

ECO-POETRY: A VALUABLE TOOL FOR ENHANCING ECO-TOURISM FOR CLIMATE RESILIENCE IN NIGERIA

Okon.E.Okon¹ Thomas.A.Omang² Otu.O.Offem³ Evelyn.I.Orji⁴

Benjamin Anabaraonye^{5*}

1. Department of Arts Education, Faculty of Education, University of Nigeria, Nsukka, Enugu State, Nigeria. Email: okonetim2001@gmail.com
2. University of Calabar, Calabar, Nigeria. Email: omangthomas@gmail.com
3. University of Calabar, Calabar, Nigeria. Email: offemodim22@gmail.com
4. Institute of Education, University of Calabar, Nigeria.
Email: eyeonu4real@yahoo.com
5. University of Nigeria, Nsukka, Nigeria. Email: benjaminshines@gmail.com*

Abstract

Eco-Poetry has always been associated with intensity of ecological emotions expressed in literary form with a sense of rhythm and beauty. Through systematic literature review and participant observation, this study identifies eco-poetry as a valuable tool for enhancing eco-tourism in Nigeria. The role of eco-poetry in enhancing eco-tourism for climate resilience and sustainable economic growth in Nigeria cannot be over-emphasized. This study vividly defines the concept of eco-poetry and eco-tourism. It further highlights the psychological and socio-economic benefits of eco-poetry and eco-tourism in Nigeria. This paper is therefore very significant as it explores new opportunities, practices and strategies in the use of eco-poetry for enhancing eco-tourism for climate resilience in Nigeria.

Keywords: Climate Resilience, Eco-poetry, Education, Eco-tourism, Sustainable Development.

1. Introduction

Poetry with its psychological benefits has been discovered as a valuable tool which can be used to help students and teachers across various higher education institutions to understand the impacts of climate change and to learn the adaptation and mitigation strategies for sustainability (Anabaraonye, Ewa & Hope, 2021). There is no doubt, therefore, that poetry can be used as a valuable tool to convey the message of climate change in schools, universities and institutions around the world in a very profound way. Poetry is beauty and beauty attracts (Anabaraonye, Nji & Hope, 2018). A poem is a piece of writing in which the words are chosen for their beauty and sound and are carefully arranged, often in short lines which rhyme (Anabaraonye, Ewa & Hope, 2021). Poetry has a unique way of communicating to the listeners and readers the message of hope, beauty and love that enables them to seek innovative ways to preserve our planet from global warming (Anabaraonye, Nji & Hope, 2018). Eco-poetry is a form of poetry that addresses ecological concerns and environmental issues, often using the reader's individual interpretations to bring awareness to these issues. It's more than just nature poetry; it actively engages with the complexities of the relationship between humans and the environment, and how human activities impact the planet (Shoptaw, 2016). Eco-poetry generally refers to poetry about ecology, ecosystems, environmental injustice, and climate change (Perez, 2020). Eco-poetry explores themes like climate change, environmental destruction, and the relationship between humans

and nature. While it may include descriptions of nature, it goes beyond simple beauty or appreciation. It aims to raise awareness of environmental problems and inspire action(Shoptaw,2016). Eco-poetry therefore describes the beauty of nature and our role both as individuals and as a community in keeping it clean and green. Eco-poetry has always been associated with intensity of ecological emotions expressed in literary form with a sense of rhythm and beauty. The role of eco-poetry in climate change education for enhancing climate resilience in Nigeria cannot be over-emphasized. Recent studies have identified eco-poetry as a valuable tool for tackling soot pollution in Nigeria (Okon, Orji, Ojong, Ewa & Anabaraonye,2025). Researchers have also identified the role of green creativity in enhancing eco-poetry for sustainable development in Nigeria(Okon, Odoh, Olisah, Ewa.& Anabaraonye, 2025). Furthermore, youth engagement in eco-poetry for enhancing climate change education in Nigeria will help to achieve the United Nations Sustainable Development goals (Onnoghen, Olisah, Ewa, Nwobu & Anabaraonye, 2024). Eco-poetry entails the use of poems in conveying the message of climate change adaptation and mitigation for sustainable development locally, nationally and globally. Through eco-poetry we can express the beauty and wonders of nature in a pleasant manner thereby helping to achieve environmental sustainability (Perez, 2020). The role of eco-poetry in enhancing climate resilience in Nigeria has been identified by various researchers in recent times. Eco-poetry has been identified as valuable tool for awareness creation on plastic waste management thereby enhancing climate resilience in Nigeria (Okon, Orji, Ojong & Anabaraonye, 2023).Eco-poetry uses language to deepen a sense of nature's presence in our lives; and these invocations of nature's presence—celebratory of the biological fact that we are nature— suggest an ecological understanding of nature and its processes. Eco- poetry uses comparable metaphors for describing the relationship between poetic making and ecology (Perez, 2020). Youth engagement in eco-poetry will enhance climate resilience and also help to tackle the menace of soot pollution in Nigeria (Onnoghen, Olisah, Ewa, Nwobu & Anabaraonye, 2024). Researchers have also identified how eco-poetry can be innovatively used in tree planting education for climate resilience and sustainable environment in Nigeria(Okon, Okolo, Dibia & Anabaraonye,2022). Through eco-poetry we can express the beauty and wonders of nature in a pleasant manner thereby helping to achieve environmental sustainability. This study highlights eco-poetry as a valuable tool for enhancing eco-tourism for climate resilience in Nigeria.

