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Afrocentric Environmental Education: Decolonizing Knowledge Systems for True Climate Justice in Africa

Kariuki Muigua*

Abstract

This paper discusses how the ideal of climate justice can be attained in Africa by promoting environmental education. The paper defines environmental education. It observes that environmental education provides effective tools and solutions that can strengthen efforts to confront climate change both globally and in Africa towards climate justice. In particular, the paper discusses the role of environmental education in promoting climate justice in Africa. Despite its role in promoting climate justice, the paper observes that use of foreign systems and models of environmental education in Africa can undermine the pursuit of climate justice for people and planet. Consequently, the paper posits that it is imperative to decolonize knowledge systems for true climate justice in Africa. In order to realise this dream, the paper discusses how Afrocentric environmental education can be promoted and utilised towards true climate justice in Africa.

1.0 Introduction

With Africa being disproportionately impacted by climate change, promoting climate justice is necessary towards protecting vulnerable nations, communities and individuals across the continent. When compared to other regions, Africa has the lowest amount of greenhouse gas emissions responsible for climate change, yet it remains the most affected continent by adverse climatic events¹. It has been observed that Africa is not a significant source of greenhouse gas emissions since the continent accounts for only 2-3 per cent of the world's carbon dioxide emissions from energy and industrial sources². However, despite Africa's negligible contribution to climate change, the continent stands out disproportionately as the most vulnerable region in the world³.

Climate change is adversely affecting nations, communities and individuals across Africa. It has been observed that Africa is highly vulnerable to climate change and its impacts yet the continent

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¹ African Development Bank Group., 'Climate Change in Africa' Available at <https://www.afdb.org/en/cop25/climate-change-africa> (Accessed on 23/10/2026)

² United Nations Climate Change., 'Africa is particularly vulnerable to the expected impacts of global warming' Available at https://unfccc.int/files/press/backgrounders/application/pdf/factsheet_africa.pdf (Accessed on 23/10/2026)

³ United Nations Environment Programme., 'Responding to climate change' Available at <https://www.unep.org/regions/africa/regional-initiatives/responding-climate-change> (Accessed on 23/10/2026)

has limited capacity to cope with worsening climatic events⁴. In particular, since most African economies and livelihoods rely heavily on climate-sensitive sectors including agriculture, hydropower, fishing, tourism, and wildlife, the impacts of climate change on these sectors are severely impacting nations, communities and individuals across Africa⁵. Africa faces disproportionate burdens and risks arising from climate change whose adverse impacts are causing massive humanitarian crises with severe impacts on agriculture, food security, education, energy, infrastructure, peace and security, public health, water resources, and overall socio-economic development⁶. Climate change related weather events and patterns including rising temperatures, droughts and floods are worsening in Africa with severe consequences for the continent's population especially the vulnerable including indigenous and local communities, women, the youth, and the poor rural populations⁷. In addition, climate change also has adverse environmental impacts in Africa since it causes desertification, biodiversity loss and changes in natural ecosystems with severe impacts on people and planet⁸.

In light of the foregoing concerns, confronting climate change is a key agenda towards ensuring Sustainable Development in Africa. In particular, promoting climate justice is necessary towards tackling the disproportionate impacts of climate change on nations, communities, and individuals in Africa. Climate justice is a concept that acknowledges that although climate change is a global crisis, its effects are felt unevenly across the world⁹. Climate justice focuses on protecting human rights of the most vulnerable including the poor, women and girls, the youth, indigenous peoples and local communities who are adversely impacted by climate change¹⁰. Climate justice is a moral and ethical principle that seeks to address the disproportionate impact of climate change on vulnerable nations, individuals, communities and future generations¹¹. Climate justice recognizes that the consequences of climate change, including extreme weather events, rising sea levels, and

⁴ Africa Climate Insights., 'How Climate Change is Pushing Africa to the Brink' Available at <https://africaclimateinsights.org/how-climate-change-is-pushing-africa-to-the-brink/> (Accessed on 23/10/2026)

