IDEAS: Uniuyo Journal of Philosophy
and Multi-Disciplinary Studies
ISSN: 3093-009x
Vol. 1, No. 6, June 2026
ideasjournaluniuyo@gmail.com
www.ideasuniuyojournal.com

An Evaluation of Hans Jonas' Moral Environmental Responsibility and its Implication to Nigeria

Fidelis Fanen Nyamive
Department of Philosophy
Rev.Fr. Moses Orshio Adasu University, Makurdi
Nyamvefidelis82@gmail.com
+2347065007017

and

Benedict Michael Shamijah
Department of Philosophy
Rev.Fr. Moses Orshio Adasu University, Makurdi
bmichael@bsum.edu.ng, benmike3@gmail.com
+2348036588177, 2349033066905

Abstract

Environmental degradation in Nigeria has become both an ecological and moral concern, especially in regions where extractive activities and weak governance structures intersect. The Niger Delta continues to experience severe oil pollution, while other parts of the country face deforestation, urban waste accumulation, and increasing climate stress. These conditions reflect not only environmental mismanagement but also deeper ethical failures in responsibility toward both present and future generations. Hans Jonas' principle of responsibility offers a philosophical framework for interpreting these challenges, particularly through its emphasis on precaution, intergenerational justice, and moral obligation in the face of technological power. This study examined the moral foundations of environmental responsibility in Hans Jonas' philosophy and its relevance to Nigeria's environmental realities. Its specific objectives are to: conceptualise environmental responsibility and its ethical dimensions; analyse Jonas' principle of responsibility; examine environmental degradation in Nigeria; evaluate the relevance of Jonas' ethics to Nigerian environmental policy and governance; and propose a contextual ethical framework for environmental responsibility. The study

adopted a qualitative research design, relying on critical textual analysis of Hans Jonas and related environmental ethics literature, alongside interpretive engagement with Nigerian environmental reports and scholarly works. The analysis was guided by Environmental Ethics Theory, particularly Jonasian responsibility ethics. Findings reveal that Nigeria's environmental crisis is sustained by weak regulatory enforcement, corporate negligence, and limited ecological awareness, while Jonas' framework provides a strong normative basis for rethinking environmental accountability. However, its application requires contextual adaptation to Nigeria's socio-political and economic realities. The study concludes that environmental responsibility in Nigeria must integrate ethical foresight, governance reform, and community participation for sustainable ecological protection.

Keywords: Environmental Responsibility, Hans Jonas, Intergenerational Justice, Environmental Ethics.

Introduction

Environmental degradation has become one of the most unsettling realities of contemporary civilisation, not merely as a scientific or economic concern but as a moral question about how humanity ought to relate to nature. Rising sea levels, polluted rivers, deforestation, and toxic industrial emissions increasingly reveal a tension between technological advancement and ecological survival. In regions such as the Niger Delta, oil exploration has produced economic value while simultaneously leaving communities with contaminated water sources and damaged livelihoods. This tension raises a deeper philosophical concern about responsibility across generations, especially when present actions determine the viability of future life.

The ideal condition presupposes a world in which human progress unfolds alongside ecological preservation, where development does not compromise the integrity of the natural environment or the dignity of future generations. The reality, however, reflects a persistent imbalance in which industrial expansion and weak regulatory systems often take precedence over environmental care. Nigeria presents a vivid example, with frequent oil spills, gas flaring, and unmanaged waste systems contributing to long-term ecological harm. The consequences extend beyond environmental damage, affecting health, food security, and social stability in affected communities. This gap between moral expectation and lived reality frames the central problem this study addresses.