2. Methodology

Data used for this study is derived from published works including academic journal articles, book chapters, conference proceedings, textbooks and internet materials. The researchers gathered a lot of materials for the research but summarized the characteristics of the papers that focused more on “Eco-poetry as a valuable tool for enhancing eco-tourism for climate resilience in Nigeria”. This enabled the researcher to generate the synthesis of various researchers' views on the subject matter.

3.1. Understanding Climate Change

Recent floods, cyclones, monumental wildfires, attendant droughts and tsunamis across various countries in the world, call for global attention to issues of climate change. Climate change is a global challenge which must tackled with alacrity to achieve our sustainable development goals Climate change is one of the global issues which we must of necessity tackle with alacrity in order to prevent global warming too unbearable for the survival of mankind. There is a general consensus among environmental scholars and scientists that the world is experiencing a rapid global climate change but separately differs on its nature, dimension, and effects (Tsojon,2017).The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods(UNFCCC ,1992).Climate change is the most significant challenge to achieving

sustainable development, not only because it affects the global physical environment directly, but also because it affects nearly all aspects of socio-economic development(World Bank, 2016). Climate change has been described as an existential threat to human well-being. Climate change impact is intensely felt on agricultural sector especially soil fertility in Nigeria(Anabaraonye, Okafor, Ewa & Anukwonke, 2021). Climate change is recognized as a true global emergency that requires concerted efforts by all countries, businesses, and even individuals to achieve the Paris Agreement goals aimed at addressing the crisis. These goals include holding the rise of average global temperatures to well below 2 degrees Celsius (2 °C) above pre-industrial levels and pursuing actions to limit the temperature increase to 1.5 °C above pre-industrial levels. “Climate change mitigation is any action taken to eliminate or reduce the long-term risk and hazards of climate change to human life, property and the society”(GGW,2018).“Climate adaptation refers to the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damage, to take advantage of opportunities, or to cope with the consequences”(GGW,2018). Climate resilience is the capacity for a socio-ecological system to absorb pressures and maintain function in the face of external stresses imposed upon it by climate change (Folke et al., 2010; Moench, 2014). It also includes the ability and capacity of an ecosystem to adapt, reorganize, and evolve into more desirable configurations that improve the sustainability of the system, leaving it better prepared for future climate impacts. Climate change education is therefore very vital in order to enable individuals and communities to adapt and mitigate the impacts of climate towards sustainability in Nigeria (Anabaraonye, Okafor & Hope, 2020).. Based on climate resilience theories advanced in recent times, Studies have shown that eco-tourism has a great role to play in enhancing global health, environmental sustainability and enhancing climate resilience in Nigeria.

3.2.Flooding and Its Impacts on Climate Resilience in Nigeria

Flooding is one of the major impacts of climate change which greatly impacts climate resilience in Nigeria (Anabaraonye et al, 2022). Flooding is a general condition of partial or complete inundation of normally dry areas from overflow of inland or tidal waters or from unusual and rapid accumulation of run off (Jeb & Aggarwal, 2008). Floods as noted by Odufuwa et al (2012) are the most frequent disaster and widespread natural hazards of the world. UN-Water (2011) noted that floods have caused 84% disaster deaths in the world with an average of 20,000 deaths per year, which makes only a few countries immune to floods. Floods can be very dangerous depending on the nature and level of water volume involved. According to Ikani (2016), flooding is the overflowing of water either as a result of torrential rainfall, a broken dam, a high rise in the volume of water in rivers, oceans or seas as a result of melting ice caps or prolong rainfall, thereby flooding its neighboring environment and beyond. Flooding was found to have influenced food insecurity in agrarian communities of the south eastern Nigeria (Akukwe, Krhoda & Oluoko-Odingo, 2018). Though, linked as the consequences of climate change, Nkwunonwo (2016) adduced that flooding do not only damage properties and endanger the lives of human and animals but, also produce other secondary effects like outbreak of diseases such as cholera and malaria. In Nigeria, flooding has become dangerous to human health in most urban and rural areas because of overcrowded slums, where drainage is poor or does not exist at all (Olajoke et al, 2013). Flooding has far reaching impacts on people’s health and its consequences include crisis of having good drinking water, shelter, sanitation problems which spread deadly communicable disease like cholera, malaria, diarrhoea, skin and soft-tissue infections with other air-borne infections (Anabaraonye, et al,2022). Thus, many wells and boreholes are contaminated by continuing overflowing sewage and refuse dumps. Again, public water supplies are disrupted by floods which destroy electricity supply and affects water pipes. All these collectively and considerably have impacts people’s health and food security in Nigeria(Kagu et al, 2013).Agriculture is a significant area of life in the Nigerian economy. Therefore, floods can negatively impact the gross domestic product by reducing agricultural yields and productivity (Solomon

& Edet, 2018). Flood can also undermine economic growth through loss of produces/products and destruction of infrastructure, which could result in extra-budgetary spending (Federal Government of Nigeria, 2013). The analyzed negative effects of flooding on food insecurity include reduction in crop harvest; decrease in farm income derived from crop sales; damages to roads; destruction of food/ farm storage facilities; reduction in labour demand; pollution of streams, etc. (Akukwe, Krhoda & Oluoko-Odingo, 2018).

