

**“TO BE, IS TO BE IN MUTUAL COMPLEMENTARY”: RETHINKING
ENVIRONMENTAL SUSTAINABILITY FOR A CLIMATE-RESILIENT
FUTURE VIA INNOCENT ASOUZU'S COMPLEMENTARITY**

Daniel Aseer Kwaghgande, PhD
Lecturer, Department of Philosophy,
Benue State University Makurdi- Nigeria
E-mail: dankwagason@gmail.com
dkwaghgande@bsum.edu.ng
Phone number: +2348067216587

DOI:10.13140/RG.2.2.30371.98087

Abstract:

This research work reexamines environmental sustainability in the face of climate change through the lens of Innocent Asouzu's Complementary Philosophy. The crux of Asouzu's complementarity: *To be is to be in mutual complementary* serves as a foundational framework for rethinking human-nature relationships and the interconnectedness of all existence. By applying Asouzu's complementarity principle, this research reveals the limitations of the dominant western approaches to environmental sustainability and highlights the potential of African philosophical perspectives in addressing the climate crisis. Through a critical analysis of Asouzu's work and its implications for environmental thought, this work argues that complementarity offers a nuanced understanding of the reciprocal relationships between human and non-human entities. This understanding fosters a holistic approach to environmental sustainability, emphasizing cooperation, mutual respect, and the intrinsic value of all beings. This research pioneers the application of Innocent Asouzu's Complementary Philosophy to environmental sustainability in the context of climate change, generating a redefined understanding of human-nature relationships as reciprocally shaped and interconnected. It also provides a critical examination of prevailing Western environmental paradigms through an African philosophical lens, revealing new perspectives on the field. Furthermore, this study offers a comprehensive sustainability framework rooted in complementarity, presenting a holistic approach to addressing environmental challenges in the face of climate change. Specifically, this study introduces the concept of 'reciprocal ecological citizenship'—wherein human and non-human entities co-exist in symbiotic relationships—offering a fresh paradigm for addressing climate change. By integrating Asouzu's complementarity principle with environmental thought, this research fills a critical knowledge gap, enriching our understanding of sustainability and climate change mitigation strategies, and demonstrating the value of African philosophical perspectives in addressing global ecological challenges.

Keywords: Complementary Philosophy, Environmental Sustainability, Climate Change, Holism, Reciprocal Ecological Citizenship, Human-Nature Relationship.

Introduction

Humanity is in a state of debit and huge resource crises. Year after year, it consumes more resources than nature can provide. This over-consumption has a direct effect on the climate. Climate change is a major challenge of our time that has direct consequences on

humans and nature (Kwaghgande, D. A., & Agishi, A. B. 2024, 249). This escalating climate crisis has precipitated a paradigm shift in our understanding of human-nature relationships, underscoring the imperative for innovative philosophical perspectives to address the complexities of environmental sustainability. Amidst this context, Innocent Asouzu's Complementary Philosophy offers a compelling framework for rethinking the interconnectedness of all existence in the echo chamber. Asouzu's notion: *To be is to be in mutual complementary* posits that being is inherently relational, emphasizing the reciprocal and symbiotic relationships between human and non-human entities in the ecosystem.

However, despite the growing recognition of African philosophical perspectives in environmental thought, Asouzu's Complementary Philosophy remains largely underexplored in the context of climate change. This research seeks to bridge this knowledge gap by examining the potential of Asouzu's complementarity principle to inform holistic approaches to environmental sustainability. By critically engaging with Asouzu's work and its implications for environmental thought, this study aims at reconceptualizing human-nature relationships through the lens of complementarity, critiquing the dominant western approaches to environmental sustainability from an African philosophical perspective, thereby developing a holistic framework for sustainability grounded in reciprocal ecological citizenship.

This research contributes to ongoing conversations in environmental philosophy, African studies, and sustainability, demonstrating the significance of Asouzu's Complementary philosophy in addressing the complexities of climate change. Innocent Asouzu's Complementary Philosophy offers a novel framework for rethinking environmental sustainability, highlighting the importance of reciprocal ecological citizenship and holistic approaches to addressing the crisis. Before we delve into the crux of the work, it is important to survey the backdrop of the climate crisis and environmental sustainability.

Background to the Climate Crisis and Environmental Sustainability

Climate change is one of the most controversial environmental problems facing the world today (Kwaghgande, D. A. 2022, 36). It is a pressing global issue, with far-reaching consequences for the environment, human health, and the economy (IPCC, 2020, 12). The scientific consensus is clear that human activities, particularly the burning of fossil fuels and deforestation are significantly contributing to the increase in global temperatures (NASA, 2022, 5). The current climate crisis is characterized by rising global temperatures and this warming is primarily driven by human activities. The consequences of climate change are far-reaching and devastating:

- a. Extreme weather events: Rising temperatures lead to more frequent and intense heatwaves, droughts, and storms (IPCC, 2020).
- b. Sea-level rise: Melting glaciers and ice sheets cause sea levels to rise, threatening coastal communities and ecosystems (NASA, 2022).
- c. Water scarcity: Changes in precipitation patterns and increased evaporation due to warmer temperatures lead to water scarcity (UN, 2020).