Philosophical inquiry into environmental ethics provides a framework for interpreting this crisis, particularly through the work of Hans Jonas, who reorients moral philosophy toward the future of life itself. Jonas argues that modern

technological power has created unprecedented ethical obligations, requiring a new principle of responsibility grounded in the protection of future existence (Jonas, p.19). His "imperative of responsibility" insists that human action must be guided by the long-term consequences it imposes on the continued survival of humanity and nature (Jonas, p. 38). The problem, however, lies in the limited contextual application of this philosophy within African environmental realities, where ecological challenges are often shaped by postcolonial governance structures, resource exploitation, and socio-economic pressures.

This study therefore examines the moral foundations of environmental responsibility in Hans Jonas' philosophy and investigates its relevance to Nigeria's ecological situation. A central concern is how Jonas' future-oriented ethics could meaningfully interpreted within a context marked by environmental exploitation and governance challenges. The thesis of this study holds that Jonas' principle of responsibility offers a valuable but incomplete framework that gains deeper significance when reinterpreted through Nigeria's environmental realities, particularly in relation to intergenerational justice and ecological accountability. The uniqueness of this research lies in its attempt to bridge a European philosophical system with African environmental experience, not as a simple application of theory, but as a critical rethinking of ethical responsibility in a context where environmental harm carries both moral and socio-political weight.

Conceptualising Environmental Responsibility

Environmental responsibility has increasingly become a central concept in ethical discourse, especially in response to the intensifying ecological pressures associated with industrialisation and modern consumption patterns. At its core, environmental responsibility refers to the moral obligation of human beings to act in ways that preserve ecological balance, prevent environmental degradation, and sustain the conditions necessary for life. Robin Attfield describes it as a duty grounded in the recognition that human actions have far-reaching consequences on ecosystems and future generations (Attfield, p. 57). This understanding shifts responsibility beyond legal compliance into the realm of moral consciousness, where everyday choices, ranging from waste disposal to energy consumption—carry ethical weight. In Nigeria, the persistence of oil pollution in the Niger Delta illustrates how the absence of such responsibility can produce long-term ecological harm that no technical remediation fully resolves.

A closer examination of environmental responsibility reveals that it is not merely a practical obligation but also an ethical construct shaped by competing moral interpretations of human–nature relations. The ethical dimension of this concept raises questions about whether nature possesses intrinsic value or whether its worth is derived solely from human use. Michael Zimmerman observes that

environmental ethics challenges traditional moral systems by extending moral consideration beyond human beings to include ecosystems and non-human life forms (Zimmerman, p. 112). This expansion complicates moral reasoning, particularly in societies where survival needs often overshadow ecological concerns. In many Nigerian communities affected by deforestation and soil erosion, environmental degradation is not always interpreted as a moral issue but as an unavoidable consequence of economic survival strategies, revealing a tension between ethical theory and lived reality.

The relationship between humans and nature has long been interpreted through anthropocentric frameworks, which position human beings at the centre of moral concern. Within this view, environmental protection is justified primarily because of its benefits to human welfare, health, and economic stability. Attfield notes that anthropocentrism remains influential in policy-making because it aligns environmental protection with human interests rather than abstract ecological value (Attfield, p. 63). However, critics argue that this approach limits moral responsibility by reducing nature to a resource pool rather than a community of life deserving independent ethical consideration. In Nigeria, policies addressing environmental damage often prioritise economic recovery over ecological restoration, a pattern that reflects this human centred orientation.

Ecological ethics, in contrast, challenges the assumption that nature exists solely for human exploitation. It advances the idea that ecosystems possess intrinsic worth, independent of human utility, and therefore deserve moral consideration. Zimmerman argues that ecological ethics redefines moral community to include rivers, forests, animals, and entire ecological systems, thereby transforming how responsibility is understood (Zimmerman, p. 119). This perspective resonates strongly with environmental crises in regions such as the Niger Delta, where oil extraction has disrupted entire ecosystems, affecting both human and non-human life. Yet ecological ethics also faces criticism for its abstractness, particularly in contexts where immediate socio-economic needs dominate public policy priorities. The tension between anthropocentrism and ecological ethics thus reveals an unresolved philosophical struggle over the scope of moral responsibility in environmental discourse.

