equipment;</p> <ul style="list-style-type: none"> Hand held radionuclide Identifier (2 nos. for each designated hospital),Total= 2x6=12 nos. MicroSievertsMeter.2nos. for each designated hospital), Total is 2x6=12 nos. Radeye.2nos.for each designated hospital), Total is 2x6 = 12 nos. Pen Dosimeter.2 nos. for each designated hospital), Total is 2x6 = 12 nos. Pocket Survey meter. 2nos. for each designated hospital),Total is 2x6 = 12 nos Pedestrian Walkthrough Radiation Detectors at each of the Six(6) emergency Unit(designated Hospital) 	NNRA		0	4,071,000
	<p>Procurement of personal protective equipment;</p> <ul style="list-style-type: none"> Coverall-fully encapsulated (Level A) PPE (10nos. for each designated hospital), Total is 10x6= 60 nos. Safety Boot(10 nos. for each designated hospital),Total is 10x6= 60 nos Eye protection equipment (10 nos for each designated hospital), Total is 10x6 = 60 nos. Face and Nasal Mask-Respirator (10 nos. for each designated hospital), Total is10x6= 60nos. Hand gloves (20 nos. for each designated hospital),Total is 20x6 = 120 nos. 	NNRA		13,200,000	52,800,000

RE.2: Enabling environment is in place for management of Radiation Emergencies

Strategic Action	Detailed Activities	MDA	Funded	Cost (N) 2018-2019	Cost (N) 2018-2022
Develop coordinated systematic information exchanges between stakeholders including health by improving coordination with the IHR focal point.	<p>Strengthening the NNRA Emergency Response and Communication Centre to be fully equipped and available 24/7.</p> <ul style="list-style-type: none"> • Communicators- 10 nos • 24/7 telephone lines (fixed-3 nos. And mobile-5nos.) • Fax machines- 2 nos • Dedicated Computer System (3-nos/Desktop and 5-nos Laptops) 	NNRA		1,985,000	1,985,000
	<p>Improve communication and coordination among Stakeholders through regular yearly Meetings</p> <ul style="list-style-type: none"> • Materials for the Meeting, • Logistics for the Meeting • Duration of the Meeting-2-days • Refreshment for the Meeting • Number of Participants for the Meeting–50 person • Venue of the Meeting–Reiz Continental Hotel, Abuja 	NNRA		5,286,000	21,144,000
	Designation of Focal Point for effective information exchange and coordination among key stakeholders and	NNRA		0	0
	Strengthen the NNRA Emergency Response and Communication center.	NNRA		0	12,032,000

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NAPHS Stakeholders

Key MDAs

Ministry of Health
Airports Authority of Nigeria
Ministry of Agriculture and Rural Development
Ministry of the Environment
Ministry of Finance
Ministry of Mines and Steel Development
Ministry of Defense
Ministry of Transport
Ministry of Science and Technology
Ministry of Justice
National Emergency Management Agency
Nigerian Armed Forces
Nigeria Police Force
Ministry of Interior
Office of the National Security Advisor
National Agency for Food and Drugs Administration and Control
National Primary Health Care and Development Agency
Nigeria Civil Aviation Authority
Nigeria Nuclear Regulatory Authority

Development Partners

World Health Organization
World Organisation for Animal Health
World Bank
U.S. Agency for International Development (USAID)
U.S. Centers for Disease Control
Public Health England
African Centers for Disease Control
Japan International Cooperation Agency
Food and Agricultural Organization
Resolve to Save Lives
Robert Koch Institute
Bill and Melinda Gates Foundation
University of Maryland, Baltimore
African Field Epidemiology Network
Helmholtz Centre for Infection Research
Pro-Health International