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THE EVOLUTION OF ONE HEALTH POLICY IN NIGERIA: AN ENVIRONMENTAL PERSPECTIVE 1988 - 2023

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Abstract

Environmental health bears heavily on the health of the people. For too long environmental policies in Nigeria seemingly compromised the ecosystem and by implication, human health. However, historical research on the environmental policy development to address these health challenges, and how these policies have evolved over time into One Health policy in Nigeria is thin and this paper fills that gap. Situated in the context of Nigeria's first environmental policy, this paper attempts to trace the evolution of environmental policy and its integration with human and animal health into a single policy framework between 1988 to 2019. The paper adopts a multidisciplinary approach with data gleaned from environmental, zoonotic and human health disciplines, with government policy documents serving as the primary sources of data and published papers as secondary data sources. With a history policy analysis approach the paper uses the policy networks theory to study the evolution from narrow environmental policies to a more robust one health policy in Nigeria. The findings of this paper show that the Nigerian Government's approach to environmental policies gradually evolved after a disastrous environmental experience in Koko Town towards a coherent and progressive approach that considered other factors like zoonosis, climate change and environmental conservation. The paper concludes that to guarantee good health and wellbeing, there must be a seamless synergy between human and animal health with the environment as the link which will necessitate a One Health approach and a dedicated budget line. (Word count: 200)

Keywords: Environmental policy, One Health, Zoonoses, Policy evolution, Nigeria

Introduction

One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes that the health of humans, and animals, plants and the wider environment (including ecosystems) are closely linked and interdependent. The approach calls on multiple sectors, disciplines, and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development. According to the Nigeria One Health Strategic Plan,[1] It is an approach to designing and implementing programs, policies, legislations and research in which multiple sectors plan, communicate and work together to achieve better public health outcomes for all the sectors. One Health is an approach that is both multi-disciplinary and multi-sectoral implying that experts from different fields have important roles in One Health across all levels, locally, nationally and internationally, to attain optimal health for the people, animals and the environment.[2]

Its long history is traced to 'zoonosis', a term coined by the German physician and pathologist Rudolf Virchow (1821 – 1902) to describe diseases transmitted between animals and humans and emphasized the interconnectedness of human and veterinary medicine, stating that, "Between animal and human medicine, there are no dividing lines—nor should there be."[3] Subsequently, a Canadian physician William Osler (1849 - 1919) who studied briefly with Virchow introduced the concept of "One Medicine" which referred to 'zoonosis' in English Language. The 21st century use of 'One Medicine' was later rearticulated by Dr. Calvin

[1] Federal Republic of Nigeria, One Health Strategic Plan 2019–2023, (Federal Ministry of Health 2019),29.

[2] Yusuf Yakubu et al., "One Health - The Fate of Public Health in Nigeria" *Asian Journal of Medical Sciences* 3(1): (2011),47

[3] L. Z. Saunders,. "Virchow's contributions to veterinary medicine: Celebrating the forgotten now". J. Vet. Pathol., 37. (2000): 204

Schwabe (1927-2006), a veterinary epidemiologist and parasitologist who spent his lifetime practicing and teaching the principles of One Health in the 21st century.[4,5,6,7]

In 2004, the concept of One Health gained currency at the conference for "Wildlife Conservation" at the Rockefeller University New York. Tagged "One World, One Health", the twelve Manhattan principles, which established the link between human, animal and the environment were developed at the conference.[8] This development was a response to zoonotic public health emergencies such as severe acute respiratory syndrome (SARS), H1N1 influenza, Ebola, and Zika in the early 2000s and 2010s. It is also prominent in several global commitments and political declarations like the tripartite alliance of the WHO, the Food and Agricultural Organization of the United Nations and the International Organization for Animal Health in the 2010 tripartite concept note.[9,10] According to Sabiha Essack, the environment is not only the most neglected of the triad of one health but also the most confounding and dynamic of the trio of human, animal and environmental health.[11] For example, environmental bacteria which complicates antibiotic resistance is as a result of antibiotic misuse and overuse in humans and animals and which is then introduced into the environment exposing plants, other animals and humans which become reservoirs like the environment. This bacterium is the most prevalent bacteria serving as reservoirs of resistance genes.[12] The environment acts as a reservoir, where nutrients and living organisms are accumulated and transported. This includes disease agents such as bacterial species and antimicrobial resistance genes together with organic and inorganic residues, chemicals and metals. The environment is the substrate for chemical and ecological processes that provide a myriad of ecosystem services to humans including those essential for human health. In the disease context, environmental processes transform chemicals to bioavailable(which can be absorbed by the body, and bioaccumulating

