THE POLITICS OF BIODIVERSITY AND PUBLIC HEALTH IN AFRICA: A PHILOSOPHICAL INQUIRY INTO THE NATURE OF POLICIES AND THEIR IMPLICATIONS

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Abstract

The relationship between biodiversity and public health in Africa has become increasingly important in the context of environmental degradation, climate change, ecological insecurity and persistent health challenges. Yet policies relating to land use, forestry, mining, agriculture, urbanisation, waste management and disease prevention are often formulated within separate institutional structures, with insufficient attention to their ecological interdependence. This paper examines the political and philosophical assumptions underlying biodiversity and public health policies in Africa, with particular attention to Nigeria. It argues that the problem is not merely administrative or technical but also ethical and philosophical, because policy decisions reflect particular conceptions of nature, development, justice, responsibility and the common good. The study employs conceptual analysis and hermeneutics. Conceptual analysis clarifies the relationships among politics, biodiversity, public health, policy and justice, while hermeneutics facilitates the interpretation of the socio-cultural and philosophical assumptions embedded in environmental governance. The paper further brings African philosophical perspectives into conversation with environmental ethics through the ideas of Kwame Gyekye, Kwasi Wiredu, Ikechukwu Anthony Kanu and Pantaleon Iroegbu. Their emphasis on community, responsibility, consensus, complementarity and relationality provides resources for rethinking biodiversity governance beyond purely instrumental approaches to nature. The Nigerian experience demonstrates that weak implementation, institutional fragmentation and unequal distribution of environmental burdens can undermine both ecological integrity and public health. The paper concludes that effective biodiversity governance in Africa requires an integrated ethical framework that combines ecological responsibility, environmental justice, community participation, indigenous ecological knowledge and human well-being.

Keywords: Biodiversity Politics, Public Health Policy, Environmental Justice, African Philosophy, Ecological Justice, Nigeria.

Introduction

Africa possesses exceptional biological diversity, including tropical forests, savannahs, wetlands, mangroves, freshwater ecosystems and diverse plant and animal species. These ecosystems sustain agriculture, fisheries, traditional medicine, water security, climate regulation and cultural life. Biodiversity is therefore not merely an environmental resource; it is part of the material foundation of human well-being. Its degradation through deforestation, pollution, mining, inappropriate agricultural practices, urban expansion and climate change consequently has implications for both ecological stability and public health.[1] The relationship between ecological degradation and health is increasingly recognised. Changes in land use and ecosystem disturbance can alter interactions among humans, wildlife, livestock and disease vectors, thereby increasing opportunities for infectious disease transmission. The World Health Organization (WHO) and the Convention on Biological Diversity (CBD) have consequently emphasised the interdependence of healthy ecosystems, food security, clean water, disease regulation and human health.[2]

Despite this interdependence, environmental and health governance in many African states remains institutionally fragmented. Ministries and agencies responsible for health, environment, agriculture, forestry, mining and urban planning frequently operate according to separate mandates. Such fragmentation can produce contradictory policy outcomes: a policy intended to stimulate economic activity may simultaneously damage ecosystems that communities depend upon for food, water and health. Biodiversity governance is therefore inherently political because it concerns the allocation of natural resources, environmental benefits and environmental burdens.

The philosophical significance of the problem lies in the values underlying these political choices. If nature is regarded principally as an economic instrument, policies are likely to favour extraction whenever immediate economic benefits appear to outweigh ecological costs. If, however, nature is understood as having moral significance and as constituting the ecological basis of communal existence, political responsibility takes a different form. Environmental policy then becomes a question of justice, responsibility and the common good.

This question has particular significance in Africa because indigenous societies developed diverse institutions for regulating relationships with land, forests, rivers, animals and other natural resources. Sacred forests, customary restrictions, protected species, seasonal prohibitions and communal forms of resource management were among the mechanisms through which ecological resources were socially regulated.

These practices should not be romanticised or treated as uniformly successful, but neither should they be dismissed as irrelevant to contemporary environmental governance. Recent research on African sacred forests, including studies in Nigeria, indicates that such sites can function as important reservoirs of biodiversity and ecosystem services.[3] Nigeria provides a useful case for examining these issues. Oil pollution in the Niger Delta, deforestation, illegal mining, poor waste management and expanding urbanisation have produced significant environmental pressures. The UNEP assessment of Ogoniland, for example, documented extensive contamination of land, water and ecosystems after decades of petroleum operations.[4] The Nigerian experience demonstrates that environmental degradation cannot be understood independently of questions concerning political authority, economic priorities, institutional responsibility and the distribution of environmental risks.

This paper therefore argues that biodiversity and public health policy in Africa requires philosophical reconsideration. Using conceptual analysis and hermeneutics, it examines the relationship between politics, biodiversity, public health and justice; evaluates relevant environmental and political theories; deepens the analysis through African philosophical perspectives; and applies the resulting framework to Nigeria.