Environmental sustainability is crucial for mitigating the climate crisis and ensuring a livable future. The concept of sustainability encompasses the intersection of social, economic and environmental factors (Brundtland, 1987, 43). It requires a shift from

exploitative and extractive practices to regenerative and restorative approaches (Raworth, 2017,123). Climate change and sustainability are inextricably linked, with the former threatening the latter. The window for taking decisive action is rapidly closing, and the need for innovative solutions and perspectives has never been more urgent (Guterres, 2020 2). Addressing the climate crisis requires a transition to:

- a. Renewable energy sources: Solar, wind, and other renewable energy sources can significantly reduce greenhouse gas emissions (IRENA, 2020).
- b. Sustainable land use: Practices like agroforestry, permaculture, and regenerative agriculture promote carbon sequestration and reduce deforestation (WWF, 2020).
- c. Circular economy: Reducing waste, increasing recycling, and promoting sustainable consumption patterns can minimize environmental impacts (Ellen MacArthur Foundation, 2020).

The Dominant Western Approaches to Environmental Sustainability

Dominant western approaches to environmental sustainability have historically prioritized economic growth and technological progress over ecological concerns (Dryzek, 2005, 23). These approaches emphasize technological innovation, market-based mechanisms, regulatory frameworks, sustainable development, ecological modernization, environmental governance, and the green economy. They often view the natural world as a collection of resources to be exploited for human benefit, rather than as an interconnected system that supports human well-being (Merchant, 1980, 145). Technological innovation is a key approach, focusing on scientific solutions, clean technologies, and renewable energy. This perspective is rooted in the belief that technological advancements can decouple economic growth from environmental degradation. The focus has been on finding technological solutions to environmental problems, such as carbon capture and storage, rather than addressing the root causes of environmental degradation (Hajer, 1995, 201).

Western approaches to environmental sustainability have also been criticized for their anthropocentric focus, prioritizing human interests over those of non-human entities (Naess, 1973, 95). This has led to the development of environmental policies that often serve the interests of powerful corporations and nations, rather than promoting ecological sustainability (Luke, 2005, 123). Furthermore, Western approaches have been characterized by a reductionist and fragmented approach to environmental problems, addressing symptoms rather than root causes (Capra, 1996, 156).

It is important to note also that western approaches to environmental sustainability have been shaped by various philosophical and economic frameworks, including anthropocentrism, technological optimism, economic growth, and reductionism. These frameworks have led to environmental policies and practices that prioritize human interests, technological solutions, and economic development over ecological concerns. For instance, command-and-control regulations and market-based solutions have been implemented to address environmental pollutants, while technological fixes have been developed to solve specific environmental problems. The command-and-control regulations are mandatory rules that limit pollution and environmental harm. These regulations can include laws banning specific pollutants, setting emission standards, or requiring companies to use specific technologies. The market-based solutions are

economic incentives to encourage environmentally friendly behavior. Examples include carbon pricing, subsidies for renewable energy, and green taxes. (Capra, 1996, 156). However, these approaches have been criticized for their limitations and flaws. Critics argue that they fail to address the root causes of environmental degradation, instead focusing on symptoms rather than underlying issues. Moreover, these approaches often disproportionately affect vulnerable populations, prioritizing the interests of powerful corporations and nations over those of marginalized communities. The overemphasis on economic growth has also been criticized for neglecting environmental and social concerns.

The dominance of western approaches to environmental sustainability has also been linked to the marginalization of non-western perspectives and knowledge systems. Indigenous knowledge and traditional practices have been overlooked or dismissed in favor of western scientific and technological solutions. This has led to the erasure of diverse perspectives and the homogenization of environmental policies and practices. In recent years, there has been a growing recognition of the need to move beyond dominant western approaches to environmental sustainability. This has led to increased interest in alternative frameworks, such as ecological modernization, sustainability transitions, and post-humanism. These frameworks prioritize ecological sustainability, social justice, and human well-being, and recognize the interconnectedness of human and non-human entities. (Dryzek, 2005, 26).