Hans Jonas' Principle of Responsibility

Hans Jonas develops his principle of responsibility as a response to the unprecedented power of modern technology and its capacity to alter the conditions of life itself. Unlike earlier ethical systems that focused primarily on immediate interpersonal relations, Jonas extends moral concern into the distant future, insisting that ethical reflection must now account for the survival of humanity as a whole (Jonas, p. 8). His approach emerges from the conviction that traditional moral

frameworks are insufficient for a civilisation capable of ecological destruction on a global scale. Within this context, responsibility ceases to be reactive and becomes anticipatory, demanding foresight in moral judgement rather than reliance on established norms.

The "heuristics of fear" represents one of Jonas' most controversial but influential ideas. It suggests that fear, properly understood, can function as a rational guide for ethical decision-making when dealing with uncertain technological futures. Jonas argues that imagining worst-case outcomes enables societies to act cautiously in the face of irreversible harm (Jonas, p. 27). This does not imply irrational anxiety but a disciplined moral imagination capable of recognising the fragility of ecological systems. In practical terms, environmental disasters such as oil spills or radioactive contamination illustrate how a failure of precautionary thinking can produce consequences that extend beyond immediate repair. Critics, however, caution that excessive reliance on fear may lead to paralysis or resistance to innovation, particularly in developing economies where technological advancement is closely tied to development goals.

Responsibility toward future generations occupies a central position in Jonas' ethical framework. He insists that moral obligations must extend beyond present populations to include those who are yet unborn, since their existence depends on decisions made in the present (Jonas, p. 36). This temporal expansion of ethics introduces a form of intergenerational justice that challenges short-term political and economic thinking. In countries such as Nigeria, where resource extraction drives much of the economy, this principle raises difficult questions about whether present economic gains justify long-term ecological degradation. Communities in the Niger Delta, for example, experience environmental harm that may compromise agricultural productivity and public health for generations yet to come. Jonas' framework therefore reframes environmental damage as a moral issue rather than a purely technical or economic one.

Moral obligation in technological civilisation becomes more complex under conditions of advanced scientific capability. Jonas argues that modern technology has transformed human agency to such an extent that ethical responsibility must now match its scale and intensity (Jonas, p. 19). Industrial systems, genetic engineering, and large-scale energy production illustrate how human actions now possess global and long-term consequences. This expansion of power disrupts earlier ethical assumptions that limited moral concern to immediate and visible effects. The Nigerian environmental context demonstrates this tension clearly, where multinational oil corporations operate technologies capable of altering entire ecosystems, often with limited accountability structures that reflect the asymmetry between technological power and moral regulation.

Critique of modern ethical frameworks forms a significant part of Jonas' philosophical project. He challenges classical ethical systems, including those grounded in Kantian duty or utilitarian calculation, for their inability to adequately address the scale of contemporary environmental risk. Jonas contends that these frameworks remain too focused on human relations within present communities, neglecting the existential vulnerability of future life (Jonas, p. 44). While this critique carries considerable weight, it also faces objections. Some scholars argue that Jonas underestimates the adaptability of modern ethics, particularly in areas such as environmental law and sustainability ethics, which already attempt to integrate long-term considerations. Others suggest that his emphasis on fear risks overshadowing justice-based approaches that may be more effective in addressing structural inequalities in environmental harm. Despite these criticisms, Jonas' work remains influential in reorienting ethical reflection toward the fragility of life in a technologically dominant world.

Critique of Hans Jonas' Principle of Responsibility

Hans Jonas' ethical proposal has generated sustained debate, particularly among scholars who accept the urgency of environmental crisis but question the philosophical structure he adopts. One major line of criticism concerns the psychological and normative foundation of the "heuristics of fear." Robert Spaemann contends that grounding moral judgement in anticipatory fear risks distorting the nature of ethical rationality, since morality should arise from an understanding of the good rather than from anxiety about catastrophic futures (p. 72). From this perspective, Jonas' approach appears to replace moral clarity with precautionary imagination, raising concerns about whether fear can consistently guide rational public policy without producing excessive caution or moral hesitation.