Conceptual Clarification and Philosophical Framework

Politics may broadly be understood as the organisation and exercise of power in the making of collective decisions. Harold Lasswell famously characterised politics in terms of "who gets what, when, and how," thereby drawing attention to the distributive dimension of political decision-making.[5] Public policy is similarly concerned with governmental choices and non-choices concerning matters of collective importance. Thomas Dye's formulation of policy as what governments choose to do or not to do is especially relevant to environmental governance because regulatory inaction may itself have significant ecological consequences.

Biodiversity, according to the Convention on Biological Diversity, encompasses variability among living organisms, including diversity within species, between species and of ecosystems.[6] Its significance extends beyond the number of species present in an ecosystem. Biodiversity contributes to food production, pollination, soil fertility, water regulation, medicinal resources and ecological resilience. The degradation of biodiversity can therefore affect the material conditions necessary for human health.

Public health, likewise, should not be reduced to medical treatment. It involves organised social efforts to prevent disease and promote conditions conducive to healthy living. The WHO's broader conception of health as physical, mental and social well-being reinforces the importance of environmental conditions in understanding health. The WHO-CBD assessment consequently treats biodiversity and ecosystem integrity as important determinants of human well-being.[7]

These concepts converge around the question of justice. Environmental justice asks who receives environmental benefits, who bears environmental burdens, and who participates in decisions concerning environmental resources. In many African contexts, communities that depend most directly on forests, agricultural land, rivers and coastal ecosystems can be particularly exposed to pollution and ecological degradation while having limited influence over decisions concerning resource extraction. Environmental ethics adds a further dimension by questioning the assumption that nature has value only insofar as it serves human economic interests. Aldo Leopold's Land Ethic expands moral consideration to the wider biotic community and proposes ecological integrity as a criterion for evaluating human conduct.[8] Holmes Rolston III similarly argues for recognising value in the natural world beyond its immediate usefulness to human beings.[9] These positions challenge policy approaches that treat ecosystems primarily as inventories of exploitable resources. Hans Jonas provides an additional ethical principle through his philosophy of responsibility. Modern technological and economic activity has acquired the power to produce environmental consequences extending across generations. Jonas therefore argues for an ethic capable of taking responsibility for the long-term conditions of human existence.[10] Applied to biodiversity governance, this means that present governments have responsibilities extending beyond immediate economic returns to the ecological conditions inherited by future generations. John Rawls' theory of justice also offers a useful, though indirect, framework. His concern with fairness in the distribution of social benefits and burdens can be extended to environmental governance.[11] If environmental risks are systematically concentrated among poor or politically marginalised populations while economic benefits are disproportionately enjoyed elsewhere, questions of distributive justice arise. Amartya Sen's capability approach reinforces this concern by understanding development in terms of people's substantive opportunities to live lives they have reason to value.[12] Environmental degradation can reduce such capabilities by undermining health, food security, access to water, livelihoods and participation in social life.

These theories establish an important normative foundation, but an analysis of Africa's biodiversity politics should not depend exclusively on Western philosophical categories. African philosophy provides concepts capable of illuminating the relationship among person, community, nature and the common good.

African Philosophical Perspectives on Nature, Community and the Common Good

A deeper African philosophical dimension begins with the recognition that African thought is internally diverse. There is no single African philosophy or uniform African conception of nature. Nevertheless, a number of African philosophers have identified

relational, communal and participatory dimensions of African moral and political thought that can contribute to contemporary environmental philosophy. Kwame Gyekye's moderate communitarianism is particularly relevant. Gyekye argues that the individual and community possess moral significance and that neither should be reduced to the other. Community is necessary for the realisation of human capacities, while individual rights and responsibilities remain important.[13] This provides a philosophical basis for understanding environmental resources as common goods without treating individual interests as irrelevant. Forests, rivers and agricultural lands may be communally significant, yet responsible governance must also recognise the rights and legitimate interests of individuals and particular communities.

The implications for biodiversity governance are substantial. Environmental policy should not be designed merely as a technical process administered from the centre. Communities affected by environmental decisions have moral and political standing. Their participation is justified not only by practical considerations but by a conception of political life in which the common good emerges through relationships among persons and communities. Kwasi Wiredu's reflections on consensus provide a complementary political dimension. Wiredu examines consensus as an African mode of collective decision-making and contrasts it with adversarial forms of political competition.[14] His argument does not imply that every traditional African political institution should simply be reproduced in modern states. Rather, it highlights the philosophical value of dialogue, participation and the accommodation of interests in decisions affecting the community. Applied to biodiversity governance, meaningful consultation with local communities should precede major decisions concerning land use, extractive industries and ecological resources. Ikechukwu Anthony Kanu's philosophy of *Igwebuike* adds another important dimension. Kanu presents *Igwebuike* as a philosophy of complementarity, relationality, solidarity and communality.[15] Its relevance to environmental governance lies in its rejection of isolated and absolutised conceptions of reality. Environmental problems themselves demonstrate this interdependence: human health depends upon ecosystems; ecosystems are affected by economic activity; economic activity is regulated through political institutions; and political decisions affect both present communities and future generations.