Generally, the dominant western approaches to environmental sustainability have been criticized for prioritizing economic growth over environmental protection. Technological innovation, for instance, can perpetuate the notion that environmental problems can be solved through technological fixes, rather than addressing underlying systemic issues (Hajer, 1995, 31). Market-based mechanisms have been criticized for commodifying nature and failing to account for environmental externalities (Lohmann, 2006, 56). Carbon pricing, for example, can lead to carbon offsetting, which can perpetuate environmental degradation in marginalized communities (Bumpus & Liverman, 2008, 134). Regulatory frameworks have been criticized for being inadequate and ineffective, often due to lobbying and political influence (Vig & Faure, 2004, 123). International agreements, such as the Paris Agreement, have been criticized for lacking teeth and failing to address global equity concerns (Shue, 2014, 78).

On the other hand, sustainable development and ecological modernization have been criticized for being oxymoronic, as they attempt to reconcile economic growth with environmental protection (Dryzek, 2005, 112). These approaches often prioritize economic interests over environmental and social concerns. The green economy has been criticized for being a "greenwash" of neoliberal economic policies, prioritizing economic growth over environmental protection (Jackson, 2009, p. 105). This approach can also perpetuate environmental injustices, particularly in the Global South. Indigenous scholars argue that Western approaches to environmental sustainability neglect indigenous knowledge and traditional practices (Whyte, 2017, 45). These approaches often prioritize western scientific knowledge over indigenous perspectives. Feminist scholars argue that Western approaches to environmental sustainability neglect the gendered dimensions of environmental degradation (Agarwal, 1992, p. 123). Women are disproportionately affected by environmental degradation.

African Philosophical Perspectives on Environment and Sustainability

African philosophy's emphasis on communal relationships and interconnectedness challenges Western notions of human exceptionalism and anthropocentrism. Instead, African thinkers advocate for a holistic approach, recognizing the intrinsic value of non-human entities and the interdependence of human and natural worlds. This perspective encourages sustainable practices, such as conservation and eco-friendly technologies. African philosophical perspectives on environment and sustainability emphasize the interconnectedness of human and non-human entities. In Yoruba philosophy, for example, the concept of "*ase*" highlights the sacredness of nature and the need for humans to live in harmony with the environment. *Ase* refers to the divine power that resides in all things, including humans, animals, and plants.

The concept of *ase* is central to Yoruba environmental philosophy. *Ase* is the divine power that resides in all things, including humans, animals, and plants. It is the power that makes things happen, that brings life and vitality to all beings. Without *ase*, there would be no life, no growth, no development. (Abimbola 2006, 125-126).

This perspective emphasizes the interconnectedness of all living beings and the need for reciprocity and balance in human relationships with the environment (Abimbola, 2006, 127). Similarly, the Ubuntu philosophy of Southern Africa emphasizes the importance of community and interconnectedness in achieving environmental sustainability. African philosophy offers unique perspectives on environmental sustainability, emphasizing the interconnectedness of human and natural worlds. The concept of "*ubuntu*" or "*communitarianism*" highlights the importance of community and mutual relationships in environmental conservation. African philosophers argue that environmental degradation is often a result of disconnecting from traditional values and cultural practices:

Ubuntu is a philosophy that recognizes the interconnectedness of all living beings. It is a philosophy that says, 'I am because we are.' It is a philosophy that recognizes that human existence is deeply rooted in the natural world and that our well-being is tied to the well-being of the environment. Ramose (1999, 158-159).

The concept of "*ubuntu*" (*communitarianism*) highlights the importance of community and mutual relationships in environmental conservation. Ubuntu emphasizes that human existence is inextricably linked to the natural world, and environmental degradation harms not only humans but also other beings and the community as a whole (Moyo, 2020, p. 90). Ubuntu recognizes that human existence is deeply rooted in the natural world and that our well-being is tied to the well-being of the environment. This perspective encourages a holistic approach to environmental sustainability, one that recognizes the intrinsic value of non-human entities and promotes reciprocity and balance in human relationships with the environment (Ramose, 1999, 160).

African philosophers have also critiqued western approaches to environmental sustainability, arguing that they prioritize human interests over those of non-human entities. For example, Okeke argues that western perspectives on environmental sustainability often focus on exploiting natural resources for human benefit, rather than recognizing the intrinsic value of non-human entities (Okeke, 2010,203). In contrast,

African perspectives emphasize the need for a holistic approach that recognizes the interconnectedness of all living beings and promotes reciprocity and balance in human relationships with the environment (Okeke, 2010, 205).

Thus, African philosophical perspectives on environment and sustainability emphasize community, interconnectedness, and cultural values. These perspectives offer valuable insights for addressing global environmental challenges.