A second critique focuses on the problem of practical decision-making in intergenerational ethics. Dieter Birnbacher argues that while Jonas is correct to extend moral concern to future generations, his framework lacks a clear mechanism for resolving conflicts between present needs and future claims (p. 91). The absence of a structured method for balancing competing temporal interests creates ambiguity in policy contexts where governments must negotiate urgent economic pressures alongside long-term ecological protection. In this sense, Jonas' theory is seen as ethically compelling but operationally incomplete, especially in societies where development priorities are immediate and politically sensitive.

Another important critique comes from Andrew Feenberg, who situates Jonas within broader debates on technology and society. Feenberg challenges the assumption that technological civilisation is inherently dangerous, arguing instead that technological systems are socially constructed and can be democratically reoriented (p. 114). From this standpoint, Jonas places excessive moral weight on

technology itself rather than on the political and economic structures that determine how technology is used. The implication is that environmental harm should be addressed through participatory governance and institutional reform rather than through a generalised ethic of fear directed at technological progress.

Kristin Shrader-Frechette raises a different concern grounded in environmental justice and empirical reasoning. She argues that Jonas' reliance on speculative future scenarios lacks sufficient empirical grounding, making it difficult to translate his ethical claims into concrete environmental policy (p. 138). Her critique emphasises that environmental ethics must be rooted in risk assessment, scientific evidence, and distributive justice rather than metaphysical assumptions about humanity's future survival. This position gains particular relevance in contexts where environmental harm is already measurable and unevenly distributed, such as industrial pollution affecting vulnerable communities.

Bryan Norton offers a further challenge by questioning the necessity of Jonas' strong metaphysical commitments regarding future generations. Norton's convergence theory suggests that diverse ethical frameworks can lead to similar environmental policy outcomes without requiring agreement on deep philosophical foundations (p. 58). This position weakens Jonas' claim that a radical restructuring of ethics is necessary for environmental protection. Instead, Norton proposes that practical environmental cooperation can be achieved through overlapping consensus, even among competing moral theories.

These critiques reveal that Jonas' principle of responsibility remains philosophically influential but contested in its application. The objections raised by Spaemann, Birnbacher, Feenberg, Shrader-Frechette, and Norton converge on a shared concern: the need for clearer practical guidance, stronger empirical grounding, and greater attention to social and political structures. At the same time, none of these critiques fully dismiss Jonas' central insight that modern technological power demands an expanded ethical horizon, particularly one that includes the vulnerability of future generations.

Environmental Degradation and Ethical Crisis in Nigeria

Environmental degradation in Nigeria presents not only an ecological challenge but also a deep ethical crisis that exposes contradictions between economic development, governance, and moral responsibility. The scale of environmental harm across oil-producing regions, forest zones, and rapidly urbanising cities reflects a pattern where short-term economic interests frequently override long-term ecological sustainability. Scholars of environmental ethics increasingly argue that such conditions cannot be understood solely through technical or policy lenses, but also through the moral choices that shape extraction, consumption, and regulation (Attfield, p. 92). Nigeria, therefore, becomes a critical site for examining how

environmental harm intersects with questions of justice, responsibility, and intergenerational survival.

Oil pollution in the Niger Delta

Oil pollution in the Niger Delta remains one of the most visible manifestations of environmental injustice in contemporary Africa. Continuous oil spills, gas flaring, and pipeline leaks have altered aquatic ecosystems, destroyed farmlands, and undermined the livelihoods of local communities. Michael Watts describes the Niger Delta as a "sacrifice zone" where ecological destruction is normalised in the pursuit of petroleum wealth (p. 63). The ethical problem extends beyond corporate malpractice to include weak enforcement structures and political complicity that allow environmental harm to persist over decades. In communities such as Ogoniland, polluted water sources and degraded soil conditions illustrate how ecological damage translates directly into human suffering, raising questions about distributive justice and corporate accountability. The crisis reveals a moral disjunction between resource wealth and human well-being, where oil extraction generates national revenue while local populations bear the environmental cost.

