# URBANISATION, WASTE MANAGEMENT AND ENVIRONMENTAL POLLUTION IN NIGERIA: TOWARDS AN ECO-PHILOSOPHICAL FRAMEWORK FOR SUSTAINABLE CITIES

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**Abstract**

*The current research focuses on the interaction between urbanization, waste management, and environmental pollution in Nigeria through an application of eco-philosophy in order to develop a philosophical perspective on a sustainable environment for the Nigerian city. Urbanisation in Nigeria has been proceeding at a faster rate than ethical planning, social responsibility, and awareness of ecological issues, leading to the occurrence of environmental problems including waste dumping, choked drainages, air and water pollution, and a decline in the quality of urban life. This research recognizes the root cause of the problem as a philosophical problem in the relation between man and nature as well as society and the environment rather than just a failure of practicality. In terms of methodology, the philosophical methodologies of analysis and hermeneutics have been used for the purpose of this study. Analysis has been applied to unravel the concept of the interrelation between urbanisation, waste, pollution, responsibility, and sustainability, while hermeneutics has been used for interpreting the meaning behind the attitude towards the environment as found in Nigerian culture. From the findings, it can be concluded that the issue of environmental pollution in urban areas within Nigeria is due to the lack of ethics, lack of good civic culture, disorganised government, and development process that is characterised by the pursuit of growth rather than environmental equilibrium. The results indicate that what is needed for sustainable cities in Nigeria is not only structural reform but also the adoption of an eco-philosophical approach based on responsibility and humanity's connection with nature.*

**Keywords**: Urbanisation, Waste Management, Environmental Pollution, Eco-Philosophy, Nigeria.

## Introduction

Urbanisation is now a defining feature of Nigeria's social and economic transformation, creating opportunities for employment, commerce and development while placing intense pressure on infrastructure and the environment.[1] Since independence, cities such as Lagos, Abuja, Kano, Port Harcourt, Onitsha, Ibadan and Benin City have expanded rapidly through population growth, migration and commercial activity.[2] Yet, urban expansion has frequently moved faster than the provision of housing, drainage, sanitation, waste collection and other essential environmental services. The consequences are visible in overflowing refuse points, blocked drains, plastic-filled waterways, open burning, polluted air and recurrent flooding across many Nigerian communities. The problem is therefore not simply the quantity of waste produced, but the failure to organise urban growth in ways that protect both human well-being and ecological systems.

At a deeper level, this crisis raises a philosophical question about how Nigerians understand their relationship with nature and the moral responsibilities that accompany development.

The anthropocentric tendency to regard nature primarily as a resource for human use encourages patterns of production and consumption that can undermine ecological integrity.[3]

Consequently, waste management and pollution should be understood not only as technical problems but also as questions of environmental ethics, civic responsibility and justice.

An eco-philosophical approach is therefore necessary for examining whether sustainable Nigerian cities require not merely better systems, but also a transformation in environmental consciousness.

Nigeria has established institutions and regulations to confront these problems, including FEPA, NESREA and various state environmental agencies, yet persistent illegal dumping, open burning and inadequate waste collection show the limits of policy without effective implementation.[4]

Weak enforcement, inadequate funding, poor planning, fragmented responsibilities and limited public participation continue to separate environmental laws from everyday realities in Nigerian cities.

Philosophers such as Arne Næss, Aldo Leopold and Holmes Rolston III challenge the purely instrumental treatment of nature by emphasising ecological interconnectedness, moral responsibility and the intrinsic value of the natural world.[5] Their insights provide a useful basis for questioning whether environmental sustainability can be achieved by

only regulation and technology.

This study therefore examines the relationship between urbanisation, waste management and environmental pollution in Nigeria from an eco-philosophical perspective.