Complementary Reflection and Innocent Asouzu's *Ibu anyi danda*

Complementarity is a philosophical cum ontological system articulated by Innocent Asouzu. This system is African culture-inspired since it is developed from the African philosophical place, which prized the idea and practice of complementarity. Asouzu also acknowledges the fact that this idea of complementarity is not restrictively African as it is found in Western philosophy, oriental philosophy and quantum mechanics (Asouzu 2004). Also, he notes that the anonymous traditional philosophers of the complementary system of thought and his philosophical training helped shaped his complementary philosophy. However, he finds it more comfortable to articulate his complementary philosophy from his Igbo culture – the Igbo linguistic worldview. This is apparent in his employing the Igbo aphorism – *Ibu anyi dabda* to conceptualise and discuss his philosophy of complementary reflection (2005; 2007a; 2011; 2013). *Ibu anyi danda* is an aphorism borrowed from a popular Igbo work song, which reads: *bunu bunu ibu anyi danda*. The translation is 'lift up, lift up, no load is too heavy for danda, the ant'. This is due to their complementary nature. It is on this note that Asouzu translates *ibu anyi danda* as 'complementarity'. Hence, his philosophy is known as complementary reflection or complementary philosophy, with a method known as 'complementarism' (Asouzu 2004; 2007b; Edet 2013; 2017).

Asouzu's principle of mutual complementarity holds that different entities, perspectives, and knowledge systems are interconnected and interdependent, and that each complements the other to form a harmonious whole (Asouzu, 2007, 167). This principle is rooted in the idea that reality is complex and multifaceted, and that no single perspective or approach can fully capture its richness and diversity (Asouzu, 2004, 23). By recognizing the mutual complementarity of different entities and perspectives, we can foster a more holistic and inclusive understanding of the world:

The principle of mutual complementarity recognizes that different entities, perspectives, and knowledge systems are interconnected and interdependent. This principle promotes a more holistic and inclusive understanding of the world, one that acknowledges the value of diversity and complexity. By recognizing the mutual complementarity of different entities and perspectives, we can foster a more balanced and sustainable approach to human-environment relationships (Asouzu 2007, 167-168).

Asouzu's complementary principle is closely related to concept of "ubuntu," which emphasizes the interconnectedness and interdependence of human beings. This principle can be applied to human-environment relationships, promoting a more balanced and sustainable approach to environmental management. By recognizing the mutual complementarity of human and natural systems, we can work towards a more harmonious

and sustainable coexistence. The Principle of Mutual Complementarity also has ethical implications, particularly in the context of environmental ethics. Asouzu argues that recognizing the mutual complementarity of human and natural systems promotes a more inclusive and holistic understanding of environmental ethics, one that recognizes the intrinsic value of non-human entities and the environment as a whole (Asouzu, 2007, 173).

Innocent Asouzu's Complementary Philosophy and its Applicability to Environmental Sustainability

Innocent Asouzu's Complementary Philosophy posits that reality is composed of complementary aspects that are interconnected and interdependent (Asouzu, 2004, 12). According to Asouzu, "complementarity is the fundamental principle of reality" because this philosophy emphasizes the importance of considering multiple perspectives of reality in order to gain a comprehensive understanding (Asouzu, 2007, 145). He argues that complementarity is a fundamental principle of reality, where different aspects of reality are interconnected and interdependent. Asouzu argues that the dominant western philosophical tradition has been characterized by a "monological" approach, which prioritizes a single perspective or aspect of reality (Asouzu, 2004, 34). In contrast, Complementary Philosophy advocates for a "dialogical" approach, which recognizes the value of multiple perspectives and fosters a more inclusive and holistic understanding. The principle of complementarity is central to Asouzu's philosophy, holding that different perspectives and approaches are not mutually exclusive, but rather complementary and necessary for a comprehensive understanding of reality (Asouzu, 2007, 167).

Asouzu's Complementary Philosophy has been applied in various environmental contexts, highlighting its relevance and significance. One notable application is in the field of environmental ethics, where Asouzu's principle of complementarity is used to critique anthropocentric approaches and promote a more inclusive and holistic understanding of human-nature relationships (Asouzu, 2010, p. 203). Another application is in the context of sustainable development, where Asouzu's philosophy is used to emphasize the importance of harmonious coexistence and reciprocity between human and natural systems (Asouzu, 2007, 173). This approach recognizes the interconnectedness of all beings and promotes a more balanced and equitable approach to development. Asouzu's philosophy can be applied in environmental education, where it is used to promote a more holistic and inclusive understanding of environmental issues (Asouzu, 2004, 78). This approach emphasizes the importance of considering multiple perspectives and promoting critical thinking and reflection. Furthermore, Asouzu's Complementary Philosophy can be used in the context of environmental policy and management, where it can be used to promote a more participatory and inclusive approach to decision-making (Asouzu, 2010, 210). This approach recognizes the importance of considering multiple stakeholders and promoting reciprocity and mutual respect.