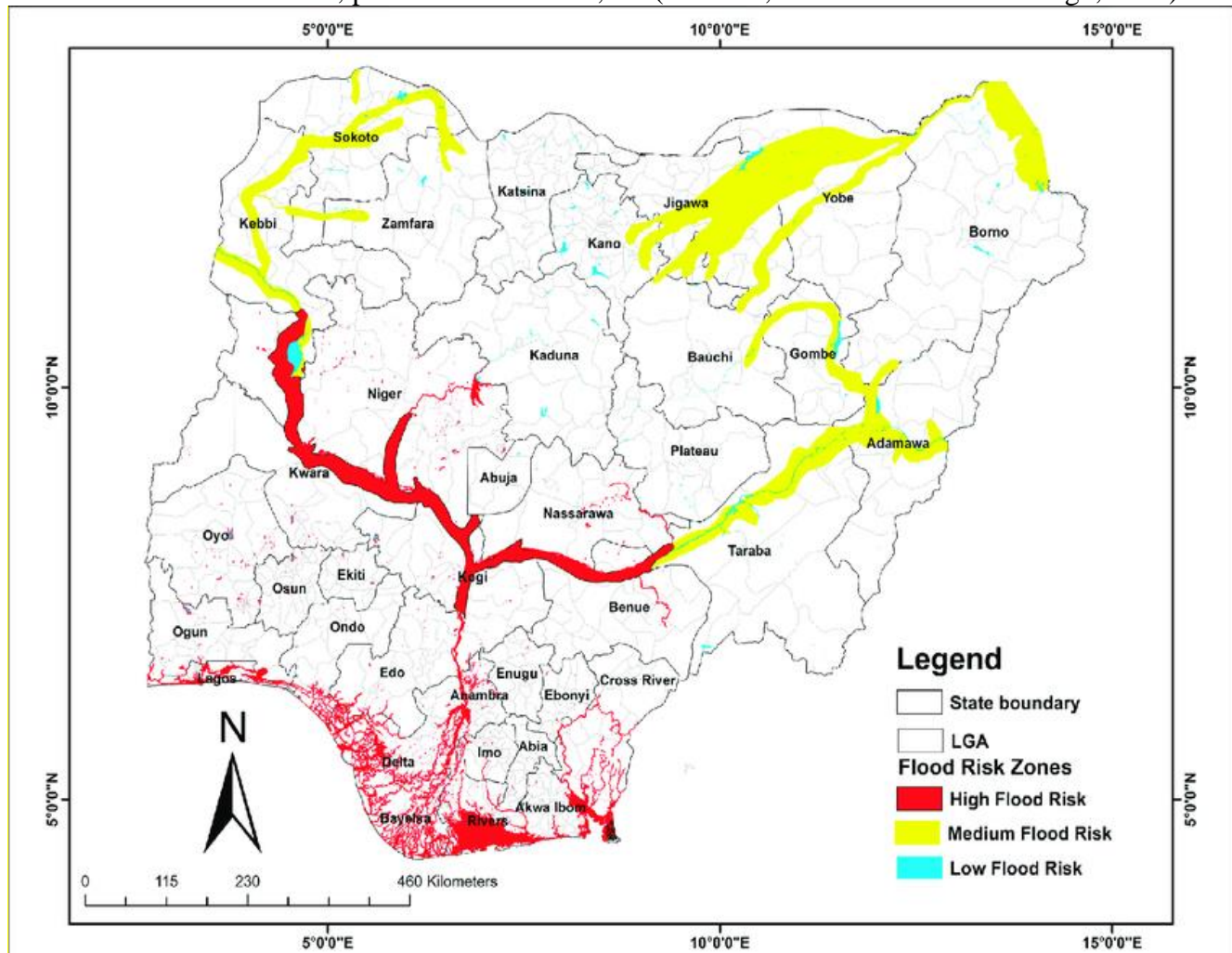


Figure 1: Map of Nigeria showing the states prone to flood (Source: Njoku et al, 2020)

3.3. A Case Study of Flooding at Lagos State in Nigeria

Climate change is a global phenomenon that has far-reaching effects on the environment and people's livelihoods (Abid et al, 2016). In recent years, flooding has been identified as one of the most visible and devastating effects of climate change, particularly in low-lying coastal areas like Lagos State, Nigeria. The city is situated by the Atlantic Ocean and has a long coastline. As sea levels rise due to global warming, the risk of flooding and coastal erosion increases (Erlandson, 2012). Flood caused by a mixture of high tides and heavy rainfall that occurred during a low-pressure storm system in Lagos State in 2011. Throughout this time, the government of Lagos State declared a state of emergency and urged people to remain calm. An estimated 100 people were killed, many were rendered homeless, and properties valued at over 380 billion Naira (US\$320 million) had been destroyed by the time the flood subsided (Oladunjoye, 2011). Farm

products and facilities were not left out of the destructive effects of flood in Lagos State thereby leading food insecurity. On 10th July 2021, major floods hit the city of Lagos, submerging cars and houses and bringing many parts of the metropolis to a standstill (Higuera Roa et al., 2022). Many areas of the state's coastline now experience coastal flooding at a very alarming rate during high tides. Climate change is causing alterations in weather and rainfall patterns, which can lead to prolonged periods of drought, followed by intense rainfall events (NASEM, 2016). In Lagos State, heavy rainfall events have become more frequent and intense, leading to flooding in many areas. This flooding is exacerbated by the fact that Lagos State is situated on a low-lying coastal plain, and this makes it especially susceptible to storm surges and sea level rise. In addition, the city's drainage systems are ill-equipped to handle the increased volume of water, leading to widespread flooding in both urban and rural areas. The impacts of flooding in Lagos State are widespread and devastating. Floods can damage homes, infrastructure, and agricultural land, leading to human displacement, loss of livelihoods, economic hardship, and death (Erlandson, 2012). This study explores the role of eco-poetry in enhancing eco-tourism for climate resilience in Nigeria.