Deforestation, urban waste, and climate stress

Environmental degradation in Nigeria is not limited to oil-producing regions but extends to widespread deforestation, urban waste accumulation, and increasing climate stress. Forest ecosystems in southern and central Nigeria continue to decline due to agricultural expansion, logging, and fuelwood dependence. Adeola Oyebade observes that deforestation contributes to biodiversity loss and disrupts ecological balance, particularly in rural communities dependent on forest resources (p. 118). Urban centres such as Lagos face escalating waste management challenges, where unregulated dumping and inadequate infrastructure result in blocked drainage systems and recurring flooding. Climate variability intensifies these pressures, as rising temperatures and unpredictable rainfall patterns affect agriculture and food security. These interconnected problems reveal how environmental degradation operates across ecological, economic, and social dimensions, creating layered vulnerabilities that disproportionately affect low-income populations.

Weak regulatory enforcement and moral negligence

Regulatory weakness remains a central factor sustaining environmental degradation in Nigeria. Institutions tasked with environmental protection often struggle with limited funding, political interference, and inconsistent enforcement of environmental standards. Nnimmo Bassey argues that environmental governance in Nigeria is frequently undermined by a culture of impunity, particularly among powerful corporate actors in the extractive sector (p.77). This institutional fragility

raises deeper ethical concerns about moral negligence, where environmental harm persists not only due to lack of capacity but also due to lack of political will. The gap between environmental legislation and actual enforcement reflects a broader moral crisis in which environmental responsibility is not fully internalised by state and non-state actors. Within this context, environmental harm becomes normalised, and affected communities are left with limited avenues for redress or ecological restoration.

The Nigerian environmental condition therefore illustrates a complex ethical failure involving multiple actors and systems. Oil pollution, deforestation, and urban environmental stress are not isolated phenomena but interconnected expressions of governance gaps and moral indifference. The persistence of these conditions raises critical questions about responsibility, justice, and the future of ecological sustainability in a context where environmental degradation has become structurally embedded.

The Relevance of Hans Jonas ' Environmental Responsibility to Nigeria

Hans Jonas' principle of responsibility gains particular relevance in Nigeria because of the country's persistent environmental crises and the long-term consequences of extractive economic practices. His ethical framework, which extends moral consideration to future generations, provides a philosophical lens through which Nigeria's ecological challenges can be reinterpreted as moral failures rather than mere developmental trade-offs. The Nigerian context, marked by oil extraction, deforestation, and weak environmental governance, demonstrates the urgency of an ethics that prioritises the survival conditions of both present and future populations (Jonas, p. 36). Within this setting, Jonas' philosophy becomes more than abstract theory; it functions as a critical tool for evaluating environmental decision-making.

Intergenerational Justice in Nigerian Environmental Policy: Intergenerational justice occupies a central position in Jonas' ethical system, insisting that present actions must preserve the possibility of a livable future. This idea has direct relevance to Nigeria, where environmental policies often struggle to balance immediate economic gains with long-term ecological sustainability. Oil exploration in the Niger Delta illustrates this tension clearly, as revenues generated today coexist with environmental damage that threatens agricultural productivity and public health for future generations. Robin Attfield argues that intergenerational ethics requires present societies to recognise obligations to individuals who cannot yet participate in political decision-making (p. 104). Nigeria's environmental governance structures, however, rarely integrate this temporal dimension in a consistent way, leading to policies that prioritise short-term fiscal returns over ecological continuity. Jonas' framework exposes this imbalance as a moral deficit rather than a purely administrative limitation.