⁵ Ibid

⁶ World Meteorological Organization., 'Africa faces disproportionate burden from climate change and adaptation costs' Available at <https://wmo.int/news/media-centre/africa-faces-disproportionate-burden-from-climate-change-and-adaptation-costs> (Accessed on 23/10/2026)

⁷ United Nations Climate Change., 'Africa is particularly vulnerable to the expected impacts of global warming' Op Cit

⁸ Ibid

⁹ What is Climate Justice?., Available at https://globalwitness.org/en/campaigns/land-and-environmental-defenders/what-climate-justice/?gad_source=1&gad_campaignid=13050085427&gbraid=0AAAAADm6LOBCAWyvG1rV8P9t7a-3ITtgC&gclid=Cj0KCQiAo4TKBhDRARIsAGW29beo0CN5gLtHcdqr42LaywMKxO5VVBWiMDiQOaj-Bj3eLN4oXC55Ah0aAkN1EALw_wcB (Accessed on 23/10/2026)

¹⁰ Aliozi. Z., 'Climate Justice and Human Rights, in a World in Climate Emergency' Available at <https://repository.gchumanrights.org/server/api/core/bitstreams/2eba3de1-1427-481b-a2d6-07818e00a53b/content> (Accessed on 23/10/2026)

¹¹ Climate Justice Global Alliance., Available at <https://sdgs.un.org/partnerships/climate-justice-global-alliance> (Accessed on 23/10/2026)

resource scarcity, are not evenly distributed, with marginalized and disadvantaged populations often bearing the brunt of these effects¹². Promoting climate justice is therefore necessary towards effectively confronting climate change both globally and in Africa since this concept advocates for equitable, fair and just climate solutions that prioritise the needs of individuals, communities and nations most affected by climate change, while also ensuring that the burdens and benefits of climate action are distributed fairly, taking into account historical and systemic inequalities¹³.

This paper discusses how the ideal of climate justice can be attained in Africa by promoting environmental education. The paper defines environmental education. It observes that environmental education provides effective tools and solutions that can strengthen efforts to confront climate change both globally and in Africa towards climate justice. In particular, the paper discusses the role of environmental education in promoting climate justice in Africa. Despite its role in promoting climate justice, the paper observes that use of foreign systems and models of environmental education in Africa can undermine the pursuit of climate justice for people and planet. Consequently, the paper posits that it is imperative to decolonize knowledge systems for true climate justice in Africa. In order to realise this dream, the paper discusses how Afrocentric environmental education can be promoted and utilised towards true climate justice in Africa.

2.0 Environmental Education and Climate Justice in Africa: Promises and Pitfalls

Environmental education is an approach to learning that allows individuals and communities to explore environmental issues, participate in environmental problem solving, and take meaningful action towards ensuring environmental protection¹⁴. Environmental education has also been defined as a learning process that increases people's knowledge and awareness about the environment and its associated challenges, develops the necessary skills and expertise that enables people and communities to address environmental challenges, and fosters attitudes, skills, motivations, and commitments to make informed decisions and take responsible action towards improving the state of the environment¹⁵. Environmental education in general entails organized efforts to teach about the environment including natural resources and ecosystems, natural processes and functions, and particularly how human beings can live sustainably on Mother Earth¹⁶.

¹² Ibid

¹³ Climate Justice Global Alliance., Op Cit

¹⁴ United States Environmental Protection Agency., 'What is Environmental Education?' Available at <https://www.epa.gov/education/what-environmental-education> (Accessed on 23/10/2026)

¹⁵ Environmental Education., Available at <https://nairobiarboretum.org/environmental-education/> (Accessed on 23/10/2026)

¹⁶ United Nations Economic and Social Commission for Asia and the Pacific., 'Introduction to Environmental Education', Available at <https://www.unescap.org/sites/default/files/CH15.pdf> (Accessed on 23/10/2026)