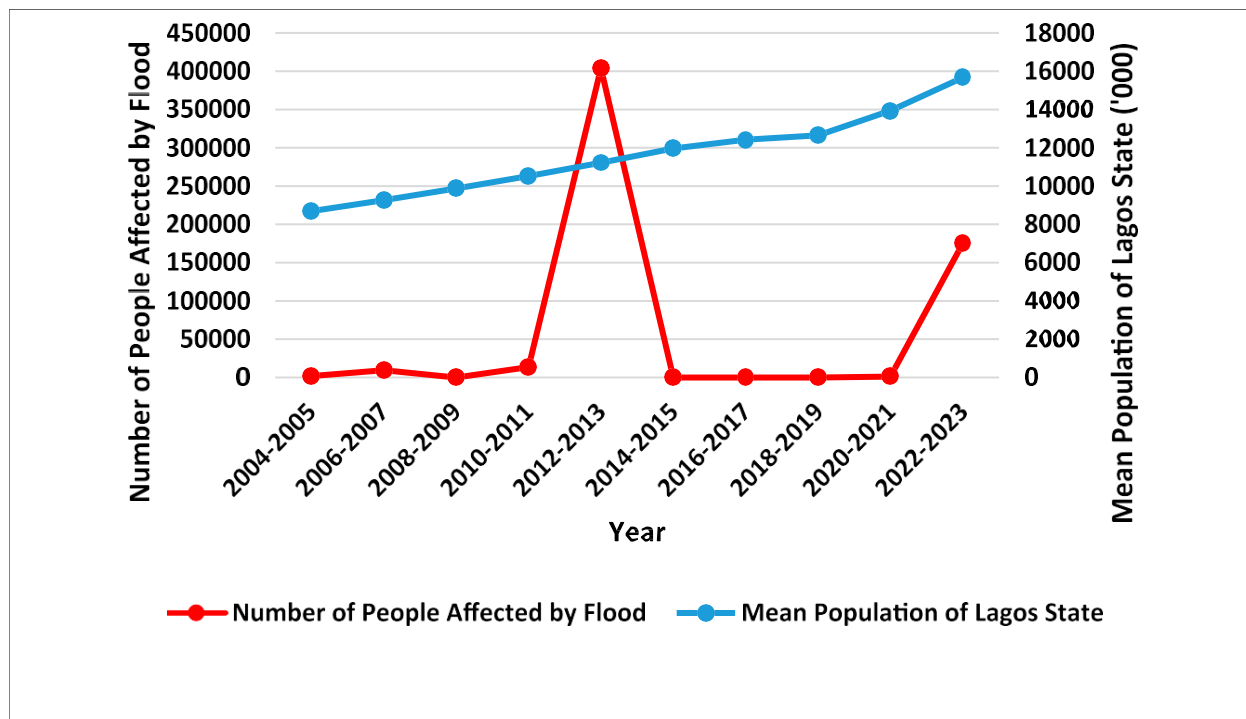


Figure 2: The population of Lagos State and the number of flood victims (The 2023 Lagos State population figure was an estimate). Sources: Centre for Research on the Epidemiology of Disasters, 2023, EM-DAT emergency events database. Available online at: www.emdat.be (accessed 5th February 2024).

3.4. Understanding Ecotourism

Ecotourism has been defined by various authors and organizations but here are a few definitions: Ecotourism is a type of sustainable tourism that aims to promote the conservation and protection of the environment while providing opportunities for tourists to appreciate the natural and cultural heritage of a destination (Enunwah, 2023). Ecotourism is the intentional travel to areas that are usually natural to understand the natural and cultural history of the environment; taking precautions not to change the integrity of the ecosystem; which produces economic opportunities to the local populace due to