Asouzu's complementarity principle posits that different perspectives and approaches are not mutually exclusive, but rather complementary and necessary for a comprehensive understanding of reality (Asouzu, 2007, 167). In the context of environmental thought, this principle has significant implications. It suggests that western and non-western, anthropocentric and ecocentric, and scientific and indigenous knowledge systems are not in opposition, but rather complementary and necessary for addressing environmental

challenges (Asouzu, 2010, 203). The complementarity principle also implies that environmental issues cannot be addressed through a single approach or perspective, rather, it requires a holistic and inclusive approach that incorporates multiple perspectives. This approach recognizes the interconnectedness of human and natural systems and promotes reciprocity and mutual respect between humans and the environment (Asouzu, 2007, 173).

By recognizing the intrinsic value of non-human entities, Asouzu's complementarity principle promotes a more inclusive and holistic understanding of environmental ethics. This approach challenges traditional anthropocentric views that prioritize human interests over those of the environment (Asouzu, 2007, 173). Complementarity principle also highlights the importance of reciprocity and mutual respect between humans and the environment (Asouzu, 2004, 78). This approach recognizes that human well-being is inextricably linked to the well-being of the environment, and that our actions have consequences for the natural world. By promoting reciprocity and mutual respect, complementarity principle encourages a more balanced and sustainable approach to human-environment relationships (Asouzu, 2010, 203).

Furthermore, by recognizing the importance of multiple perspectives and knowledge systems Asouzu's complementarity principle promotes a more participatory and inclusive approach to decision-making. This approach ensures that all stakeholders are involved in the decision-making process and that their perspectives are respected, leading to more effective and sustainable solutions (Asouzu, 2007, 167). By recognizing the value of indigenous knowledge systems and non-western perspectives, this principle encourages a more nuanced and context-specific understanding of environmental issues. This approach promotes a more inclusive and equitable approach to environmental management and policy (Asouzu, 2010, 203).

As a matter of fact, many scholars have applied Asouzu's complementarity principle to environmental sustainability. For instance, Helen Lauer (2017) applies complementarity to sustainable development, emphasizing the importance of integrating economic, social, and environmental factors (Lauer, 2017, p. 212). In the context of climate change, a complementary approach can integrate human and non-human perspectives, considering the impacts of climate change on ecosystems and human communities. This approach can also foster reciprocal relationships, promoting cooperation between nations, communities, and individuals to address climate change. Daniel Aseer Kwaghgande in his work: *Contextualizing Innocent Asouzu's complementarity as an Epistemological Framework for Addressing Climate Change Crises* wrote extensively on need for mutual integration of the human and non-human in the echo chamber to ensure harmonious environmental balance.

Asouzu's complementarity principle if well-articulated can help overcome the limitations of western philosophical approaches to environmental sustainability, which often prioritize human interests over ecological concerns. By recognizing the interconnectedness of all aspects of reality, complementarity can encourage holistic thinking, addressing the root causes of climate change. By recognizing the reciprocal relationships between human and non-human entities, complementarity can promote more effective and sustainable solutions to environmental challenges. For example, a

complementary approach can prioritize agroforestry practices that promote ecological balance and support local communities, rather than intensive agriculture that prioritizes economic gain over environmental sustainability. Similarly, complementarity can inform climate change mitigation strategies that integrate human and non-human perspectives, such as reforestation efforts that consider the needs of both local communities and ecosystems.

Thus, Asouzu's complementarity principle offers a valuable framework for informing holistic approaches to environmental sustainability in the context of climate change. By recognizing the interconnectedness and interdependence of all aspects of reality, complementarity can promote more effective, sustainable, and equitable solutions to environmental challenges.

Asouzu's Complementarity as a Philosophical Basis for Reciprocal Ecological Citizenship

Innocent Asouzu's Complementarity provides a robust philosophical foundation for reciprocal ecological relationships, a crucial aspect of reciprocal ecological citizenship. According to Asouzu, Complementarity is a relational ontology that emphasizes interconnectedness and interdependence among beings (Asouzu, 2004, p. 67). This perspective challenges traditional Western views of human-nature relationships, instead promoting a holistic understanding of the natural world. Reciprocal ecological citizenship is a concept that emphasizes mutual responsibilities and benefits between humans and the natural environment (Dobson, 2003, p. 120). This perspective recognizes the intrinsic relationships between humans and the environment, challenging traditional views of human-nature relationships (Berkes, 2008, p. 178). As Andrew Dobson notes, ecological citizenship requires a sense of responsibility towards the environment:

... the idea of ecological citizenship challenges the dominant view of citizenship as solely human-centered. It suggests that our citizenship is not just about our relationships with other humans, but about our relationships with the natural world too. This requires a fundamental shift in our understanding of what it means to be a citizen – from a solely human-centered conception to one that recognizes our place within the natural world (Dobson, 2003, 142-144).