Promoting environmental education is key towards bolstering environmental governance for people and planet. The United Nations Environment Programme (UNEP) notes that environmental education plays a fundamental role in capacity building, increasing access to policy making and facilitating participation towards a climate neutral, nature positive and pollution free future¹⁷. It has been observed that environmental education matters in environmental governance since this process enables individuals, communities, and organizations to learn more about the environment, and develop skills and understanding about how to address global environmental challenges including climate change, biodiversity loss, and pollution¹⁸. Environmental education has the power to influence positive attitudes and motivate action towards protecting the environment for sustainability¹⁹. Environmental education is a key tool in environmental governance since it raises awareness on issues impacting the environment and how individuals, communities and organisations can take action towards addressing environmental challenges for the benefit of present and future generations²⁰.

With the world facing mounting environmental threats including climate change, biodiversity loss, and pollution, promoting environmental education is necessary towards empowering individuals, communities, and nations with skills and attitudes required to confront these challenges towards strengthening environmental governance. In particular, it has been observed that environmental education can help nations and societies to effectively confront climate change through knowledge, skills, attitudes necessary to understand the causes and effects of climate change towards positive and sustainable climate action²¹. Climate change education is a form of environmental education that enables individuals and communities to understand and address the impacts of the climate crisis, by empowering them with the knowledge, skills, values and attitudes needed to act as agents of change at all levels²². The United Nations notes that education is one of the most effective solutions towards confronting climate change and securing a healthy, sustainable and prosperous planet for both current and future generations²³. In particular, through climate education, vulnerable populations including young people, and

¹⁷ United Nations Environment Programme., 'Youth, education and environment' Available at <https://www.unep.org/topics/youth-education-and-environment> (Accessed on 23/10/2026)

¹⁸ North American Association for Environmental Education., 'About Environmental Education and Why it Matters' Available at <https://naaee.org/about/ee> (Accessed on 23/10/2026)

¹⁹ Ibid

²⁰ Top 10 Benefits of Environmental Education., Available at [https://www.plt.org/educator-tips/top-ten-benefits-environmental-education/#:~:text=Environmental%20education%20\(EE\)%20connects%20us,educators%2C%20schools%2C%20and%20communities](https://www.plt.org/educator-tips/top-ten-benefits-environmental-education/#:~:text=Environmental%20education%20(EE)%20connects%20us,educators%2C%20schools%2C%20and%20communities) (Accessed on 23/10/2026)

²¹ United Nations Educational, Scientific and Cultural Organization., 'Climate change education and COP conferences' Available at <https://www.unesco.org/en/climate-change/education> (Accessed on 23/10/2026)

²² Ibid

²³ United Nations., 'Education is key to addressing climate change' Available at <https://www.un.org/en/climatechange/climate-solutions/education-key-addressing-climate-change> (Accessed on 23/10/2026)

indigenous and local communities can be taught about the causes and consequences of climate change and how to adapt to climate change²⁴.

Environmental education is therefore an appropriate and effective solution in the global efforts to confront climate change and promote climate justice. In particular, with Africa being disproportionately affected by climate change, promoting climate education is necessary towards empowering vulnerable individuals and communities with the knowledge, skills, values, and attitudes needed to not only confront climate change but also adapt to its consequences. It has been observed that climate education in Africa plays a key role in promoting climate justice since it builds the skilled workforce that powers long-term stability, economic growth and climate resilience.²⁵ By embedding climate-resilient learning in schools and communities in Africa, it is possible to build resilient and environmentally-aware societies towards climate justice²⁶. Environmental education can enable nations, communities and individuals in Africa to embrace climate-resilient practices such as transition to renewable energy and sustainable agriculture towards confronting climate change and promoting climate justice²⁷. Promoting environmental education in Africa can therefore lead to an educated generation, equipped with adaptation skills, creative problem-solving and entrepreneurial drive, towards developing home-grown solutions for renewable energy, waste management, water resilience and nature-based adaptation for effective climate action²⁸.