The philosophical significance of *Igwebuike* therefore extends beyond the simple claim that "community matters." It provides a relational framework for interpreting biodiversity governance. Forest, river, human community, animal life and political institution should not be regarded as unrelated entities. They participate in a network of relationships in which harm to one dimension may produce consequences for others. Kanu's interpretation of *Igwebuike* as an ethical orientation grounded in complementarity and solidarity is consequently relevant to a policy framework that seeks to integrate environmental protection, public health and communal welfare.[16]

Pantaleon Iroegbu's *Uwa* ontology provides another promising African philosophical resource. The idea of *uwa* as a reality of belonging and relational existence has recently been interpreted as providing a possible basis for an ecocentric environmental philosophy. Jonathan O. Chimakonam and L. Uchenna Ogbonnaya argue that Iroegbu's ontology can support an understanding of ecosystems as interconnected networks of biotic and abiotic realities rather than as collections of isolated objects.[17] This is particularly significant for biodiversity because the loss of one component of an ecosystem can affect the functioning of the whole.

These African philosophical perspectives also encourage a critical reassessment of indigenous ecological knowledge. Indigenous practices should neither be idealised nor accepted uncritically. Some traditional practices may have become inadequate under contemporary population, technological and economic conditions. Nevertheless, sacred groves, customary restrictions and community-based resource institutions demonstrate that ecological regulation has historically been embedded within African social and moral structures. Recent research on sacred forests in Africa confirms their continuing importance for local biodiversity conservation, while research on sacred groves in southwestern Nigeria has documented their ecological and cultural significance.[18]

The philosophical lesson is therefore not that Africa should reject modern science in favour of tradition. Rather, contemporary environmental policy can benefit from a dialogue between scientific knowledge and indigenous ecological knowledge. Wiredu's critical approach to tradition is important here: African traditions can constitute resources for philosophical reflection without being exempted from critical examination.[19] Such an approach avoids both uncritical traditionalism and the assumption that useful knowledge can only come from modern scientific institutions. The African philosophical contribution to biodiversity governance can consequently be summarised around four interconnected principles: community, participation, relationality and responsibility. These principles complement environmental ethics and political theories of justice by providing culturally grounded ways of thinking about the common good and the human relationship with the natural world.

The Politics of Biodiversity and Public Health in Africa

The biodiversity crisis in Africa is fundamentally political because access to ecological resources and exposure to ecological risks are shaped by political decisions. Governments determine the legal status of forests, mining areas, wetlands and protected lands; approve or reject development projects; regulate extractive industries; and determine the institutional resources available for environmental protection.

African states have adopted important environmental laws and international

commitments, including the Convention on Biological Diversity and the Kunming-Montreal Global Biodiversity Framework.[20] Yet formal commitments do not automatically produce effective conservation. Where environmental regulations are weakly enforced, environmental impact assessments are inadequate, or institutional responsibilities overlap, economic activities may continue to generate ecological damage.

The consequences extend to public health. The WHO-CBD assessment identifies connections between biodiversity, infectious diseases, nutrition, medicines, water, climate regulation and other determinants of health.[21] Ecosystem degradation may increase exposure to pollutants, reduce food diversity, undermine water security and alter relationships between humans and disease vectors. Biodiversity policy should therefore be considered part of preventive public health rather than a separate environmental concern. Fragmented governance remains a major obstacle. When environmental, agricultural, health, water and mining policies are formulated independently, one institution may inadvertently undermine the objectives of another. The appropriate response is not simply the creation of more agencies but stronger coordination around shared ecological and health objectives. The problem is particularly serious for rural communities. Forests, wetlands, rivers and coastal ecosystems often provide food, fuel, medicinal resources, employment and water. When such ecosystems deteriorate, the consequences can appear simultaneously as environmental degradation, loss of livelihood, food insecurity and declining health. The politics of biodiversity is therefore also the politics of social vulnerability.

Environmental justice further reveals that ecological burdens are rarely distributed equally. Communities located close to extractive activities may experience pollution and loss of livelihood while economic benefits are distributed through wider national or international markets. Such situations raise questions of participation, compensation, accountability and distributive justice. An integrated approach should therefore connect biodiversity conservation with public health, poverty reduction and community participation. Conservation that excludes communities from legitimate decision-making can generate conflict, while development that disregards ecological limits can create long-term health and economic costs. The philosophical challenge is to establish institutions capable of balancing these interests without reducing nature to a commodity or communities to passive beneficiaries.