[4] Saunders, Virchow's Contribution, 199-207
[5] Yakubu et al. "One Health - The Fate of Public Health in Nigeria" (2011): 47
[6] Cardiff etal. "One medicine—one pathology: are veterinary and human pathology prepared?" Laboratory Investigation 88, 2008):18-19
[7] Khan etal. "Confronting zoonoses through closer collaboration between medicine and veterinary medicine (as 'one medicine')". Veterinaria Italiana, 43(1) (2007), 6
[8] Gibbs "The evolution of one health: a decade of progress and challenges for the future." *Vet Rec*;17 (2014), 85
[9] FAO et al. Collaboration: Sharing responsibilities and coordinating global activities to address health risks at the animal-human-ecosystems interfaces, A Tripartite Concept Note, 2010.
[10] S. Y. Essack "Environment: the neglected component of the One Health triad." The Lancet Planetary Health, Vol. 2, Issue 6, 2018, 238-239
[11] S.Y. Essack "Environment: the neglected component of the One Health triad." 238
[12] S.Y. Essack "Environment: the neglected component of the One Health triad" 239

(WHO/EUROPE).[13] One Health therefore is no longer narrowly confined to zoonotic diseases but has embraced non-communicable diseases like cancer.

Environmental issues impacting health within the One Health framework include climate change, habitat degradation, pollution, antimicrobial resistance (AMR), and land use changes. Climate change alters disease patterns by creating favourable conditions for pathogens, enabling zoonotic diseases to spread into new areas. AMR arises when microorganisms become resistant to treatments, often due to environmental reservoirs like soil and water harbouring resistant bacteria, complicating treatment efforts across humans, animals, and ecosystems. Pollutants, such as persistent synthetic chemicals, accumulate in the environment and food chain, leading to health risks like cancer. Biodiversity loss from activities like wildlife trade disrupts ecosystems, increasing disease transmission risks. Land use changes, including deforestation, fragment habitats, bringing humans into closer contact with wildlife and elevating zoonotic disease risks.

The significance of environmental policies in public health cannot be overstated. As the world grapples with the dual challenges of environmental degradation and public health crises, the role of environmental policies emerged as a critical nexus for promoting sustainable development and enhancing population health outcomes.[14] Thus, this paper attempts to examine and analyse how Nigeria's approach to environmental policy has evolved in response to changing environmental challenges and economic development.

Statement of the problem

Environmental health significantly influences public well-being. Historically, Nigeria's environmental policies have inadequately addressed the interconnectedness of human, animal, and ecosystem health. This oversight has led to fragmented strategies, impeding effective responses to health challenges arising from environmental degradation, zoonotic diseases, and climate change. The lack of a cohesive One Health approach has resulted in missed

[13] WHO/Europe, A health perspective on the role of the environment in One Health, 2022. https://www.who.int/europe/news-room/01-07-2022

14. Uwaga M. Adanma and Emmanuel O. Ogunbiyi "The public health benefits of implementing environmental policies: A comprehensive review of recent studies". *International Journal of Applied Research in Social Sciences*, Volume 6, Issue 5, May (2022) :979

[14] Uwaga M. Adanma and Emmanuel O. Ogunbiyi "The public health benefits of implementing environmental policies: A comprehensive review of recent studies". *International Journal of Applied Research in Social Sciences*, Volume 6, Issue 5, May (2022) :979

opportunities for comprehensive policy development and implementation. This paper aims to bridge this gap by examining the evolution of Nigeria's environmental policies from 1988 to 2023 through a One Health lens, highlighting the progression towards integrated health strategies and underscoring the necessity for a unified framework to enhance public health outcomes.