conservation of natural resources (Wood, 1999). Fennell described it as such that: “Ecotourism is a sustainable form of natural resource-based tourism that focuses primarily on experiencing and learning about nature, and which is ethically managed to be low-impact, non-consumptive, and locally-oriented. It typically occurs in natural areas, and should contribute to the conservation or preservation of such areas” (Fennell, 1999). Ecotourism is environmentally friendly and responsible visitation and travel to relatively undamaged or undisturbed natural areas, to appreciate and enjoy nature including any cultural features that promote and encourage conservation (Mohammed,2022). Ecotourism as a field of study is considered as a sub-component of sustainable tourism. Ecotourism’s potential is an effective tool for sustainable development which is why developing and third world countries are now embracing it and making it a tool in their conservation strategies and economic development (Briassoulis, 2002). Ecotourism goes beyond mere sightseeing; it involves a conscientious way of travelling that emphasizes sustainability and preservation. It includes discovering natural marvels, engaging with indigenous cultures, and making a beneficial contribution to the environment and local communities(Durojaiye, 2024). Nigeria is well endowed with various ecotourism potentials including diverse culture, biodiversity, and scenic landscapes. There is hardly any community in Nigeria without unique ecotourism attractions - unique culture, food and environment. The cultural foods of different tribes in Akwa Ibom and Cross River States and the hospitable manner the dishes are packaged and served to visitors have been commended by many tourists (Ijeomah *et al*, 2011). Nigeria, with its diverse cultures and rich natural resources, has great potential for ecotourism development. Nigeria is a country with over 250 ethnic groups, each with its language, customs, and traditions. These diverse cultures and traditions are vital components of Nigeria’s heritage, and preserving them is crucial for the country’s socio-cultural development(Durojaiye, 2024). Cultural preservation is essential for maintaining the identity and uniqueness of a society. Ecotourism can play a significant role in promoting cultural preservation by creating awareness and appreciation for cultural diversity among tourists and local communities. As tourists visit and appreciate different cultures, they develop a better understanding and respect for them. This understanding can lead to increased support for the preservation of cultural heritage(Enunwah, 2023). Ecotourism helps the people to appreciate the beauty of nature and inspire new ways of preserving the environment. Ecotourism can also aid in nature education research which has been identified as one of the ways of enhancing climate resilience in Nigeria (Onnoghen, Idika, et al,2024). The impacts of climate change is being felt on Nigeria’s economic growth in a profound way(Onnoghen, Orji, et al, 2024). However, Ecotourism can play a great role in enhancing sustainable economic growth in Nigeria. Ecotourism is centered around empowering local communities. Through the adoption of sustainable tourism practices, ecotourists play an important role in boosting the economy of communities living in ecotourism spots. Whether it’s backing local craftsmen or choosing eco-conscious accommodations, each dollar spent by tourists on ecotourism serves as a driver for beneficial transformations, fostering job prospects, and enhancing the quality of life (Durojaiye, 2024). Ecotourism can work in hand in hand with eco-musicology and eco-theology towards enhancing climate resilience in Nigeria(Onnoghen, Nwafor, Odoh,et al, 2024; Onnoghen, Nwafor, Orji, et al, 2024). Eco-photography with its aesthetic benefits and green entrepreneurial opportunities will also help the ecotourist enjoy a rich and fulfilling adventure in the course of ecotourism(Anabaraonye,2023; Okolo, Orji & Anabaraonye, 2024). Researchers have recently identified the role of ecotourism in enhancing economic development in Nigeria (Onnoghen et al,2023). They further identified that Calabar Municipal in Cross River State, Nigeria has the potentials to become one of the leading destinations for ecotourism due to her rich cultural heritage, tourism sites, cuisines, attractions etc. and traces of the different types of tourism being found in it, has stimulated the development of a variety of allied infrastructure and facilities such as Calabar International Convention Centre (CICC), National Museum, Calabar, sport stadium, airport and more(Onnoghen et al,2023). Eco-Tourism when incorporated into religious tourism can make the adventure more fulfilling,

sustainable and climate resilient (Onnoghen et al,2023; Ncube & Chikuta,2020). Businesses such as hotels, restaurants, transport companies, and travel agents, among others flourish in religious tourism destination as the services of these businesses are highly needed for enhanced memorable experience of the tourists (Ncube & Chikuta,2020). In a world facing environmental deterioration and cultural deprivation, ecotourism stands out as a ray of hope. It presents a sustainable alternative to traditional tourism methods, which frequently result in carbon footprints and cultural disrespect. Through the adoption of ecotourism, we protect the valuable ecosystems of our planet and honour the variety of cultures that contribute to Nigeria's distinctiveness(Durojaiye, 2024). Ecotourism can provide several benefits to Nigeria, including economic, social, and environmental benefits. It can create employment opportunities for local communities, promote the preservation of natural resources, increase revenue for the government, and thereby promote sustainable development. By promoting ecotourism, Nigeria can also promote sustainable development and reduce the negative impact of tourism on the environment. Sustainable tourism ensures that the environment is not degraded, and natural resources are preserved for future generations(Enunwah, 2023).

3.5. Enhancing Eco-tourism Through Eco-poetry In Nigeria

Eco-poetry can enhance eco-tourism in Nigeria by fostering emotional connections with nature, educating about environmental issues, and promoting sustainable practices, all of which can attract and engage visitors. By showcasing the beauty and fragility of Nigeria's environment through poetic imagery, eco-poetry can inspire visitors to become more aware of and invested in conservation efforts. Here's how eco-poetry can be used to enhance eco-tourism:

A) Raising Environmental Awareness:

- i) **Emotional Connection:** Eco-poetry can evoke strong emotions about nature, making visitors and tourists more receptive to environmental messages and potentially inspiring them to become more involved in conservation for enhancing climate resilience in Nigeria.
- ii) **Educational Tool:** Eco-poetry can be used in educational programs to teach about specific ecosystems, wildlife, and the impacts of human activities on the environment.
- iii) **Promoting Sustainable Practices:** Eco-poetry can highlight the benefits of sustainable tourism, encouraging visitors to make responsible choices during their trip.

