

**PUBLISHED BY:**

Global Emerging Pathogens  
Treatment Consortium

**JOURNAL WEBSITE**

[www.getjournal.org](http://www.getjournal.org)

Date Received: January 7, 2023  
Date Reviewed: January 20, 2023  
Date Accepted: March 20, 2023

## Biosecurity in Nigeria: Emergence of the National Biosecurity Policy and Action Plan 2022-2026

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### ABSTRACT

Nigeria has experienced its own share of biosecurity challenges, as evident in its exposure to some disease epidemics and pandemics. Significant outbreaks of diseases may cause devastation to humans and animals, as well as have severe economic, environmental and social impacts. Considering the multi-sectoral nature of biosecurity and the need to explore a coordinated approach to biosecurity, the National Biosecurity Policy and Action Plan 2022-2026 was developed with the aim of fostering the integration and harmonization of biosecurity strategies that will be implemented through the One-health approach for the prevention, early detection, rapid response to biothreats and recovery from biosecurity incidents. The policy document highlights Nigeria's biosecurity priorities, Institutional Governance and Stakeholders' Commitment, strategies and action plans, as well as a monitoring and evaluation framework to ensure a strong national biosecurity system. Ensuring biosecurity is a critical sector of a nation's sovereignty towards ensuring the safety of lives of its citizens and the environment and improving the socio-economic development of the country.

**Keywords:** Biosecurity; Biothreats; Nigeria; Policy.

### CASE PRESENTATION

In our ever more interconnected world, diseases that emerge in one country can rapidly become a global threat either directly by the spread of diseases or indirectly by destabilizing already vulnerable regions [1]. Global travel, urbanization, technological advancement, and terrorist interest in biological weapons have magnified the risk of a disastrous biological incident. Significant outbreaks of diseases threaten lives and cause disruption to public services and the economy [2]. The COVID-

19 pandemic highlighted how devastating an infectious disease can be within a short period of time and its potential impact on the global economy. This devastation holds true irrespective of the source of the disease outbreak, which can either occur as a natural outbreak of a well-known disease or as an emerging infectious disease. In other situations, it can be caused by an accidental release, theft, or loss of valuable biological materials from research or industrial facilities, or in some deliberate biological attack [3]. Recognition

of all these factors, taken together, instigates the need to strengthen Biosecurity, reduce biological risks, create new approaches to improve infectious disease surveillance, and identify as well as fill gaps and fill gaps to strengthen the Biosecurity capabilities of the Nation [4].

### **BIOSECURITY SCENARIO IN NIGERIA**

Globally, ensuring biosecurity is a critical sector of a nation's sovereignty towards ensuring the safety of lives of its citizens, and the environment and improving the socio-economic development of the country. Hence, a bio-secured Nigeria cannot be over-emphasized. Nigeria has experienced its own share of biosecurity challenges [4]. This was evident in its exposure to many disease epidemics and other biological threats with devastating effects. Distinguishable Public Health Emergencies (PHEs) of national concern in the last decade include Severe Acute Respiratory Syndrome (SARS) [5], Lassa Fever [6], Cholera [7], Cerebrospinal Meningitis [8], Yellow Fever [9,10], Rabies, Monkeypox, Ebola [11] and COVID-19 [12].

Biosecurity insufficiencies in Nigeria have also been reflected in the country-led self-assessment exercise in 2019, which involved the revision of the Health Security Capacities in the country using the updated WHO Joint External Evaluation (JEE) and WHO Benchmarks Tool [13]. Nigeria's score for Biosafety and Biosecurity technical area was two, which indicates limited capacity, although this was an improvement on the score of 1 obtained in the peer-reviewed JEE in 2017 [13]. Since infectious disease outbreaks do not respect borders [1], the country at this point remains vulnerable to both direct threats of bioterrorism and accidental exposure. Hence, the emergence of a National Policy and Action Plans on Biosecurity that recognizes the roles of all national sectors on matters of biosecurity and emphasizes the need for synergy to achieve One-health approach being canvassed globally as a strategy for preparedness and response to epidemic, pandemic, bioterrorism and other related issues.

### **POLICY DEVELOPMENT: STAKEHOLDERS' INVOLVEMENT**

Despite the rising biosecurity threats, Nigeria is strongly determined to protect its citizens, the environment, and the economy, as well as safeguard operations of critical sectors from biological threats.

The National Biosafety Management Agency (NBMA) Act, 2015 (as amended) empowered the NBMA to put in place measures to ensure biosecurity through effective communication and collaboration (synergy) with existing Ministries,

Departments and Agencies (MDAs) with biosecurity activities with a focus to strengthening her national biosecurity. As a result of this, the NBMA, under the auspices of the Federal Ministry of Environment, led the drive towards the development of a holistic policy document that aims to foster the integration and harmonization of Biosecurity strategies.

In July 2020, the Director-General and Chief Executive Officer of NBMA, Dr. Rufus Ebegba, constituted and inaugurated a 20-member committee to draft the National Biosecurity policy. The zero draft of the policy was submitted in August 2020 and was thereafter subjected to a series of internal reviews by the management staff of the Agency. Sequel to this, in December 2020, the zero draft document was officially presented to stakeholders by the Honorable Minister of State, Federal Ministry of Environment, Chief Sharon Ikeazor. One hundred and forty-five (145) participants drawn from different relevant federal government organizations, state governments, academia, professional associations, civil society organizations, and development partners, among others, convened to partake in the 1st, 2nd and 3rd stakeholders' review of the policy which held in June, August and September 2021 respectively. Following the validation of the document by biosecurity stakeholders in September 2021, the Federal Executive Council (FEC) approved the National Biosecurity Policy and Action Plan (NBP&AP) 2022-2026 in December 2021. This feat was made possible through the intensive utilization of national multi-sectoral efforts with the full recognition of biosecurity as a multi-sectoral discipline.