This paper examines the progression of Nigeria's environmental policies from 1988 to 2023 through a One Health lens, emphasizing the integration of human, animal, and environmental health for sustainable development. The specific objectives are to Investigate the origins and development of Nigeria's environmental policies, assess the transformation from traditional environmental policies to comprehensive One Health strategies, identifying key drivers and milestones in this transition, and suggest actionable steps for policymakers to strengthen the synergy between human and animal health sectors, with the environment as a central link. It focuses on the evolution of one health from the environmental policies perspective in Nigeria between the period of 1988 when toxic chemicals were dumped in Koko Town to 2019 when Nigeria became the first country in Africa to adopt the One Health policy that included the environment.

Theoretical framework

The discussion in this paper is anchored on the Policy Networks Theory. It is a policy analysis that describes informal and formal interactions between a variety of usually collective public(state) and private actors, who have different but interdependent interests, in relatively non-hierarchical negotiations to define policy alternatives, formulate or implement policies. The theory does not have just a single proponent. It was notably influenced by one of the proponents, Arthur F. Bentley (1870-1957), an American political scientist and philosopher, who in his book, 'The Process of Government' in 1908 described government as a "network of activities",[15] and "the process of the adjustment of a set of interest groups."[16].

Rod Rhodes, a prominent political scientist further developed the concept through his typologies of policy networks. It emerged in the late 1980s and early 1990s as a means to study changing forms of public policy making, particularly the shift from vertical to more horizontal

[15] Arthur F. Bentley *The Process of Government: A Study of Social Pressures* , (Chicago:University of Chicago Press 1908), 260 https://archive.org/details/processofgovernm00bent/page/n13/mode/2up

[16] 16. Bentley *The Process of Government: A Study of Social Pressures* ,260

decision-making in states as a response to growing internationalization of public policy as more decision making is taking place beyond the state with the growing importance of global governance.[17] It looks at the relationships and interactions between different actors involved in policymaking, including government agencies, interest groups, and international organizations. Its key concepts are policy communities, issue networks, and governance structures. We x-ray how policy networks in this case health and economic policy networks influenced the evolution of environmental policies and shaped policy agenda in the adoption of One Health.

Background to Environmental Policy in Nigeria

Nigeria's environmental policy framework has evolved significantly since the late 1950s, marked by a series of legislative and strategic initiatives aimed at addressing environmental challenges. The Forests Act of 1958 focused on forest preservation and management, emphasizing deforestation control and afforestation efforts. In the same year, the Destruction of Mosquitoes Act was enacted to control mosquito populations and prevent vector-borne diseases. The Minerals Act of 1958 and the Mineral Oil (Safety) Regulations of 1963 primarily addressed operational aspects of mining and oil extraction, with limited environmental considerations.[18]

In the First National Development Plan (1962–1968), infrastructure development was prioritized, with minimal attention to environmental concerns. The Wild Animals Law of 1963 regulated wildlife hunting and trade, to protect biodiversity. The Agriculture Act of 1964 for the control of importation of agricultural products and hazardous chemicals to control plant diseases and pests. The Oil in Navigable Waters Act of 1968 aimed to prevent oil pollution in Nigeria's waterways, aligning with international marine pollution prevention standards.[19] The 1960s also saw Nigeria's engagement in global environmental discourse. In 1968, Nigeria participated in the UNESCO Man and the Biosphere Programme, promoting sustainable development through biosphere reserves.[20] Concurrently, Nigeria signed the African

[17] Coleman, W. D. "Policy Networks." (International Encyclopaedia of Social and Behavioural Sciences, Elsevier, 2015), 701

[18] Supplement to Official Gazette Nigeria, B378 -B381

[19] Supplement, B378 -B381

[20] Serge Monrad "An Ecosystem based Ecology of Health, VEOLIA INSTITUTE REVIEW, FACTS REVIEW: Field Actions Science Reports, journal of Field Actions," (*Special Issue* 24, 2022), 20