Moral Reorientation of Governance and Corporations: The application of Jonas' principle also demands a moral reorientation of both state governance and corporate practice. Technological and industrial actors in Nigeria operate within systems that often prioritise production efficiency over environmental protection, particularly in the extractive sector. Hans Jonas insists that technological power must be matched with proportional ethical responsibility, especially when its consequences extend beyond immediate visibility (Jonas 19). In the Nigerian oil industry, repeated spills and gas flaring reveal a gap between regulatory standards and corporate conduct, suggesting that legal compliance alone is insufficient without deeper ethical commitment. Nnimmo Bassey notes that environmental governance failures in extractive economies often reflect structural impunity, where powerful actors operate with limited accountability (p. 83). Jonas' ethics challenges both corporations and government institutions to move beyond regulatory minimalism toward a responsibility-based approach grounded in precaution and long-term ecological care.

Community Responsibility and Ecological Awareness: Jonas' ethical vision also has implications at the level of local communities, particularly in fostering ecological awareness and participatory responsibility. Environmental degradation in Nigeria is often experienced most intensely at the community level, where livelihoods depend directly on land, water, and forest ecosystems. Michael Watts observes that communities in the Niger Delta have developed forms of environmental activism in response to ecological destruction, reflecting a growing consciousness of environmental rights and justice (p. 71). Jonas' principle supports this orientation by affirming that responsibility is not limited to institutional actors but extends to all agents whose actions affect ecological stability. Community-based environmental awareness initiatives, including local advocacy against pollution and deforestation, reflect an emerging ethical sensibility aligned with Jonas' call for anticipatory responsibility. However, such efforts remain constrained by structural inequalities and limited access to political power, raising questions about how effectively moral awareness can translate into systemic change without institutional support.

The relevance of Jonas' philosophy to Nigeria therefore lies in its capacity to reframe environmental degradation as a moral and intergenerational issue rather than a purely economic or technical challenge. His principle of responsibility exposes gaps in policy orientation, corporate ethics, and community engagement, while also offering a normative foundation for rethinking environmental governance in a context of ecological vulnerability. The Nigerian case demonstrates that ethical theory gains practical significance when it engages directly with lived environmental realities shaped by extraction, inequality, and institutional fragility.

Advancing Jonasian Environmental Ethics within the Nigerian Context

This study advances environmental ethics by repositioning Hans Jonas' principle of responsibility within the lived ecological realities of Nigeria. Rather than treating Jonas as a purely European philosophical authority applied externally to African conditions, the analysis reworks his framework through Nigeria's environmental crises, thereby generating a dialogue between abstract ethical theory and concrete ecological suffering. Jonas' insistence on responsibility toward future existence becomes more analytically urgent when read alongside the persistent oil pollution, deforestation, and governance failures that characterise Nigeria's environmental landscape (Jonas, p. 36). The contribution lies in this interpretive movement, where ethical theory is tested against a context marked by ecological fragility and institutional inconsistency.

Bridging European philosophical ethics with Nigerian environmental realities

European environmental ethics, particularly Jonas' work, often emerges from contexts of advanced industrialisation and institutional stability. Nigeria presents a contrasting environment where ecological harm is intensified by weak enforcement mechanisms and socio-economic pressures. Robin Attfield argues that environmental ethics must be sensitive to contextual differences if it is to remain practically relevant across diverse societies (p. 112). This study contributes by bridging that gap, demonstrating how Jonas' abstract principle of responsibility gains sharper meaning when confronted with oil spills in the Niger Delta and urban environmental stress in cities such as Lagos. The ethical abstraction of intergenerational responsibility becomes materially visible in communities where polluted water and degraded soil directly threaten future livelihoods.