It investigates the historical development of environmental challenges and policies, the conditions of selected Nigerian cities, and relevant international approaches to sustainable urban environmental governance. Through conceptual analysis and hermeneutics, the study interprets the ethical assumptions underlying environmental practices and explores their implications for Nigerian urban life. It argues that sustainable cities require the integration of effective institutions and infrastructure with ecological consciousness, civic responsibility and respect for the intrinsic value of nature. The study consequently seeks to develop an eco-philosophical framework capable of complementing conventional policy responses and promoting environmentally sustainable Nigerian cities.

**Urbanisation, Waste and Pollution: A Conceptual Analysis**

Urbanisation refers to the increasing concentration of population in towns and cities through natural growth, industrialisation and rural–urban migration.[6] It is therefore not merely the physical expansion of cities but a transformation of production, consumption, governance and social relations. When properly planned, urbanisation can support employment, innovation, infrastructure and improved living conditions through sustainable urban governance.[7] However, where population growth exceeds the capacity of public institutions, overcrowding, poor sanitation, flooding and pollution become persistent features of urban life. Nigeria illustrates this tension as cities such as Lagos, Port Harcourt, Onitsha, Kano and Abuja expand faster than environmental infrastructure and waste services. Waste, as a result, becomes more than discarded material; it reflects patterns of consumption, resource use and society's conception of what is valuable or useless.[8] The conceptual relationship between urbanisation and waste therefore exposes both an infrastructural problem and a deeper question of social and environmental responsibility.

The Basel Convention defines waste as substances or objects disposed of, intended for disposal, or required to be disposed of under national law.[9] In practice, effective waste management requires segregation, collection, transportation, treatment, recycling, recovery and environmentally safe disposal.[10] The waste hierarchy consequently places prevention and reduction before reuse, recycling, recovery and final disposal, shifting attention from disposal to resource efficiency. Yet many Nigerian cities still experience indiscriminate dumping along roads, markets, drainage channels and waterways, with open burning adding further environmental and health risks.

This governance deficit is evident in cities where population growth has outpaced collection infrastructure and where weak institutional coordination limits effective waste services.[11]

Environmental pollution consequently emerges through contaminated land and water, polluted air, blocked drainage and the accumulation of plastics and other hazardous materials.[12] Thus, urban waste is not an isolated municipal problem but a major pathway through which unsustainable urban development becomes ecological degradation.

From an eco-philosophical standpoint, pollution also reveals an ethical problem in humanity's relationship with nature. An anthropocentric outlook that values forests, rivers, land and other ecosystems mainly for their usefulness encourages patterns of production and consumption that disregard ecological limits.[13] Arne Næss challenges this orientation by affirming the intrinsic value of living beings, while Aldo Leopold extends moral concern to the wider ecological community. Their perspectives shift environmental responsibility from controlling nature for human purposes towards recognising human beings as participants within an interconnected ecological order. This is particularly relevant to Nigeria, where technological solutions and environmental regulations have not always prevented recurring dumping, burning, flooding and pollution.

Sustainable urban development therefore requires not only stronger institutions and infrastructure but also changes in environmental values, civic conduct and patterns of consumption. An eco-philosophical analysis consequently links urbanisation, waste and pollution through a common question: how can human development proceed without undermining the ecological conditions that sustain life?

## Theoretical Framework

The study adopts an integrated eco-philosophical framework combining Deep Ecology, Leopold's Land Ethic, Sustainable Development Theory and African eco-communitarian thought.[14]

Næss challenges anthropocentrism by affirming the intrinsic value of living beings and calling for a fundamental transformation in humanity's relationship with nature.[15] He further argues that ecological crises arise from distorted assumptions about humanity's place within the natural world, requiring changes in values and patterns of living.[16] Leopold complements this position by extending ethical consideration to soils, waters, plants and animals, making ecological integrity a moral responsibility.[17]

Leopold's Land Ethic therefore provides a basis for interpreting pollution, indiscriminate dumping and ecological destruction as failures of environmental responsibility.[18] Sustainable Development Theory complements these perspectives by defining development in terms of meeting present needs without compromising those of future generations.[19] Its emphasis on balancing economic, social and environmental concerns is reinforced by the United Nations Sustainable Development Goals, particularly Goal 11 on sustainable cities.[20] Accordingly, this framework provides a normative basis for examining Nigerian urbanisation and proposing development grounded in ecological ethics, effective governance and intergenerational responsibility.[21]