Environmental education is therefore a cornerstone of climate justice in Africa due to its crucial role in equipping individuals and communities with climate literacy and a deeper understanding of climate change. However, it has been observed that current environmental education models in Africa are products of colonial legacies and subjugate indigenous knowledge systems and local climate realities and are therefore inadequate in ensuring effective solutions to the continent's climate-related risks and challenges²⁹. It has been observed that in predominantly Western-oriented education systems, policies, academic circles and investigations, the African voice is usually sidelined or suppressed because indigenous knowledge and methods are often ignored or not taken seriously³⁰. This undermines climate justice due to marginalization of knowledge systems that have enabled people and communities in Africa to live in harmony with nature for

²⁴ Ibid

²⁵ United Nations Children's Fund., 'Climate and Education in Eastern and Southern Africa: An Investment Case' Available at <https://www.unicef.org/esa/media/16031/file/Climate-Education-ESA-Investment-Case.pdf> (Accessed on 23/10/2026)

²⁶ Ibid

²⁷ Ibid

²⁸ Ibid

²⁹ Mbah. M.F., & Liberty. C., 'Why Education Matters for a Climate-Resilient Africa' Available at https://link.springer.com/chapter/10.1007/978-3-031-84081-4_2 (Accessed on 23/10/2026)

³⁰ Owusu-Ansah. F., & Mji. G., 'African indigenous knowledge and research' Available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC5442578/#:~:text=Indigenous%20knowledge%20or%20African%20knowledge,is%20collective%20and%20community%20oriented> (Accessed on 23/10/2026)

many centuries. As a result, it has been correctly observed that it is only through the implementation of Afrocentric environmental education systems that a climate-resilient future can be guaranteed for the people of Africa³¹. Decolonizing knowledge systems is therefore crucial towards promoting true climate justice in Africa for posterity.

3.0 Promoting Afrocentric Environmental Education for True Climate Justice in Africa

With Africa being adversely impacted by climate change, promoting climate justice is key towards protecting vulnerable nations, communities, and individuals across the continent for climate justice. The concept of climate justice can ensure that vulnerable communities and individuals in Africa are protected from worsening impacts of climate change for equity, fairness, and human rights. In particular, it has been observed that achieving true climate justice in Africa requires nations, communities and individuals in the continent to play a central role in defining adaptation strategies, allocating resources, and determining priorities³². Climate justice in Africa requires climate action and policies to be inclusive, responsive and community-driven³³.

Environmental education plays a key role in driving climate justice both globally and in Africa by empowering nations, communities, and individuals with the knowledge, skills, values and attitudes required to take effective climate action for people and planet. In particular, environmental education can empower vulnerable groups and communities in Africa including the youth, women and girls, and indigenous and local communities to effectively respond to climate change and its impacts for climate justice³⁴. However, in order to effectively utilize environmental education as a driver of climate justice in Africa, it is imperative to decolonizing knowledge systems by promoting Afrocentric environmental education. It has been correctly observed that current education systems in Africa, including those related to climate change and the environment, are largely influenced by Eurocentric perspectives and do not reflect the continent's diverse indigenous knowledge and realities³⁵. Western environmental education models fail to address the complex and context-specific challenges and opportunities that climate change poses for Africa undermining effective climate action in the continent³⁶.

Promoting Afrocentric environmental education is therefore a prerequisite for true climate justice in Africa. Afrocentric environmental education can enhance the pursuit of climate justice in Africa since it embraces indigenous knowledge systems, norms and values such as Traditional Ecological Knowledge (TEK) for effective climate action. For example, it has been observed that in the African context, TEK emphasizes harmony with nature thus enabling people all over the

³¹ Mbah. M.F., & Liberty. C., 'Why Education Matters for a Climate-Resilient Africa' Op Cit

³² Reframing climate Justice for Africa's future., Available at <https://acts-net.org/reframing-climate-justice-for-africas-future/> (Accessed on 23/10/2026)