Convention on Conservation of Nature and Natural Resources in Algiers, reflecting a growing commitment to environmental conservation.[21]

The Second National Development Plan (1970–1974) introduced water resource management and established the Ministry for Water Resources, emphasizing the importance of clean water supply. Following the 1972 United Nations Stockholm Conference on the Human Environment, Nigeria created an urban development and environment division within the Ministry of Economic Development as part of the Third National Development Plan (1975–1980), indirectly influencing environmental management through infrastructure improvements.[22,23] The Land Use Act of 1978 aimed to standardize land allocation and ownership across the country. In 1979, the Energy Commission of Nigeria Act was enacted to coordinate the development of the nation's energy resources (Yahaya 105—108, Ogunba 682).[24,25] The Fourth National Development Plan (1981–1986) mandated environmental impact assessments for public and private projects, signalling increased environmental awareness, though specific implementation modalities were lacking (Ogunba 675).[26]

A pivotal moment occurred in 1987 when toxic industrial waste was illegally dumped in Koko Town, leading to severe environmental and public health consequences. This incident prompted the Nigerian government to enact the Harmful Waste Act of 1988, criminalizing the unauthorized disposal of hazardous waste and marking a significant shift towards comprehensive environmental regulation (Adewoye, Ogunba 685).[27,28] This historical trajectory highlights Nigeria's gradual progression from sector-specific environmental laws to

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[21] Ravelomanantsoa et al. An Introduction to the African Convention on the Conservation of Nature and Natural Resources. (The World Conservation Union (IUCN), Gland, Switzerland 2006), xvi -96

[22] Mohammed Nasiru Abubakar The Achievements of National Development Planning in Nigeria 1962-1986: An Overview of Selected Sectors, The Journal of Zaria Historical Research (ZAHIR) Vol. 5 No. 2 A B U, Zaria, Nigeria, 85-100

[23] Brian Onyeke "National Development Plans and Rural Development in Nigeria: The Environmental Situation," *Glob Acad J Econ Buss*, 4(1), (2022), 1-17

[24] Yahaya, Y. "The Land Use Act and the Nigerian Housing Sector" Economic and Financial Review, Vol. 27, Central Bank of Nigeria, (2019), 105-108

[25] Adebola Ogunba "An Appraisal of the Evolution of Environmental Legislation in Nigeria," *Vermont Law Review* (Vol. 40:673) 2016), 628

[26] Adebola Ogunba "An Appraisal of the Evolution of Environmental Legislation in Nigeria," 675

[27] Temidayo Adewoye. Koko Toxic Waste Recurrence: Why the Gods are not to blame 27, October 2017, https://www.linkedin.com/pulse/koko-toxic-waste-dumping-recurrence-why-gods-blame-temidayo-adewoye?

[28] Adetola Ogunba, "An Appraisal", 674-694

a more integrated policy approach, for cohesive strategies in addressing complex environmental challenges.

Environmental Legislation from 1988 to One Health Strategic Policy

In 1988, the Nigerian government established the Federal Environmental Protection Agency (FEPA) through Decree 58 to manage environmental resources and develop environmental research technology. The law, delayed since 1981, was spurred by the Koko toxic waste incident.[29,30]

FEPA's subsidiary regulations addressed industrial waste discharge, hazardous waste management, and pollution control. The first National Policy on the Environment followed in 1989, promoting sustainable development and public awareness of environmental issues.

The 1990s saw key legislative developments, including the Endangered Species Act (1990), Quarries Act (1990), and Sea Fisheries Act (1990), all aimed at environmental conservation. The 1991 revision of the National Policy on the Environment emphasized resource conservation, pollution control, and integration of environmental concerns into national planning.[31] The Environmental Impact Assessment (EIA) Act of 1992 mandated prior environmental appraisals for development projects, marking a major step in environmental governance.[32]

The 1999 revision expanded the policy's scope to include biodiversity conservation, climate change, and waste management while fostering stakeholder participation (FRN NPE 41). However, due to FEPA's enforcement shortcomings, the National Environmental Standards and Regulations Enforcement Agency (NESREA) replaced it in 2007, introducing