**African Eco-Communitarianism**

African eco-communitarianism provides an important indigenous dimension to the philosophy of urbanisation and environmental responsibility in Nigeria.[22] Godfrey Tangwa describes the traditional African outlook as eco-bio-communitarian, stressing the interdependence and peaceful coexistence of humans, animals, plants and the earth.[23] This perspective challenges an understanding of nature as merely an object for human exploitation and instead places human life within a wider network of relationships.[24] Kanu's Igwebuike philosophy similarly presents life as a shared reality founded on complementarity, solidarity, relationality and communality.[25] The moral implication is that environmental harm cannot be treated simply as damage to an external object, because the community itself depends upon the health of its ecological surroundings.[26] African eco-communitarianism therefore connects individual conduct with communal wellbeing and gives environmental responsibility a distinctly social character.[27]

Waste disposal, pollution and destruction of natural resources consequently become matters of collective ethical responsibility rather than private behaviour alone. This makes the approach particularly relevant to Nigerian cities where environmental conditions are shaped by the actions of households, businesses, communities and public institutions. The strength of this perspective lies in its capacity to bring ecological responsibility into the everyday moral life of the community.

Frans Kruger, Adré le Roux and Kevin Teise argue for an African eco-communitarianism that extends the idea of community beyond humans to the more-than-human world.[28] Similarly, M. F. Murove relates African environmental ethics to ukama and ubuntu, emphasising relatedness and the moral significance of communal existence.[29] Such thinking does not require the rejection of modern environmental

science or public regulation; rather, it supplies an ethical foundation upon which these instruments can operate. For Nigeria, the approach can encourage communities to regard clean streets, protected waterways, forests and responsible waste practices as expressions of shared civic obligation. It also shifts environmental education from merely instructing people about rules to cultivating habits of care, restraint and responsibility. Eco-communitarianism thus complements deep ecology and the land ethic while grounding environmental responsibility in African relational thought.[30] Its relevance to urbanisation lies in reconnecting development with the common good, ecological interdependence and the long-term conditions necessary for communal flourishing.

## Nigeria's Environmental Challenges

Nigeria's environmental crisis is expressed through interconnected problems of waste accumulation, pollution, flooding, ecosystem degradation and weak environmental management.[31] The National Policy on Environment acknowledges that the volume of solid waste has placed considerable pressure on urban authorities and that indiscriminate disposal remains a serious problem.[32] Ezeah and Roberts further identify weaknesses in waste governance, including inefficient institutional arrangements and difficulties in coordinating sustainable waste management in Nigerian cities.[33] The problem extends beyond visible refuse, since poorly managed waste can block drains, contaminate land and water, encourage open burning and increase environmental health risks.[34] Air pollution presents another serious challenge, with the World Health Organisation recording substantial exposure to fine particulate matter in Nigeria.[35] Oil pollution adds a distinct dimension, particularly in the Niger Delta, where UNEP documented extensive contamination of land, groundwater, surface water and vegetation in Ogoniland.[36]

Urban flooding further demonstrates the connection between environmental neglect and urban infrastructure, as waste obstructs drainage systems and reduces the capacity of cities to manage heavy rainfall. These conditions show that Nigeria's environmental challenges are not isolated problems but interconnected failures of planning, consumption, infrastructure, regulation and collective responsibility. The philosophical significance of these challenges lies in the relationship between human choices and the ecological consequences that follow from them. The problem is therefore not simply that Nigerian cities produce waste, but that waste is frequently generated, consumed, discarded and governed without sufficient regard for its wider consequences. Recent World Bank analysis identifies low collection rates, inadequate waste systems, open dumping, limited recycling and uncontrolled burning among the problems affecting several Nigerian cities.[37]