The Nigerian Experience

Nigeria illustrates the political and ethical difficulties involved in biodiversity governance. Its ecological diversity ranges from mangrove and freshwater ecosystems in the Niger Delta to forests, savannahs and semi-arid environments in other regions. These ecosystems support agriculture, fisheries, forestry, traditional medicine and numerous rural livelihoods.[22] Yet oil pollution, deforestation, mining, waste generation,

urban expansion and other pressures have degraded important ecosystems. The UNEP assessment of Ogoniland provides particularly strong evidence. Its investigation examined more than 200 locations and found extensive contamination associated with decades of petroleum operations, with implications for land, water, ecosystems and human health.[23]

The Nigerian problem is therefore not simply the absence of environmental legislation. Institutions such as the Federal Ministry of Environment and environmental regulatory agencies exist, and Nigeria has adopted biodiversity strategies and international commitments. The persistent difficulty lies in implementation, coordination, monitoring and enforcement. This distinction is philosophically important. A state may possess formally adequate laws while failing to realise the values those laws are intended to protect. The resulting gap between normative commitment and practical governance becomes a problem of political responsibility. Where environmental rules exist but are systematically ignored, the problem cannot be solved through legislation alone. The Nigerian experience can also be interpreted through the African philosophical framework developed above. From a communitarian perspective, environmental resources are connected with communal welfare. Pollution of a river is not simply damage to an abstract environmental object; it can affect the health, livelihood and social continuity of a community. From an *Igwebuike* perspective, environmental governance requires attention to the relationships among ecological systems, communities, institutions and economic activity. From the perspective of *Uwa*, ecological realities can be understood through belonging and interdependence rather than isolation.

These perspectives also modify the meaning of environmental justice. Justice requires more than distributing financial benefits from natural resources. It requires ensuring that communities have meaningful participation in decisions affecting their ecological conditions and that they are not disproportionately exposed to environmental hazards. The common good must therefore include the ecological conditions necessary for communal life. Nigeria's environmental challenge consequently calls for an ethical reorientation of governance. Political leadership must treat biodiversity conservation and public health as interconnected responsibilities rather than separate administrative concerns. Economic development remains legitimate and necessary, but its legitimacy is weakened when the ecological foundations of human well-being are destroyed.

Conclusion and Recommendations

This study has examined the politics of biodiversity and public health in Africa from a philosophical perspective. It has shown that biodiversity is not merely a biological or technical concern but a political and ethical issue involving power, justice, responsibility, participation and the common good. The analysis also demonstrates that

environmental degradation can undermine public health through effects on water, food systems, pollution, disease regulation, livelihoods and ecological resilience.

The philosophical analysis of Leopold, Rolston, Jonas, Rawls and Sen provides important resources for understanding ecological value, responsibility, justice and human capabilities. However, the African philosophical perspectives of Gyekye, Wiredu, Kanu and Iroegbu deepen the argument by drawing attention to community, participation, relationality, complementarity and belonging. These perspectives suggest that biodiversity governance in Africa should not be constructed exclusively through externally derived conceptual frameworks.

Five recommendations follow: First, African governments should develop integrated biodiversity–public health policies that bring environmental, health, agricultural, water, forestry, mining and climate institutions into effective coordination. Second, environmental regulatory institutions should be strengthened through adequate funding, technical capacity, transparent environmental impact assessment, monitoring and enforcement. Environmental laws are meaningful only when institutions possess the capacity and independence to implement them. Third, communities should have meaningful participation in environmental decision-making. Indigenous ecological knowledge should be documented, critically assessed and incorporated where appropriate into contemporary conservation strategies. Community participation should be understood as a matter of political responsibility rather than merely administrative consultation. Fourth, environmental protection should be treated as preventive public health. Clean water, sanitation, pollution control, ecosystem restoration, sustainable agriculture and climate resilience should form part of public health planning, particularly in vulnerable rural and peri-urban communities. Finally, environmental ethics and ecological justice should receive greater attention in education and public policy. The objective should be an ethical conception of development in which economic progress is evaluated alongside ecological integrity, human dignity, communal welfare and intergenerational responsibility.

The central conclusion of the study is therefore that Africa's biodiversity and public health challenges cannot be adequately addressed by technical interventions alone. What is required is a political philosophy of ecological responsibility: one that recognises the intrinsic and instrumental significance of nature, protects the capabilities and health of human communities, gives affected populations a meaningful voice in environmental decisions, and understands present political authority as carrying responsibilities to future generations. Such an approach provides a philosophical basis for reconciling environmental protection with sustainable human development.

Endnotes

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