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FLEMING FUND PHASE II NIGERIA COUNTRY GRANT POLICY BRIEF

*Environmental AMR Surveillance in Nigeria:
A Call to Expand, Equip, and Engage.*

by: MSH



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Acronyms:

AMR: Antimicrobial Resistance
EH-AMR: Environmental Health
Antimicrobial Resistance
FFCG: Fleming Fund Country Grant
MSH: Management Sciences for Health
NCDC: Nigeria Centre for Disease Control
and Prevention
NAP: National Action Plan
OH: One Health



In Focus: Strengthening Environmental Health AMR Surveillance As A National Imperative

Nigeria faces a critical juncture in its antimicrobial resistance (AMR) surveillance response. While AMR surveillance in human and animal health has seen measurable progress, environmental health remains the weakest link. With environmental reservoirs acting as conduits for resistant pathogens across sectors, robust environmental health AMR (EH-AMR) surveillance is not a luxury, it is a necessity. This brief outlines Nigeria's current position on EH-AMR surveillance and presents clear, actionable recommendations for policy leaders, development partners, and stakeholders across the One Health spectrum.

Why It Matters: The Environmental Link in Nigeria's AMR Response

The environment is a critical transmission route for resistant microorganisms. Contaminated water, waste from farms, homes, and healthcare settings, and improperly disposed antimicrobials contribute to the silent spread of resistance. Without strengthened environmental health surveillance, Nigeria's progress in human and animal health surveillance may be undermined. Surveillance in this sector is also essential to fulfil the One Health approach and achieve the goals of Nigeria's One Health National Action Plan (NAP) for AMR.

What the Data Reveals

In Nigeria, environmental AMR surveillance data remains limited and primarily research-based. However, it is well known that the environment significantly contributes to the spread of AMR. High levels of harmful bacteria, linked to open defecation and poor water, sanitation, and hygiene (WASH), have been found in soil, water, and waste. Key bacteria of public health concern, including *E. coli*, *Staphylococcus aureus*, and *Pseudomonas*, show resistance to a wide range of antibiotics and even to commonly used disinfectants and heavy metals found in the environment. Some have been found to carry resistance genes from farm and hospital settings.

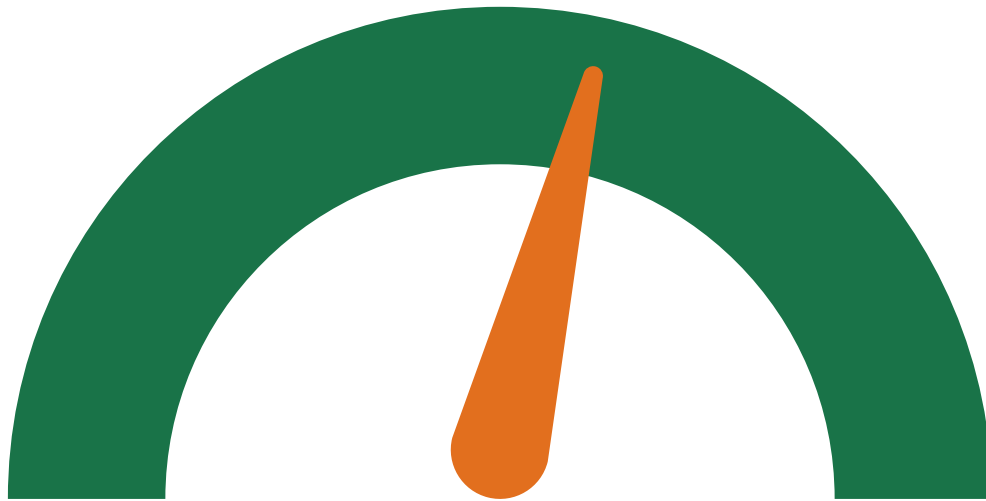
Gaps That Demand Urgent Action

- EH-AMR surveillance is extremely limited, with only one reference laboratory currently operating in Port Harcourt.
- Limited regional coverage restricts the ability to detect and respond to resistance patterns nationwide.
- Protocols for EH-AMR surveillance exist but have not been implemented at scale.
- Environmental sampling, lab analysis, and data-sharing mechanisms are inconsistent, limiting evidence-based policymaking.



Current Efforts: Building the Foundation for EH-AMR Surveillance

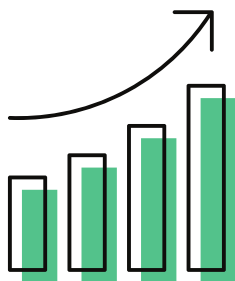
The FFCG Phase II, implemented by Management Sciences for Health (MSH) has supported the federal government of Nigeria in the development of validated EH-AMR surveillance strategies and strengthened existing lab infrastructure in Port Harcourt. Collaborations with the Nigeria Centre for Disease Control and Prevention (NCDC), academia, and environmental agencies are ongoing. So far AMR surveillance network and strategic documents on environmental health have been developed. There exists also, the Integrated National Environmental Health Surveillance Systems (INHESS) operating in 12 states. However, without further investments and multisectoral policy coordination, these efforts risk stalling.



Progress and Pitfalls

What's Working:

- Development of EH-AMR surveillance protocols.
- Establishment of a national reference laboratory in Port Harcourt.
- Engagement of key stakeholders in environmental surveillance planning.



What's Lagging:

- No dedicated funding stream for EH-AMR labs.
- Surveillance coverage limited to southern Nigeria.
- Insufficient laboratory capacity and trained personnel in high-risk states.
- Private sector, including waste management and pharmaceutical industries, are largely absent from AMR mitigation efforts.

Unlocking Potentials: Policy Shifts That Could Strengthen EH-AMR Surveillance

- **Expand Reference Lab Network:** Fund and establish additional EH-AMR labs in regions such as Lagos and Kano to improve geographic coverage and response.
- **Sustain Laboratory Systems:** Allocate dedicated funding for laboratory infrastructure, consumables, and workforce development to ensure sustainability.
- **Implement National Protocols:** Mandate and monitor the rollout of validated EH-AMR surveillance protocols nationwide.

- **Activate the Private Sector:** Establish incentives and partnerships to engage industries responsible for environmental contamination in the AMR response.
- **Integrate Data Streams:** Enhance intersectoral data sharing platforms to create a comprehensive view of AMR trends across One Health domains.
- **Actively implement other EH-friendly policies that support the strengthening of AMR surveillance:** These include improving WASH infrastructure, monitoring resistance to both antibiotics to curb AMR spread from environmental sources.

The Ask: What We Need From Policymakers, Donors, and Implementing Partners

- Fund the operationalization of the validated EH-AMR surveillance protocols and support the EH-AMR activities outlined in the NAP AMR.
- Facilitate prioritization of activities to set up and/or strengthen EH-AMR labs in state budgets.
- Support expansion of EH-AMR reference labs and capacity building for EH staff to improve AMR data generation
- Involve private sector actively in antimicrobial waste management and surveillance.

References:

Nigeria's National Action Plan for AMR (2024–2028)

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