Plastic waste has intensified the difficulty because its persistence allows everyday consumption to become a long-term environmental burden.[38] The regulatory framework has developed considerably, including NESREA regulations covering sanitation, waste control, air quality, water quality, plastics and other environmental concerns.[39] Yet the existence of regulations does not by itself guarantee responsible environmental conduct; implementation requires institutional capacity, public participation, monitoring and consistent enforcement.[40] The challenge is consequently both practical and philosophical, requiring a transformation of how development, consumption, public space and responsibility are understood. Nigeria needs an environmental philosophy that can connect ecological knowledge with moral discipline, communal participation and effective governance

**Towards an Eco-Friendly Philosophy of Urbanisation/Waste Management in Nigeria**

An eco-friendly philosophy of urbanisation must begin by recognising the city as an ecological community rather than merely a space for economic activity. Urban development should therefore integrate human needs with the carrying capacity of land, water, air and other ecological systems.[41] This requires moving beyond the linear pattern of production, consumption and disposal towards prevention, reuse, recycling and responsible recovery of materials.[42] Waste management should consequently be treated as part of urban planning from the point of production and consumption rather than as a problem to be addressed only after waste has been discarded. Nigeria's existing environmental policy already calls for sustainable and environmentally friendly practices and the integration of environmental concerns into economic decision-making.[43]

NESREA's regulatory framework similarly provides institutional mechanisms for sanitation, waste control, pollution prevention and environmental protection.[44] The philosophical task is to give these policies an ethical foundation by cultivating restraint, responsibility, ecological awareness and concern for future generations. Urbanisation then becomes not a process of conquering nature, but an attempt to organise human settlement within the limits and possibilities of the natural world. Such a philosophy must also recognise that effective waste management depends upon cooperation between government, communities, households, businesses and informal waste workers. Ezeah and Roberts show that waste governance in Nigerian cities is closely connected with institutional arrangements and the participation of different actors.[45] The practical response should therefore combine reliable collection systems, source separation, recycling, recovery facilities, sanitary disposal and public environmental education.

The World Bank's recent assessment of Nigerian cities similarly points to inadequate collection, limited recycling and open dumping as important weaknesses requiring systemic improvement.[46] An eco-friendly urban philosophy should also support circular approaches in which materials are retained in productive use for as long as possible rather than continually transferred from consumption to disposal. This approach connects ecological ethics with social responsibility because cleaner cities depend not only on government enforcement but also on everyday habits and community cooperation.

The overall objective is a form of Nigerian urbanisation in which development, public health, environmental protection and communal wellbeing reinforce one another.[47] Such an approach brings African eco-communitarianism into practical dialogue with sustainable development, making environmental responsibility both a philosophical principle and a concrete practice of urban governance.[48]

**Evaluation, Conclusion and Recommendations**

Nigeria's urban environmental crisis is not merely a consequence of rapid urbanisation and inadequate infrastructure but also reflects a deeper ethical disconnect between humanity and nature. Despite environmental laws, regulatory agencies and sanitation initiatives, pollution remains widespread because institutional reforms have not been matched by environmental consciousness and civic responsibility. Poor planning, indiscriminate waste disposal, plastic pollution, inadequate drainage and weak enforcement continue to undermine urban sustainability. Experiences from Lagos, Cross River and Akwa Ibom show that effective governance, political commitment and public participation can improve environmental conditions. International examples from Sweden, Germany, Singapore, Japan and Rwanda further demonstrate that legislation, institutional continuity, technology and active citizenship must work together. Eco-philosophy provides a framework that promotes stewardship, ecological justice and interdependence rather than treating nature merely as an object of economic exploitation. This approach also reflects indigenous African values of communal responsibility and respect for nature, making moral transformation essential to sustainable Nigerian cities.