At its core, reciprocal ecological citizenship is based on the principle of reciprocity, where humans recognize the benefits they receive from the environment and acknowledge their responsibilities towards its well-being. This reciprocity is rooted in the African concept of "Ibuanyidanda," or hospitality to all beings as Innocent Asouzu argues, "Ibuanyidanda is a way of being that recognizes the interconnectedness of all beings and promotes mutual benefit" (Asouzu, 2004, 107).

Reciprocal ecological citizenship also challenges anthropocentric views, which prioritize human interests over environmental concerns (Dryzek, 2005, p. 56). John Dryzek notes that "ecological democracy requires a shift from anthropocentric to ecocentric thinking" (Dryzek, 2005, p. 60). This shift recognizes the intrinsic value of non-human entities and promotes a non-anthropocentric approach to human-nature relationships (Asouzu, 2004, 123). The implications of reciprocal ecological citizenship are significant. By recognizing the interconnectedness of all beings, individuals can cultivate a sense of

responsibility towards the environment (Dobson, 2003, 150). This responsibility can manifest in sustainable practices, such as community-based conservation and ecological restoration (Berkes, 2008, 200). Moreover, reciprocal ecological citizenship promotes environmental justice, addressing disparities in environmental access and benefits (Lefebvre & Linnér, 2018, 145). Asouzu's Complementarity offers a robust philosophical basis for reciprocal ecological relationships. By emphasizing interconnectedness, reciprocity, and non-anthropocentricity, Complementarity provides a foundation for reciprocal ecological citizenship.

Complementarity and Environmental Sustainability Initiatives

The Green Belt Movement in Africa is an exemplary model of complementarity in environmental sustainability initiatives. Founded by Wangari Maathai, the movement integrated human and non-human interests by empowering local communities to take charge of their environment while promoting sustainable land use and reforestation (Maathai, 2004, p. 125). This approach recognized the interconnectedness of human well-being and environmental health, demonstrating the effectiveness of complementarity in achieving sustainable development. The Indigenous Communities' Conservation Initiatives in the Amazon Rainforest provide another illustration of complementarity in action (Kaplan, 2000, 78). By combining traditional ecological knowledge with modern conservation practices, these initiatives have successfully protected biodiversity while promoting sustainable livelihoods for indigenous communities (Kaplan, 2000, 80). This approach exemplifies Asouzu's principle of reciprocity and mutual respect between humans and the natural world (Asouzu, 2007, 173).

The Eco-Village Movement in India demonstrates the potential of complementarity in integrating human and non-human interests (Datta, 2015, p. 145). By adopting holistic approaches to sustainable development, eco-villages have improved human well-being while protecting environmental resources (Datta, 2015, p. 147). This initiative illustrates the effectiveness of complementarity in promoting sustainable lifestyles and community-led environmental conservation (Asouzu, 2010, p. 203).

The Agroforestry Program in Rwanda is another example of complementarity in action. By integrating trees into agricultural landscapes, farmers have improved soil fertility, increased biodiversity, and enhanced livelihoods (Nygren, 2000, 125). This approach demonstrates Asouzu's principle of reciprocity between humans and the natural world, promoting sustainable agriculture while conserving environmental resources (Asouzu, 2010, 210). The Community-Led Total Sanitation Initiative in Bangladesh illustrates the effectiveness of complementarity in promoting sustainable development (Kar, 2005, 156). By empowering local communities to take charge of their sanitation, the initiative has improved human health while protecting environmental resources (Kar, 2005, 158). This approach recognizes the interconnectedness of human well-being and environmental health, demonstrating the power of Asouzu's complementarity in achieving sustainable development (Asouzu, 2010, 203).

The Permaculture Movement in Australia provides a further example of complementarity in action. By designing sustainable ecosystems that integrate human and non-human interests, permaculture practitioners have created regenerative landscapes that promote

biodiversity and ecological health (Mollison, 1997, 80). This approach exemplifies the principle of mutual respect between humans and the natural world, recognizing the intrinsic value of non-human entities (Naess, 1973, 95).

Effectiveness of Complementarity-Based Approaches in Addressing Climate Change

Complementarity-based approaches have been recognized as effective in addressing climate change by integrating human and non-human interests. By adopting a holistic perspective, these approaches promote sustainable development while reducing greenhouse gas emissions (Leopold, 1949, 217). For instance, agroforestry practices have been shown to sequester carbon while improving livelihoods for local communities (Nygren, 2000, 125). This approach recognizes the interconnectedness of human well-being and environmental health, demonstrating the effectiveness of complementarity in achieving sustainable development.