B) Enhancing the Tourist Experience:

- i) **Cultural Immersion:** Incorporating local poetry and traditional storytelling can provide visitors with a deeper understanding of the region's culture and its relationship with nature.
- ii) **Creating Artistic Attractions:** Eco-poetry can be used to create unique and engaging attractions, such as nature walks with poetry readings or themed workshops exploring the relationship between art and nature.
- iii) **Promoting Local Artists:** Showcasing the work of Nigerian poets and writers can enhance the local tourism experience and contribute to the economic development of the region. This provides opportunities for networking and future collaborations with those poets thereby enhancing climate resilience in Nigeria.

C) Inspiring Conservation and Action:

- i) **Advocacy for Change:** Eco-poetry can be used to raise awareness about environmental issues and inspire visitors to become advocates for change.
- ii) **Community Engagement:** Eco-poetry can be used to foster community involvement in conservation efforts, encouraging local residents and visitors to work together to protect the environment.
- iii) **Supporting Sustainable Businesses:** Eco-poetry can be used in promoting eco-tourism destinations and businesses that prioritize environmental responsibility can further encourage sustainable practices.

3.3. Maximizing The Benefits OF Eco-tourism In Nigeria

Ecotourism in Nigeria offers numerous benefits, including environmental protection, local economic development, and increased awareness of biodiversity. It promotes sustainable tourism practices, reduces the negative impacts of tourism on the environment, and enhances the well-being of local communities. There is therefore great need for the institutions, communities and the government to realize and maximize the benefits of ecotourism for sustainable development in Nigeria. These benefits are discussed in details below.

A) Benefits of Ecotourism in Nigeria:

- i) **Environmental Protection:** Ecotourism encourages the preservation of natural habitats and wildlife, contributing to biodiversity conservation.
- ii) **Local Economic Development:** It creates employment opportunities in tourism-related businesses and supporting industries like hospitality and transportation.
- iii) **Increased Revenue for Government:** Ecotourism can generate revenue for the government, which can be used to improve infrastructure and support conservation efforts.
- iv) **Community Empowerment:** Ecotourism provides opportunities for local communities to benefit from tourism, contributing to poverty alleviation and improved living standards.
- v) **Promotes Sustainable Development:** Ecotourism encourages responsible travel practices that minimize environmental impact and support local cultures.
- vi) **Enhanced Cultural Understanding:** Ecotourism can help travelers learn about and appreciate Nigeria's diverse cultural heritage.
- vii) **Increased Awareness of Biodiversity:** Ecotourism promotes education about the natural world and the importance of conservation.

Recommendations

- i) Social media platform can be used as a tool for awareness creation and promotion of eco-poetry and eco-tourism for climate resilience and sustainable development in Nigeria.
- ii) Government should provide incentives such as grants and awards to promising youths in Nigeria thereby enhancing their use of eco-poetry in advancing eco-tourism in Nigeria.

- iii) Artificial Intelligence can be smartly incorporated into higher education institutions' systems thereby advancing the role of eco-poetry in enhancing eco-tourism for climate resilience in Nigeria.
- iv) Green financing from multilateral organizations such as the World Bank Group will also help the country to provide more infrastructure and systems towards maximizing the benefits of eco-poetry and eco-tourism for sustainable development in Nigeria(Anabaraonye et al,2023).
- v) Policies and Laws should be enacted and enforced by the Nigerian government towards maximizing the benefits of eco-poetry and ecotourism for climate resilience and sustainable development in Nigeria.

Conclusion

Nigeria has the potential to be a major contributor in ecotourism thereby enhancing her climate resilience and sustainable economic growth. Eco-poetry when engaged effectively and efficiently in eco-tourism is a form of green entrepreneurship which has the capacity to enhance the quality of life for both the eco-poets and the tourist who patronize them(Anabaraonye, 2024). By effectively leveraging the power of eco-poetry, Nigeria can create a more engaging and meaningful tourism experience that not only benefits visitors but also contributes to the conservation and sustainability of its natural heritage. However, there is need for deeper research on this subject matter which can be carried out by scholars, researchers and professionals at the higher education institutions in Nigeria.

References

- Abid.M, Schilling J, Scheffran. J. & Zulfiqar.F.(2016) Climate change vulnerability, adaptation and risk perceptions at farm level in Punjab, Pakistan. *Science of Total Environment*. 54: 7: 447–460
- Akukwe T.I, Ogbodo.C (2015) Spatial analysis of vulnerability to flooding in Port Harcourt metropolis, Nigeria. *SAGE Open*. 5 (1), 1–19.
- Akukwe, T.I., Krhoda, G.O. & Oluoko-Odingo, A.A. (2018) Principal Component Analysis of the Effects of Flooding on Food Security in Agrarian Communities of South Eastern Nigeria. *International Journal of Hydrogen*, 2, 205-212.
<https://doi.org/10.15406/ijh.2018.02.00070>
- Anabaraonye.B,Nji.A.I,Hope.J.(2018) Poetry as a valuable tool for climate change education for global sustainability. *International Journal of Scientific & Engineering Research*. Volume 9, Issue 9, September 2018.ISSN 2229-5518,81-85.
- Anabaraonye, B., Okafor, J.C., Hope, J. (2020). Educating Farmers in Rural Areas on Climate Change Adaptation for Sustainability in Nigeria. In: Leal Filho, W. (eds) *Handbook of Climate Change Resilience*. Springer, Cham. https://doi.org/10.1007/978-3-319-93336-8_184
- Anabaraonye.B, Ewa.B.O & Hope.J(2021) The psychological benefits of poetry and its innovative use in green entrepreneurship in Nigeria. *Covenant Journal of Entrepreneurship (CJoE)* Vol. 5 No.1, June 2021