### **Synopsis of the Policy**

#### **Policy Thrust and National Priorities**

The National Biosecurity Policy and Action Plan (NBP&AP) 2022-2026 is put in place to draw together diverse activities across Government to protect Nigeria from biothreats, whether naturally occurring, accidentally or as a result of deliberate attacks [4]. In consideration of the multi-sectoral nature of biosecurity, the NBP&AP 2022-2026 adopted a multi-disciplinary approach that aims to foster the integration and harmonization of biosecurity strategies that will be implemented through One-health approach for the prevention, early detection, rapid response to biothreats and recovery from biosecurity incident. The intent is to ensure synergy among stakeholders involved in biosecurity sectors in Nigeria for effective operations of the national biosecurity systems. Therefore, the NBP&AP 2022-2026 provides the framework for coordination and ensuring biosecurity in Nigeria.

The NBP&AP 2022-2026 in the utilization of the One-health approach (Human Health, Agriculture and Food Safety, and Environment) centers on ensuring national values, interests, and objectives that define the Nation as a people concerned with collective efforts to the advancement of nation-building and international best practices. The policy document highlights Nigeria's priorities for the national biosecurity system to include but not be limited to safeguarding primary industries and food safety, preparedness, detection, response to new pests and diseases, and minimizing environmental and socio-economic impacts of pests and diseases. Others include institutionalizing an integrated approach to biosecurity enhancement, building biosecurity technical expertise and auditing high-impact laboratories dealing with dangerous pathogens.

### **The Principles of the Strategic Actions**

The NBP&AP 2022-2026, which contains specific strategies of action, is based on the principle of shared responsibility, recognizing that many government agencies, non-governmental organizations, and the private sector have varying levels of biosecurity responsibilities in their mandate. The Policy is therefore expected to drive the following: (1) ensuring that rigorous, risk-based screening systems for evaluating the intentional and unintentional introduction of biothreats are developed; (2) identifying the pathways by which harmful organisms are moved and developing a mechanism to minimize the movement of harmful and potentially harmful organisms; (3) strengthening basic border control, risk and impact assessment and quarantine capacity by enhancing the numbers and capabilities of personnel, employing more effective technologies and improving scientific methods; (4) developing a rapid response programme with the collaboration of sub-nationals and local stakeholders to respond immediately to incidences caused by bio-organisms as soon as they are detected; and (5) establishing an easily accessible funding mechanism for emergency action.

The strategies and action plans for the national biosecurity system cover 24 thematic areas, which include human health, plant health, animal health, food safety, agriculture, environmental protection and biodiversity conservation, biotechnology and biosafety, facility establishment, management and security, biosecurity information and database, bioterrorism and biowarfare, biothreat risk assessment, border control, transport security, climate change, bioethics, surveillance, preparedness and response; waste management, human resources management, research and

development, international trade, communication, education and advocacy, gender participation, and biosecurity enforcement [4].

### **Institutional Governance and Stakeholders' Commitment**

In line with the goals of the NBP&AP 2022-2026, all stakeholders in the Nigeria biosecurity system are expected to play their specific roles in line with their specific mandates and work in synergy to produce a clear aggregation and unified effort to strengthen biosecurity in Nigeria. In addition, the NBP&AP 2022-2026 provides a mechanism for strengthening biosecurity governance and coordination that will ensure a functional and robust collaborative system for managing the national biosecurity system. It provides for the establishment of a National Advisory Council on Biosecurity that will serve as a high-level advisory body on national biosecurity issues and may make decisions on the evaluation reports for the implementation of the NBP&AP. It also provides for the establishment of the National Technical Working Group on Biosecurity that will provide technical discourse and analysis to strengthen the Nigeria Biosecurity System taking into consideration the effective implementation of the NBP&AP.

### **Monitoring and Evaluation**

In ensuring accountability and in demonstrating effectiveness and efficiency with the implementation of NBP&AP, the NBP&AP 2022-2026 provides for the integration of a monitoring and evaluation (M&E) mechanism that is intended to ensure that programs and projects in the NBP&AP stay on track while detecting problems to reduce the risk of major cost overruns or time delays. It employs M&E strategic plan built on three main pillars that will ensure that the desired results are delivered in a functional, effective, and efficient manner: (1) Enabling environment: People, partnerships and planning required to support data use; (2) Data and Information: Mechanisms for collection, capturing and verification of data for making decisions; and (3) Decision Making: Dissemination and use of data for decision-making. The NBP&AP 2022-2026, therefore, enshrines the institutionalization of M&E logical frameworks within the implementing MDAs in line with these three main pillars that outline the objectives, inputs, outputs, and outcomes of specific programs/projects, as well as the indicators that will be used to measure and verify all results.

## CONCLUSION

The development of the National Biosecurity Policy and Action Plan 2022-2026 has accorded Nigeria the opportunity to evaluate the strengths and vulnerabilities as well as the potential of its biosecurity system. A prediction of all the ways the bio-risk landscape will evolve in the future is extremely limited, and so there is a need for adequate preparedness and working in a coordinated way across and beyond government to tackle the risk of significant biothreats and bioterrorism.

## LIST OF ABBREVIATIONS

COVID-19 – Corona Virus Disease 2019  
FEC – Federal Executive Council  
JEE – Joint External Evaluation  
M&E – Monitoring and Evaluation  
MDAs – Ministries, Departments and Agencies  
NBMA – National Biosafety Management Agency  
NBP&AP – National Biosecurity Policy and Action Plan  
PHEs- Public Health Emergencies  
SARS- Severe Acute Respiratory Syndrome  
WHO – World Health Organization

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