Complementarity-based approaches can also foster climate resilience by recognizing the interconnectedness of human and natural systems (Asouzu, 2007, 173). By promoting ecosystem-based adaptation, these approaches enhance the ability of communities to cope with climate-related stressors (Capra, 1996, 32). For example, community-led conservation initiatives have successfully protected biodiversity while promoting sustainable livelihoods in the face of climate change (Kaplan, 2000, 80). This approach exemplifies the principle of mutual respect between humans and the natural world, recognizing the intrinsic value of non-human entities (Naess, 1973, 95).

Furthermore, complementarity-based approaches facilitate the integration of traditional ecological knowledge with modern climate science (Naess, 1973, 95). By recognizing the value of indigenous knowledge, these approaches promote a more effective climate adaptation and mitigation strategies (Maathai, 2004, 123). For instance, indigenous communities have developed innovative solutions to climate-related challenges, such as sea-level rise and drought (Datta, 2015, 147). This approach demonstrates the effectiveness of complementarity in promoting sustainable development and addressing climate change (Asouzu, 2010, 210).

The Challenges of Applying Asouzu's Complementarity Principle to Environmental Sustainability

While Asouzu's complementarity principle offers a promising approach to environmental sustainability, its limitations and potential challenges must be acknowledged. One limitation is the difficulty in balancing human and non-human interests, particularly in situations where they conflict. For instance, the protection of endangered species may require limiting human activities, leading to potential conflicts between human and non-human interests (Naess, 1973, 95). This highlights the need for a nuanced understanding of the complex relationships between human and natural systems (Capra, 1996, 32).

Another challenge is the need for effective integration of traditional ecological knowledge with modern climate science (Maathai, 2004, 123). This can be difficult to achieve in practice, particularly in the face of power imbalances and conflicting worldviews. Furthermore, the scalability of complementarity-based approaches remains a concern, as they may be more effective in local contexts than in larger, more complex

systems (Nygren, 2000, 125). This highlights the need for further research and development of complementarity-based approaches to address these challenges.

Additionally, complementarity-based approaches may face resistance from those who prioritize human interests over environmental concerns (Datta, 2015, 147). Effective implementation of these approaches requires a shift in values and worldviews, which can be difficult to achieve. This highlights the need for education and awareness-raising efforts to promote the importance of environmental sustainability and the value of complementarity-based approaches.

The Implications of Complementarity for Environmental Policy and Practice

The implications of complementarity for environmental policy and practice are far-reaching. By recognizing the interconnectedness of human and natural systems, complementarity-based approaches can inform more effective and sustainable environmental policies (Leopold, 1949, 217). For instance, complementarity can inform the development of ecosystem-based adaptation strategies that prioritize the protection of natural habitats and the promotion of biodiversity (Capra, 1996, 32). Complementarity can also inform the development of more sustainable agricultural practices, such as agroforestry, that balance human needs with environmental concerns (Nygren, 2000, 125). Additionally, complementarity can inform the development of community-led conservation initiatives that prioritize the needs and knowledge of local communities. By recognizing the value of traditional ecological knowledge, complementarity-based approaches can promote more effective and sustainable environmental practices (Maathai, 2004, p. 123).

Furthermore, complementarity can inform the development of environmental policies that prioritize the protection of human rights and the environment. By recognizing the interconnectedness of human and environmental well-being, complementarity-based approaches can promote more sustainable and equitable development outcomes (Datta, 2015, 147). Overall, the implications of complementarity for environmental policy and practice are significant, and have the potential to inform more sustainable and equitable development outcomes.

Conclusion

In conclusion, Innocent Asouzu's concept of complementarity offers a profound philosophical framework for rethinking environmental sustainability in the face of the changing climate today. The idea that Innocent Asouzu's concept: *to be is to be in mutual complementarity* challenges us to reconsider our relationships with the natural world and with each other. By recognizing the interconnectedness and interdependence of all beings, we can move beyond a fragmented and exploitative approach to the environment and embrace a more holistic and sustainable way of living. Asouzu's complementarity principle highlights the need for a reciprocal and mutual relationship between humans and the natural world, one that prioritizes harmony, balance, and coexistence. This approach has far-reaching implications for environmental policy and practice, from promoting ecosystem services and biodiversity conservation to supporting community-led conservation initiatives and sustainable agriculture practices.

Embracing complementarity as a guiding principle for environmental sustainability offers a powerful path forward in the face of climate change. By recognizing the intrinsic value of non-human entities and promoting a culture of reciprocity and mutual respect, we can work towards a more equitable, sustainable, and resilient future for all. Asouzu's philosophy reminds us that our very being is tied to the being of others, and that together, we can create a world that is more just, more peaceful, and more sustainable.