Anabaraonye B., Okafor J.C., Ewa B.O., Anukwonke C.C. (2021) The Impacts of Climate Change on Soil Fertility in Nigeria. In: Choudhary D.K., Mishra A., Varma A. (eds) *Climate Change and the Microbiome. Soil Biology*, vol 63. Springer, Cham. https://doi.org/10.1007/978-3-030-76863-8_31

Anabaraonye.B(2023) Enhancing climate change education through environmental photography in Nigeria. Conference Handbook of the Keyano College Conference on Climate Change 2023. <https://www.keyano.ca/en/programs-and-courses/resources/Conference-Handbook-2023.pdf>

Anabaraonye.B, Ezuma.S, Emone.E, Olisah.N.C & Ewa.B.O (2023) The Role of The World Bank Group in Green Financing to Enhance Green Entrepreneurship in Nigeria. *CJoE* (2023) 7 (1) 52-55.

Anabaraonye.B(2024) Advancing quality of life through entrepreneurship: the 5 C's <https://www.emeraldgrouppublishing.com/opinion-and-blog/advancing-quality-life-through-entrepreneurship-5-cs>

Briassoulis, H. (2002). Sustainable Tourism and the Question of the Commons. *Analysis of Tourism Research* 29(4):1065-1085.

Durojaiye.O(2024) Nigeria's Ecotourism Potential: Preserving nature, cultures and communities. <https://conservationsng.com/nigerias-ecotourism-potential-preserving-nature-cultures-and-communities/>

Enunwah.M.(2023) Ecotourism in Nigeria: Driving Economic, Social and Environmental Benefits. <https://curious.earth/blog/economic-social-and-environmental-benefits-of-ecotourism-in-nigeria/>

Erlandson, J. M. (2012). As the world warms: Rising seas, coastal archaeology, and the erosion of maritime history. *J. Coast. Conservation* 16, 137–142. [doi:10.1007/s11852-010-0104-5](https://doi.org/10.1007/s11852-010-0104-5)

Federal Government of Nigeria (2013). Nigeria post-disaster needs assessment – 2012 floods. Available at: <https://www.gfdrr.org/>

Fennell, D. A. (1999). *Ecotourism: An Introduction*. Routledge, London, 1999. 43. ISBN 0-415-14237-7

Folke, C., Carpenter, S. R., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience Thinking: Integrating Resilience, Adaptability and Transformability. *Ecology and Society*, 15(4), <https://doi.org/10.24926/ijps.v7i2.3386> 12

Global Greenhouse Warming(2018). Climate change mitigation and adaptation. <http://www.global-greenhouse-warming.com/climate-mitigation-and-adaptation.html>

Higuera Roa, O., O'Connor, J., Ogunwumi, T. S., Ihinegbu, C., Reimer Lynggaard, J., Sebesvari, Z., et al. (2022). *Technical Report: Lagos Floods*.

Ijeomah, H.M, Alarape, A.A. & Ogogo.A.U. (2011). *Ecotourism Potentials of Plateau State, Nigeria: A Monitoring survey*. *Asia Pacific Journal of Tourism Research* 16(2):153 – 167.

Ikani D.I. (2016). An impact assessment of flooding on food security among rural farmers in Dagiri Community of Gwagwalada Area Council, Abuja. Nigeria. *Agricultural Development*. Vol 1(1): 6–13.

Jeb, D.N. & Aggarwal. S.P. (2008). Flood inundation hazard modelling of the River Kaduna using remote sensing and geographic information systems. *Journal of Applied Sciences Research*. Vol 4 (12):1822–1833.

Kagu. A; Badawi, .H, Abba, J.M. (2013). Assessment of domestic wastewater disposal in some selected wards of Maiduguri metropolis, Borno State, Nigeria. *Journal of Geography and Geology*, Vol. 5:4; 2013. <http://dx.doi.org/10.5539/jgg.v5n4p83>

Moench, M. (2014). Experiences applying the climate resilience framework: linking theory with practice. *Development in Practice*, 24(4), 447–464.

Mohammed.A.U(2022) Ecotourism in Nigeria, Challenges and Prospects: A Review
Gadau Journal of Pure and Allied Sciences. 1(1): 12-17
ISSN: 2955-1722. DOI: <https://doi.org/10.54117/gipas.v1i1.3>

National Academies of Sciences, Engineering, and Medicine (NASEM) (2016). *Attribution of extreme weather events in the context of climate change*. Washington, DC: The National Academies Press

Ncube, F. & Chikuta, O. (2020). Perceived Economic Impact of Religious Tourism: The Case of Zimbabwe. *Hospitality & Tourism Review*, 1. 1-13.

Njoku, C. G; Efiog, J; & Ayara, N. N. (2020). A geospatial expose of flood-risk and vulnerable areas in Nigeria. *Int. J. Appl. Geospatial Res.* 11 (3), 1–24. doi:10.4018/IJAGR.20200701.oa1

Nkwunonwo, U.C. (2016). A review of flooding and flood risk reduction in Nigeria. *Global Journal of Human-Social Science: B- Geography, Geo-Sciences, Environmental Science & Disaster Management*, 16(2), 23-42.