³³ Ibid

³⁴ Mbah. M.F., & Liberty. C., 'Why Education Matters for a Climate-Resilient Africa' Op Cit

³⁵ Ibid

³⁶ Ibid

continent to live sustainably and protect the environment and natural ecosystems³⁷. TEK upholds African cultural norms since it affirms that the universe is a spiritual and a material whole in which all beings are interrelated and interdependent³⁸. TEK is a valuable knowledge systems that can strengthen environmental education in Africa through viable and context-specific solutions to environmental challenges including climate change. For example, indigenous peoples and local communities in Africa have developed flexible, adaptive and resilient practices to cope with environmental variability unique to the continent including sustainable agricultural practices, sustainable hunting and fishing methods, sustainable water management, forest governance, and sustainable ecosystem conservation practices tailored to local needs³⁹. Over the years, indigenous and local communities in Africa have developed deep and sophisticated indigenous knowledge systems such as TEK, based on their observations and interactions with the environment over generations that have enabled them to harness ecosystem services to support their livelihoods and survive socioecological changes including climate change⁴⁰.

Embracing Afrocentric environmental education with emphasis on indigenous and traditional ecological knowledge systems is therefore necessary towards true climate justice in Africa. Afrocentric environmental education enables individuals, communities and organizations in Africa to recognise and appreciate the interconnectedness between people and the environment towards harmony with nature⁴¹. Afrocentric environmental education embraces indigenous knowledge systems including TEK, developed over generations by indigenous and local communities in Africa, providing sustainable and culturally relevant environmental and climate solutions that complement modern scientific approaches⁴². Promoting Afrocentric environmental education therefore provides valuable insights into sustainable practices and local adaptation strategies developed by communities in Africa and the Global South over many

³⁷ Traditional Ecological Knowledge and Global Climate Change; A Global South Perspective on Climate Solutions., Available at <https://afo.or.tz/traditional-ecological-knowledge-and-global-climate-change-a-global-south-perspective-on-climate-solutions/> (Accessed on 23/10/2026)

³⁸ Owusu-Ansah. F., & Mji. G., 'African indigenous knowledge and research' Op Cit

³⁹ Traditional Ecological Knowledge and Global Climate Change; A Global South Perspective on Climate Solutions., Op Cit

⁴⁰ Zougmore. R., Segnon. A., & Thornton. P., 'Harnessing Indigenous Knowledge and Practices for Effective Adaptation in the Sahel' Available at <https://doi.org/10.1016/j.cosust.2023.101389> (Accessed on 23/10/2026)

⁴¹ Kamarudin. Z., 'Teaching climate change grounded in traditional ecological knowledge (TEK)' Available at <https://voicesoftherainforest.leeds.ac.uk/teaching-climate-change-grounded-in-traditional-ecological-knowledge-tek/#:~:text=TEK%20integration%20encourages%20students%20to,Ogunniyi%20&%20Iwuanyanwu%2C%202024>. (Accessed on 23/10/2026)

⁴² Ogwu. M.C., 'Harnessing African Traditional Ecological Knowledge for Sustainable Biodiversity Conservation' Available at https://www.researchgate.net/publication/397745381_Harnessing_African_Traditional_Ecological_Knowledge_for_Sustainable_Biodiversity_Conservation (Accessed on 23/10/2026)

generations⁴³. In addition, it has been argued that indigenous knowledge systems are not fixed since they evolve over time in response to emerging environmental challenges, often merging with new knowledge and technologies to create adaptive approaches that teach important lessons in resilience and environmental stewardship relevant to current climate change risks and challenges⁴⁴. Afrocentric environmental education is therefore a dynamic and evolving body of knowledge that effectively adapts to and responds to emerging environmental challenges.