The study therefore recommends stronger environmental education, enforcement of existing laws and adequately funded regulatory institutions free from political interference. Government should invest in recycling, waste-to-energy technologies and circular-economy initiatives, while urban planning should protect green spaces, improve drainage and prevent developments that obstruct natural waterways. Environmental sustainability must become a shared responsibility involving government, traditional and religious institutions, businesses, civil society and local

communities. Sustainable cities cannot be achieved through legislation and technology alone but require ethical values, responsible governance and environmentally conscious citizens. Nigeria possesses the human resources and policy foundations necessary for sustainable urban development, but political will and collective moral commitment remain indispensable. Environmental protection should consequently be regarded as a common obligation owed to present and future generations, rather than solely a governmental responsibility. Through an eco-philosophical approach integrating ethical responsibility with practical governance, Nigerian cities can become cleaner, healthier and more sustainable while promoting human wellbeing and ecological balance.

## Endnotes

1. United Nations Human Settlements Programme (UN-Habitat), *World Cities Report 2022: Envisaging the Future of Cities* (Nairobi: UN-Habitat, 2022), 4–7.
2. United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects 2018: Highlights* (New York: United Nations, 2018), 9–11.
3. Arne Næss, "The Shallow and the Deep, Long-Range Ecology Movement: A Summary," *Inquiry* 16, nos. 1–4 (1973): 95–100; Aldo Leopold, *A Sand County Almanac, with Essays on Conservation from Round River* (New York: Oxford University Press, 1949), 204–25; Holmes Rolston III, *Environmental Ethics: Duties to and Values in the Natural World* (Philadelphia: Temple University Press, 1988), 1–3.
4. Chukwunonye Ezeah and Clive L. Roberts, "Waste Governance Agenda in Nigerian Cities: A Comparative Analysis," *Habitat International* 41 (2014): 121–28; Chukwunonye Ezeah, Jak A. Fazakerley, and Clive L. Roberts, "Emerging Trends in Informal Sector Recycling in Developing and Transition Countries," *Waste Management* 33, no. 11 (2013): 2509–19.
5. Næss, "The Shallow and the Deep," 95–100; Leopold, *A Sand County Almanac*, 204–25; Rolston, *Environmental Ethics*, 1–20.
6. United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2018 Revision* (New York: United Nations, 2019), 1–3.
7. UN-Habitat, *World Cities Report 2022*, 4–7.
8. Ezeah and Roberts, "Waste Governance Agenda in Nigerian Cities," 121–28.
9. Basel Convention, "Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal," art. 2(1).
10. United Nations Environment Programme, *Guidelines for National Waste*

*Management Strategies: Moving from Challenges to Opportunities* (Nairobi: UNEP, 2013), 21–23.

11. Ezeah and Roberts, "Waste Governance Agenda in Nigerian Cities," 121–28.
12. United Nations Environment Programme, *Environmental Assessment of Ogoniland* (Nairobi: UNEP, 2011), 9–12.
13. Næss, "The Shallow and the Deep," 95–100; Leopold, *A Sand County Almanac*, 204–25.
14. Arne Næss, *Ecology, Community and Lifestyle: Outline of an Ecosophy*, trans. David Rothenberg (Cambridge: Cambridge University Press, 1989), 28–35.
15. Næss, "The Shallow and the Deep," 95–100.
16. Næss, *Ecology, Community and Lifestyle*, 164–66.
17. Aldo Leopold, *A Sand County Almanac, with Essays on Conservation from Round River* (New York: Oxford University Press, 1949), 203–25.
18. Leopold, *A Sand County Almanac*, 224–25.
19. World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987), 43.
20. United Nations, *Transforming Our World: The 2030 Agenda for Sustainable Development*, A/RES/70/1 (New York: United Nations, 2015), Goal 11.
21. United Nations, *Transforming Our World*, Goal 11, Targets 11.3 and 11.6.
22. Godfrey B. Tangwa, "Some African Reflections on Biomedical and Environmental Ethics," in *A Companion to African Philosophy*, ed. Kwasi Wiredu (Oxford: Blackwell, 2004), 387–95.
23. Tangwa, "Some African Reflections," 389.
24. Timothy Adie Okpe and Friday Achu Oti, "Towards an African Philosophy of Environment," *International Journal of Environmental Pollution and Environmental Modelling* 2, no. 3 (2019): 105–8.
25. Ikechukwu Anthony Kanu, "Igwebuike as an Igbo-African Relational Ethical Theory," *SIST Journal of Religion and Humanities* 2, no. 1 (2022): 84–101.
26. Kanu, "Igwebuike as an Igbo-African Relational Ethical Theory," 89–91.
27. Philomena A. Ojomo, "Environmental Ethics: An African Understanding," *The Journal of Pan African Studies* 4, no. 3 (2011): 101–13.
28. Frans Kruger, Adré le Roux, and Kevin Teise, "Ecojustice Education and Communitarianism: Exploring the Possibility for African Eco-Communitarianism," *Educational Philosophy and Theory* 52, no. 2 (2020): 206–16.
29. M. F. Murove, "An African Environmental Ethic Based on the Concepts of