Odufuwa B.O; Adedeji O.H, Oladesu J.O, et al (2012). Floods of fury in Nigerian cities. *Journal of Sustainable Development*. 5(7).

Okolo.V.N, Orji.E.I,& Anabaraonye.B(2024) Green Entrepreneurial Opportunities in Environmental Photography for Sustainable Development in Nigeria. *Covenant Journal of Entrepreneurship*, 7(2),45-50.

Okon.E.O, Okolo.N.V, Dibia.S.I.C, & Anabaraonye.B(2022) The innovative use of poetry in tree planting education for sustainable sustainable environment in Nigeria. *International Journal of Research in civil engineering and technology*.Vol. 3(2):13-16

Okon.E.O, Orji.E.I, Ojong.A.A & Anabaraonye.B(2023) Poetry as a valuable tool for awareness creation on plastic waste management in Nigeria. *International Journal of Humanities and Arts*.5(1):26-30

Okon.E.O, Odoh.C.C, Olisah.N.C, Ewa.B.O & Anabaraonye.B(2025) The role of green creativity in enhancing eco-poetry for sustainable development in Nigeria. *Journal of Global Warming and Climate Change*.Vol. 1(1):3-5

- Okon.E.O, Orji.E.I, Ojong.A.A, Ewa.B.O & Anabaraonye.B(2025) Eco-poetry as a valuable tool for tackling soot pollution in Nigeria. *Kenkyu Journal of Epidemiology & Community Medicine*.11(1):1-4
- Olajoke. A, Akeem, B.M & Ikotun, S.A (2013) Impacts of flood disaster in Agege local government area Lagos, Nigeria. *International Journal of Development and Sustainability*, 2(4), 2354-2367
- Oladunjoye, M. (2011). Nigeria: July 10 flooding–Lagos gives relief materials to victims. Lagos State, Nigeria: Daily Champion Newspaper. Accessed January 30, 2024.
- Onnoghen.U.N, Unimtiang.U.S, Ogbani.O.N, Odey.M.O, Igwe.T.A, Sam.I.E & Oham.S.B (2023) Ecotourism and economic development of Calabar municipal, Cross River State, Nigeria. *Zamfara International Journal of Education(ZIJE)*, Vol. 3(4):2814-1369
- Onnoghen.U.N, Olisah.N.C, Ewa.B.O, Nwobu.E.A & Anabaraonye.B(2024) Youth engagement in eco-poetry for enhancing climate change education in Nigeria. *Journal of Current Trends in Agriculture, Environment and Sustainability*.5(4):1-5
- Onnoghen.N.U, Idika.D.O, Anabaraonye.B, Ewa.B.O & Hope.J.(2024) Enhancing Nature Education Research for Environmental Sustainability in Nigeria. *Juniper Online Journal of Public Health*. Vol. 8:5. ISSN:2573-2153.
- Onnoghen.N.U, Nwafor.G.U, Orji.E.I, Odoh.C.C, Anabaraonye.B(2024) The role of eco-theology in enhancing climate resilience in Nigeria. *Journal of Civil Engineering and Applications* 2024; 5(1): 37-39
- Onnoghen.U.N, Nwafor.G.U, Odoh.C.C, Ewa.B.O & Anabaraonye.B(2024) The role of eco-musicology in enhancing climate resilience in Nigeria. *Recent archives of Journalism and Mass Communication*. Vol. 1(2):1-4.
- Onnoghen.U.N, Orji.E.I, Olisah.N.C & Anabaraonye.B(2024) The impacts of climate change on sustainable economic growth in Nigeria. *Journal of Civil engineering and applications*. Vol. 5(1):12-15.
- Perez.C.S(2020) Teaching Ecopoetry in a time of climate change.
<https://thegeorgiareview.com/posts/teaching-ecopoetry-in-a-time-of-climate-change/>
- Shoptaw.J(2016) Why Ecopoetry? <https://www.poetryfoundation.org/poetrymagazine/articles/70299/why-ecopoetry>
- Solomon, E., and Edet, O. G. (2018). Determinants of climate change adaptation strategies among farm households in Delta State, Nigeria. *Curr. Investigations Agric. Curr. Res.* 5 (3). [doi:10.32474/ciacr.2018.05.000213](https://doi.org/10.32474/ciacr.2018.05.000213)
- Tsojon JD (2017) Impact of climate change on agricultural production by farmers in Taraba state. *Niger Int J Entrep Dev Educ Sci Res* 4(1):178–190
- UNFCCC(1992) United Nations framework convention on climate change. <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

UN-Water (2011) Cities coping with water uncertainties. Media Brief, UN-Water Decade Programme on Advocacy and Communication.

Wood, M. E. (1999). The Ecotourism Society—An International NGO Committed to Sustainable Development, *Tourism Recreation Research*, 24(2): 119 – 123.

World Bank(2016). Climate Change Action Plan 2016-2020. Washington DC: World Bank.

Copyright (c) 2025 **Authors**



This work is licensed under a [Creative Commons Attribution 4.0 International License](http://creativecommons.org/licenses/by/4.0/).

*Article published in **Academic Research Journal of Science and Technology (ARJST)** is an open access under the Creative Commons Attribution 4.0 International License -BY, (<http://creativecommons.org/licenses/by/4.0/>), which permits use, distribution and reproduction in any medium, provided the original work is properly cited.*