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29. Adegboroye, A. "The Challenges of Environmental Enforcement in Africa: The Nigerian Experience." in Jo Gerardu and Cheryl Wasserman (eds.) *Third International Conference on Environmental Enforcement: Conference Proceedings* 43, (1994), 47

30. Adetola Ogunba, "An Appraisal" 686

31. 29. Federal Republic of Nigeria, National Policy on Environment, (2016), 41

32. Federal Republic of Nigeria, Environmental Impact Assessment Act. No. 86 of 1992 https://ead.gov.ng/wp-content/uploads/2017/04/EIA_Act.pdf

24 subsidiary regulations addressing broader environmental concerns, including wetlands conservation, desertification control, and vehicular emissions.[33,34]

The 2016 revision of the National Policy on the Environment introduced a holistic framework integrating environmental governance, climate change adaptation, and environmental justice. It emphasized sustainable resource use, climate resilience, and equitable access to a healthy environment while reinforcing Nigeria's commitments to international environmental agreements. This evolution laid the groundwork for a more integrated One Health approach, linking environmental, human, and animal health within a sustainable development framework.[35]

The Nigeria One Health Strategic Plan 2019 – 2023

The 68th World Health Assembly (WHA) in May 2015 adopted the Global Action Plan, in collaboration with the Food and Agricultural Organization (FAO) and the World Organisation for Animal Health (OIE) to control Anti-Microbial Resistance (AMR). It also requested member states of which Nigeria is one to participate in an integrated global programme for the control of antimicrobial resistance. The goal of the Global Action Plan was to, "ensure continuity of successful treatment and prevention of infectious diseases with effective and safe medicines that are quality-assured, used in a responsible way and accessible to all who need them."[36] In November 2016, Nigeria conducted an antimicrobial resistance (AMR) situational analysis, using the One Health approach by the AMR technical working group comprising human health, animal health, food animal production and the environmental health sectors in the development of an AMR National Action Plan. In May 2017, Nigeria approved and submitted a National Action Plan on AMR, with a One Health approach to WHO.[37]

33. Adetola Ogunba 688

34. Ladan, M.T. "Review of NESREA Act 2007 and Regulations 2009 – 2011: A New Dawn in Environmental Compliance and Enforcement" in *Nigeria. Law, Environment and Development Journal*, 8, 116, (2012), 128

35. Federal Republic of Nigeria, National Policy on Environment, 12

36. World Health Organisation, Global Action Plan on Anti Microbial Resistance 2015

37. Federal Republic of Nigeria, One Health Strategic Plan 2019–2023, Federal Ministry of Health, (2019), 9

In June 2017, Nigeria conducted her first Joint External Evaluation (JEE) which gave a readiness score of 39%. Consequently, the 2018 to 2023 National Action Plan for Health Security (NAPHS) was developed to address identified gaps and recommendations from the 2017 evaluation. The JEE is a voluntary multi-sectoral process, one of the four components of the International Health Regulations (IHR) monitoring and evaluation framework.[38] The Nigeria Centre for Disease Control and Prevention (NCDC), as stipulated in the NCDC Act 2018, coordinates IHR implementation for the country. The external evaluators were usually a team of experts and partners who validated the score from the completed internal assessment. The external validation phase of the JEE involved a comprehensive review of presentations, documents, policies, and systems for each technical area. In addition, site visits were conducted to national public health centers and institutes across the 19 technical areas. Following the reviews of the technical areas, validated scores were aggregated which determined Nigeria's JEE score and signalled the level of progress in detecting, assessing, reporting, and responding to public health events.[39]

After the evaluation by the JEE of the IHR, strengths were identified in the One Health space with the successful control of zoonotic diseases such as H5N1 Avian influenza, Ebola, Yellow fever, Monkey pox and Lassa fever in Nigeria. In July 2017, NCDC convened a multi-sectoral group of experts that prioritized zoonotic diseases in Nigeria using a predefined international criterion for zoonosis prioritization. The prioritization helps focus the limited resources on "the highest burden conditions". However, there were still gaps in zoonotic diseases surveillance and response which necessitated the implementation of Regional Disease Surveillance System Enhancement (REDISSE) project being financed by the government through a credit facility from the World Bank and domiciled in NCDC through a One Health approach. Additionally, a coordinated institutionalized long-term plan for One Health was identified as a gap that needed to be addressed in the JEE.[40]