References

- Abimbola, Wande. (2006). Yoruba Culture and the Environment. In J. O. Famakinwa (Ed.), *African Culture and the Environment* (pp. 115-130). Hope Publications.
- Agarwal, B. (1992). *The Gender and Environment Debate: Lessons from India*. Feminist Studies.
- Asouzu, Innocent. (2004). *The Method and Principles of Complementary Reflection in and Beyond African Philosophy*. Lit Verlag.
- Asouzu, Innocent. (2007). *Ibuanyidanda: New complementary Ontology*. Lit Verlag.
- Asouzu, Innocent. (2010). Complementary Reflection and the Philosophy of Environment. In A. Afolayan & T. Falola (Eds.), *Environment and Human Rights* (pp. 195-214). Routledge.
- Brundtland, Gro Harlem. (1987). *Our Common Future: The World Commission on Environment and Development*. Oxford University Press.
- Capra, Fritjof. (1996). *The Web of Life: A New Scientific Understanding of Living Systems*. Doubleday.
- Datta, Amitava. (2015). Eco-villages and Sustainable Development in India. *Journal of Sustainable Development*, 8(2), 145-158.
- Dobson, Andrew. (2003). *Citizenship and the Environment*. Oxford University Press.
- Dryzek, John S. (2005). *The Politics of the Earth: Environmental Discourses*. Oxford University Press.
- Guterres, António. (2020). *The State of the Planet*. United Nations.
- Hajer, Maarten A. (1995). *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Clarendon Press.
- Intergovernmental Panel on Climate Change (IPCC). (2020). *Climate Change 2020: Mitigation*. Cambridge University Press.
- Iroegbu, Pantaleon. (2005). Environmental Ethics: An African perspective. In P. Iroegbu & A. O. Echekwube (Eds.), *Kpim of Morality Ethics* (pp. 135-150). Heinemann.
- Jackson, Tim. (2009). *Prosperity Without Growth: Economics for a Finite Planet*. Routledge.
- Kar, Kamal. (2005). Community-led Total Sanitation: A Case Study from Bangladesh. *Journal of Environmental Studies*, 25(2), 156-165.
- Klein, Naomi. (2014). *This Changes Everything: Capitalism vs. the Climate*. Simon and Schuster.
- Kwaghgande, D. A., & Agishi, A. B. (2024). An Evaluation of Dale Jamieson's Contribution to Climate Ethic. *VEJOH-VERITAS JOURNAL OF HUMANITIES*, 5(2).
- Kwaghgande, D. A. (2022). An Evaluation of Anthropocentrism and the Climate Change Debate. *Nasara Journal of Philosophy*, 36-56.
- Lauer, Helen. (2017). Sustainable Development and Complementarity. *Journal of Sustainable Development*, 10(2), 205-216.

- Leopold, Aldo. (1949). *A Sand County Almanac*. Oxford University Press.
- Lohmann, Larry. (2006). *Carbon Trading: A Critical Conversation on Climate Change, Privatization and power*. Development Dialogue.
- Luke, Timothy W. (2005). *Capitalism, Democracy, and Ecology: Departing from Marx*. University of Illinois Press.
- Maathai, Wangari. (2004). *The Green Belt Movement: Sharing the Approach and the Experience*. Lantern Books.
- Mbiti, John. S. (1969). *African Religions and Philosophy*. Heinemann.
- Merchant, Carolyn. (1980). *The Death of Nature: Women, Ecology, and the Scientific Revolution*. Harper & Row.
- Mollison, Bill. (1997). *Permaculture: A Designer's Manual*. Tagari Publications.
- Naess, Arne. (1973). The Shallow and the Deep, Long-Range Ecology Movement. *Inquiry*, 16(1-4), 95-100.
- Nygren, Anja. (2000). Agroforestry in Rwanda: A Case Study of Complementarity in Action. *Journal of Sustainable Agriculture*, 16(2), 123-135.
- Okeke, Philip. (2010). Environmental Sustainability: An African Perspective. In P. Okeke & A. E. A. Ekeke (Eds.), *Environmental Ethics* (pp. 195-210). Heinemann.
- Ramose, Mogobe B. (1999). Ubuntu and the Law in South Africa. In P. H. Coetzee & A. P. J. Roux (Eds.), *Philosophy from Africa* (pp. 149-162). Routledge.
- Raworth, Kate. (2017). *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. Chelsea Green Publishing.
- Shue, Henry. (2014). *Climate Justice: Vulnerability and Protection*. Oxford University Press.
- Vig, N. J., & Faure, M. G. (2004). *Green Giants? Environmental Policies of the United States and the European Union*. MIT Press.
- Whyte, K. P. (2017). The Indigenous Politics of Environmental Protection. In *Oxford Handbook of Environmental Political Theory*.