Reinterpreting Jonas within an African socio-political framework requires attention to historical, economic, and institutional realities that shape environmental outcomes. Nnimmo Bassey notes that extractive economies in Africa are often structured through asymmetrical power relations that limit environmental accountability (Bassey, p. 85). Within this context, Jonas' emphasis on anticipatory responsibility takes on a different dimension, shifting from philosophical foresight to a critique of governance systems that permit ecological harm. Michael Watts' analysis of the Niger Delta further illustrates how environmental degradation is embedded within political and economic structures that marginalise local communities (Watts, p. 74). The study contributes by situating Jonas within these dynamics, rather than treating his theory as detached from the socio-political conditions that define environmental injustice in Africa.

Environmental ethics has often been criticised for remaining at the level of abstraction, particularly when it fails to engage with lived environmental suffering. Kristin Shrader-Frechette argues that ethical frameworks must incorporate empirical

realities if they are to inform meaningful policy decisions (Shrader-Frechette,p. 141). This study responds to that concern by extending Jonas' theory into practical Nigerian contexts where environmental harm is measurable and socially unequal. The expansion of environmental ethics beyond abstraction becomes evident in the analysis of regulatory failure, corporate responsibility, and community-based environmental struggles. Ethical responsibility is therefore not confined to philosophical reflection but is repositioned as a lived necessity embedded in governance, industry, and daily survival.

Conclusion

The analysis has demonstrated that Hans Jonas' principle of responsibility provides a significant ethical framework for understanding environmental degradation in Nigeria. His emphasis on intergenerational justice, precautionary reasoning, and expanded moral obligation offers a conceptual structure for interpreting ecological harm as a failure of responsibility rather than an unavoidable consequence of development. The study has also shown that Nigeria's environmental challenges—ranging from oil pollution in the Niger Delta to deforestation and urban waste—reflect deeper ethical and institutional weaknesses that cannot be separated from questions of governance and moral accountability.

Ethically, the findings suggest that environmental governance in Nigeria requires a shift from short-term economic reasoning to long-term responsibility-based planning. Hans Jonas' framework implies that policy decisions should be evaluated not only in terms of immediate benefits but also in relation to their impact on future generations (Jonas 44). Robin Attfield supports this orientation by arguing that sustainable ethics must integrate long-term ecological responsibility into policy structures (Attfield 119). In practical terms, this calls for stronger regulatory enforcement, corporate accountability in extractive industries, and increased ecological awareness at community level. The Nigerian environmental crisis therefore becomes not only a technical problem but a moral test of how responsibility is understood, distributed, and enacted across generations and institutions.

Works Cited

Attfield, Robin. *Environmental Ethics: An Overview for the Twenty-First Century*. Polity Press, 2014.

Bassey, Nnimmo. *To Cook a Continent: Destructive Extraction and the Climate Crisis in Africa*. Pambazuka Press, 2012.

Birnbacher, Dieter. *Responsibility for Future Generations*. Translated by Patrick Camiller, Humanity Books, 1988.

Feenberg, Andrew. *Transforming Technology: A Critical Theory Revisited*. Oxford University Press, 2002.

Jonas, Hans. *The Imperative of Responsibility: In Search of an Ethics for the Technological Age*. University of Chicago Press, 1984.

Norton, Bryan G. *Sustainability: A Philosophy of Adaptive Ecosystem Management*. University of Chicago Press, 2005.

Oyebade, Adeola. *The Nigerian Environment: Issues and Challenges*. Lagos University Press, 2015.

Shrader-Frechette, Kristin. *Risk and Rationality: Philosophical Foundations for Populist Reforms*. University of California Press, 1991.

Spaemann, Robert. *Happiness and Benevolence*. Translated by Jeremiah Alberg, Eerdmans, 2000.

Watts, Michael. *Petro-violence: Community, Extraction, and Political Ecology in the Niger Delta*. Duke University Press, 2008.

Zimmerman, Michael E. *Contemporary Moral and Social Issues in Environmental Ethics*. Oxford University Press, 2010.