In March 2018 with support from Global Implementation Solutions (GIS), NCDC and Department of Veterinary and Pest Control Services (DVPCS) jointly convened a One Health key stakeholders meeting in Nigeria. The stakeholders were drawn from government

38. Nigeria Center for Disease for Disease Control, Nigeria Commences its Second Joint External Evaluation for the International Health Regulations(IHR), Core Capacities Monday, August 14, 2023.

39. Nigeria Center for Disease for Disease Control, Nigeria Commences its Second Joint External Evaluation

40. Federal Republic of Nigeria One Health ix

ministries, departments and agencies, development partners, academia, private sector and non-governmental organizations to undertake a situation analysis and develop an implementation plan since having come to a conclusion that OH was the guiding principle for the new World Bank Regional Disease Surveillance Systems Enhancement (REDISSE), National Action Plan for Health Security (NAPHS) and the National AMR Action Plan.[41] And also, that these efforts needed to be expanded to an NCDC led full-fledged One Health program. During the five-day meeting, the zoonotic disease priority list was reviewed and a situation analysis for OH implementation in Nigeria conducted. A 5-year strategic plan was developed with a one-year implementation plan. Thus far, the role of Policy networks like the WHO, FAO, UNEP, WOAH and other such stakeholders have influenced the actions of the Nigerian state in the direction of the aforementioned actions initiated and policies adopted as well as the country modernizing to meet current ecological demands.

An equally significant factor to the adoption of a one health approach was Nigeria's 2019 Lassa fever (LF) outbreak which highlighted the need for a multi-sectoral approach to public health challenges in the human-animal-ecosystem interface. Between 1st January and 29th December 2019, of the 5,057 people tested for LF, 833 were confirmed positive from 23 States, across 86 Local Government Areas. Of the 833 confirmed cases, 650 (78%) were from hotspot States of Edo (36%), Ondo (26%) and Ebonyi (16%).[42] Nigeria is one of four countries that account for 44% of the world's poorest livestock caretakers and a considerable number of endemic diseases. Nigeria arguably tops the charts for the country with the most endemic zoonotic diseases.[43]

The One Health Strategic Plan (2019-2023) was adopted to address this zoonotic disease which was one of the 'highest burden conditions' in Nigeria and to manage future outbreaks. The plan was created through collaboration between the Ministries of Health, Agriculture and Rural Development, and Environment, along with the academia, the private sector, and NGOs. Finally, there was a strategic plan to establish an NCDC led full-fledged One Health Programme. To successfully meet its health challenges, manage epidemic

41. Federal Republic of Nigeria One Health, 29

42. Nwafor etal."The One Health approach to incident management of the 2019 Lassa fever outbreak response in Nigeria," *One Health* 13. 100346, (2021),1

43. Don Elieso etal. "Addressing one health in Nigeria; challenges and recommendations." *PAMJ - One Health*,10(3), (2023), 3

outbreaks and create synergy across related ministries, Nigeria became the first country in Africa to launch a "One Health Plan" signed by the ministers of Health, Agriculture and Environment in December 2019. The current "One Health Strategic" plan shows that it is not restricted to human and veterinary clinical expertise but a collective effort of professionals in ecology, anthropology, history, health economics and policy, artificial intelligence etc. So far, the environmental health sector reports that its implementation of awareness programs on AMR is mostly linked to the roles of hygiene, sanitation, and proper waste disposal in preventing the spread of pathogens and antimicrobial-resistant bugs.