Ukama and Ubuntu," in *African Ethics: An Anthology of Comparative and Applied Ethics*, ed. M. F. Murove (Scottsville: University of KwaZulu-Natal Press, 2009), 315–31.

30. Mercy Osemudiame Okpoko, "'Interconnectedness with Nature': The Imperative for an African-Centered Eco-Philosophy in Forest Resource Conservation in Nigeria," *Ethics, Policy & Environment* 25, no. 1 (2022): 21–36.
31. Federal Ministry of Environment, *National Policy on Solid Waste Management* (Abuja: Federal Ministry of Environment, 2022).
32. Federal Republic of Nigeria, *National Policy on the Environment* (Abuja: Federal Ministry of Environment, 2016), 31.
33. Ezeah and Roberts, "Waste Governance Agenda in Nigerian Cities," 121–28.
34. World Bank, *Nigeria—Multi-Sector Analytical Review and Pathway to Transformation* (Washington, DC: World Bank, 2025), section on solid waste management in Nigerian cities.
35. World Health Organization, *Health and Environment Scorecard: Nigeria* (Geneva: World Health Organization, 2022), air-pollution indicators.
36. United Nations Environment Programme, *Environmental Assessment of Ogoniland*.
37. World Bank, *Nigeria—Multi-Sector Analytical Review and Pathway to Transformation*, section on solid waste management in Nigerian cities.
38. United Nations Environment Programme, "Nigeria's Dual Challenge of Water Access and Plastic Pollution," September 3, 2026.
39. National Environmental Standards and Regulations Enforcement Agency, "Laws & Regulations," including the National Environmental (Sanitation and Wastes Control) Regulations, 2009; National Environmental (Air Quality Control) Regulations, 2021; and National Environmental (Plastic Waste Control) Regulations, 2026.
40. National Environmental Standards and Regulations Enforcement Agency, "Our Functions," particularly its statutory responsibilities for environmental enforcement, pollution abatement, ecosystem management, and environmental education.
41. National Environmental Standards and Regulations Enforcement Agency, "Policies & Guidelines," *National Policy on Environment*, particularly its principle concerning the relationship between human needs and the carrying capacity of the environment.
42. United Nations Environment Programme, *Guidelines for National Waste Management Strategies: Moving from Challenges to Opportunities*, 21–23.

43. Federal Republic of Nigeria, *National Policy on the Environment*, particularly the provisions on sustainable environmental management and environmentally friendly technologies.

44. National Environmental Standards and Regulations Enforcement Agency, "Laws & Regulations," including the National Environmental (Sanitation and Wastes Control) Regulations, S.I. No. 28 of 2009.

45. Ezeah and Roberts, "Waste Governance Agenda in Nigerian Cities," 121–28.

46. World Bank, *Nigeria—Multi-Sector Analytical Review and Pathway to Transformation*, section on solid waste management in Nigerian cities.

47. United Nations, *Transforming Our World: The 2030 Agenda for Sustainable Development*, Goal 11, Targets 11.3 and 11.6.

48. Kruger, le Roux, and Teise, "Ecojustice Education and Communitarianism," 206–16.