It is therefore necessary to promote Afrocentric environmental education towards achieving true climate justice in Africa. Achieving this goal involves promoting environmental and climate literacy in Africa with emphasis on indigenous knowledge systems such as TEK⁴⁵. Teaching in indigenous and local languages in Africa is also necessary towards enhancing access to Afrocentric environmental education towards true climate justice. It has been observed that languages especially indigenous languages have throughout history evolved with their environment, meaning that they often have words and concepts specifically adapted within the geographical location of the indigenous or local community⁴⁶. Teaching in indigenous and local languages is therefore necessary towards enhancing the quality and responsiveness of environmental education by harnessing the unique environmental ideas and concepts preserved in such languages. Supporting cultural preservation can also strengthen Afrocentric environmental education by ensuring that indigenous knowledge systems such as TEK are not lost and can be passed to future generations for utilization in ecological conservation including climate action⁴⁷. Mainstreaming indigenous knowledge systems with modern scientific knowledge can also create holistic environmental education frameworks in Africa which empower vulnerable communities in Africa to respond to environmental challenges such as climate change through data-driven and culturally-appropriate solutions⁴⁸.

⁴³ Kamarudin. Z., 'Teaching climate change grounded in traditional ecological knowledge (TEK)' Available at <https://voicesoftherainforest.leeds.ac.uk/teaching-climate-change-grounded-in-traditional-ecological-knowledge-tek/> (Accessed on 23/10/2026)

⁴⁴ Ibid

⁴⁵ Mbah. M.F., & Liberty. C., 'Why Education Matters for a Climate-Resilient Africa' Op Cit

⁴⁶ United Nations University's Institute for Environment and Human Security., '5 Ways Languages Contribute to a Safer and More Inclusive World' Available at <https://unu.edu/ehs/series/5-ways-languages-contribute-safer-and-more-inclusive-world#:~:text=Languages%20are%20libraries%20of%20information,adaptive%20capacity%20as%20a%20species> (Accessed on 23/10/2026)

⁴⁷ Latief. A., 'Harnessing Indigenous Knowledge for Climate Change Resilience in Africa' Available at https://www.linkedin.com/pulse/harnessing-indigenous-knowledge-climate-change-africa-aatifah-latief/?utm_source=share&utm_medium=member_android&utm_campaign=share_via (Accessed on 23/10/2026)

⁴⁸ Johansson. G., & Kalorii. D., 'Traditional Ecological Knowledge (TEK) and Climate Change Adaptation: Bridging the Gap for Hydrological Resilience' Available at [https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5813243#:~:text=1.2%20Significance%20of%20Traditional%20Ecological%20Knowledge%20\(TEK\)&text=By%20integrating%20cultural%2C%20spiritual%2C%20and,%2C%20&%20Folke%2C%201993](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5813243#:~:text=1.2%20Significance%20of%20Traditional%20Ecological%20Knowledge%20(TEK)&text=By%20integrating%20cultural%2C%20spiritual%2C%20and,%2C%20&%20Folke%2C%201993) (Accessed on 23/10/2026)

Through the foregoing interventions, it is possible to promote Afrocentric environmental education towards true climate justice in Africa.

4.0 Conclusion

With climate change devastating nations, communities, and individuals across Africa, promoting climate justice is necessary towards human rights, equity and fairness. Environmental education provides an effective approach towards securing climate justice both globally and in Africa by empowering individuals and communities with knowledge, skills, values, and attitudes required to effectively confront climate change⁴⁹. However, the use of Euro-centric education systems undermines the role of environmental education as a driver of climate justice in Africa since this approach neglects and marginalizes indigenous and traditional ecological knowledge systems including TEK⁵⁰. It is therefore necessary to decolonize knowledge systems for true climate justice in Africa. In particular, harnessing and strengthening Afrocentric environmental education is a vital approach and solution towards promoting true climate justice for the people of Africa.

⁴⁹ United Nations Educational, Scientific and Cultural Organization., 'Climate change education and COP conferences' Op Cit

⁵⁰ Mbah. M.F., & Liberty. C., 'Why Education Matters for a Climate-Resilient Africa' Op Cit

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