The Federal Ministry of Agriculture and Rural Development (FMARD) developed policies that covered AMR in terrestrial and aquatic animals. The NCDC has assisted with the help of international bodies to establish eleven laboratories in the human sector and seven laboratories in the animal sector to upscale surveillance of antimicrobial-resistant pathogens within the country.[44] But challenges persist especially the non-integration of public health disease databases in Nigeria[45] which is inimical to the global drive towards prevention and control of zoonosis and recommended the integration of the zoonotic component of animal disease databases in Nigeria with its human and environmental health counterparts. In Nigeria, communication between the tripartite human, animal and environmental health sector remains at a low ebb, except during an outbreak of zoonotic disease which the NCDC has equally admitted in addition to surveillance challenges.[46]

The "2016 Nigeria National Environmental Policy" aimed to create a holistic framework for managing the environment and natural resources, emphasizing sustainability and public health. This aligns with the "Nigeria One Health Strategic Plan (2019-2023)," which promotes inter-sectoral collaboration among health, agriculture, and environmental sectors to address public health challenges, including zoonotic diseases. Both policies advocate for a healthy ecosystem as essential for human and animal health, reinforcing the interconnectedness of environmental, animal, and human health.

Consequently, in December 2021 as a response to COVID-19, in a joint tripartite and UNEP statement released by the FAO, OIE, UNEP and the WHO, members of the One Health

44. Don Elieso etal. "Addressing one health in Nigeria.",3
45. S.C. Okolie One health; the need to integrate human and veterinary diseases data bases in Nigeria. *PAMJ - One Health*. ;6(1). (2021), 2

46. S.C. Okolie One Health, 2

High-Level Expert Panel (OHHLEP) established in May 2021 having realized the confounding component of the environment and "recognizing the complex and interdisciplinary challenges observed at the interface of human, animal and ecosystem health that require enhanced coordination and collaboration among sectors and agencies, nationally and internationally, in a One Health approach, established the Quadripartite in 2021 bringing the environmental component in UNEP on board to provide them with scientific advice in their support of governments to implement and scale up the OH approach."[47] This was after Nigeria had already integrated the environmental component.

Conclusion

The evolution of environmental policies in Nigeria reflects a growing understanding of changing environmental challenges and economic development given the interconnectedness of human, animal, and environmental health. It is true that the One Health policy is geared primarily towards human good health and wellbeing as espoused in the sustainable development goal 3, but planetary and animal health are necessary corollaries if human health must be guaranteed. It has become increasingly clear that the most effective method to address this is the integration of the environment. By addressing environmental challenges and strengthening inter-sectoral collaboration, Nigeria can create a healthier and more sustainable future. However, the existing coordinating systems are not as effective as planned in fostering the spread of cross-sectoral expertise which could be a factor in increased non-communicable diseases and continued zoonotic diseases outbreak.

Recommendations

Achieving further progress in One Health requires multi-sectoral collaboration, increased public awareness, and dedicated budgetary allocations, as no specific funding currently exists. Policies must be enacted to promote One Health implementation, including regulations on the use of medicines in both humans and animals. Public understanding of One Health should be enhanced through mass media, social media, health education, and its

47. FAO et al. "Collaboration",1

integration into school curricula. Institutionalizing One Health platforms across all levels of government is crucial, given its relevance to human, animal, and environmental health.

Strengthening health surveillance systems is essential to ensure effective collaboration among healthcare, environmental, and veterinary professionals. Nigeria's One Health Strategic Plan (2019–2023) acknowledges gaps in disease surveillance integration. Addressing this requires expanding training programs such as NFELTP and Field Epidemiology Training Programme (FETP) for health workers at all levels.

Additionally, the plan should explicitly address environmental hazards like Persistent Organic Pollutants (POPs), including DDT, particularly as Nigeria faces a growing burden of non-communicable diseases. Further research into One Health implementation, particularly in Low- and Middle-Income Countries (LMICs), is critical for refining strategies in the face of emerging global health challenges.

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FAO, OIE, WHO, UNEP. Joint Tripartite (FAO, OIE, WHO) and UNEP Statement, Tripartite and UNEP support OHHLEP's definition of "One Health", 2021.

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Federal Republic of Nigeria, One Health Strategic Plan 2019–2023, Federal Ministry of Health

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