

**Respect African Cultural Norms:  
Incorporating Traditional Ecological  
Knowledge into Current Environmental  
Education for Sustainability**

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**Kariuki Muigua**

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**Table of Contents**

1.0 Introduction ..... 3

2.0 Traditional Ecological Knowledge and Environmental Education in Africa:  
Opportunities and Challenges ..... 6

3.0 Incorporating Traditional Ecological Knowledge into Current Environmental  
Education for Sustainability ..... 9

4.0 Conclusion ..... 11

References ..... 13

## **Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability**

**Kariuki Muigua\***

### **Abstract**

*This paper critically examines how environmental education can be strengthened in the African context by respecting African cultural norms. The paper argues that Traditional Ecological Knowledge (TEK) provides a viable and effective approach towards integrating African cultural norms into current environmental education for sustainability. The paper defines TEK. It observes that TEK has played a crucial role in fostering environmental education in Africa for many centuries by emphasizing harmony with nature. Despite its suitability in fostering sustainability, the paper notes that TEK is underutilised in current environmental education systems. It examines some of the challenges facing TEK in Africa. In light of these challenges, the paper discusses how TEK can be incorporated into current environmental education for sustainability.*

### **1.0 Introduction**

Environmental education is a process that helps individuals, communities and organizations to learn more about the environment, and develop skills and capacities that can help them address environmental problems at local, national, regional and global levels<sup>1</sup>. Further, it has been observed that environmental education entails organized efforts to teach about the environment including ecosystems, natural processes and functions, and particularly how human beings can live sustainably on Mother Earth<sup>2</sup>. Environmental education has also been defined as a process that allows

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<sup>1</sup> About Environmental Education and why it Matters., Available at <https://naaee.org/about/ee> (Accessed on 06/01/2026)

<sup>2</sup> 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 06/01/2025)

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

individuals to explore environmental issues, engage in environmental problem-solving, and take sustainable actions to protect and conserve the environment<sup>3</sup>.

Fostering environmental education is a key ideal in the pursuit of sustainability. For instance, the United Nations Environment Programme (UNEP) recognises 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 future<sup>4</sup>. UNEP recognises environmental education as a continuous and lifelong process, based on interdisciplinary approaches, active participation and individual and group responsibility for the environment towards sustainability<sup>5</sup>. It has been observed that environmental education has the power to influence positive attitudes and motivate action towards protecting the environment for sustainability<sup>6</sup>. This process equips individuals, communities and organizations with skills, knowledge, positive attitudes and motivation to be responsible stewards of the environment<sup>7</sup>. By strengthening environmental education, it is possible to foster sound environmental governance and sustainability including through tackling environmental challenges such as climate change, pollution, biodiversity loss, environmental degradation and resource scarcity<sup>8</sup>.

The role of environmental education as a pillar for sustainability has been recognised under several instruments. For example, the *Declaration of the United Nations Conference*

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<sup>3</sup> United States Environmental Protection Agency., 'What is Environmental Education?' Available at <https://www.epa.gov/education/what-environmental-education> (Accessed on 06/01/2026)

<sup>4</sup> United Nations Environment Programme., 'Youth, education and environment' Available at <https://www.unep.org/topics/youth-education-and-environment> (Accessed on 06/01/2026)

<sup>5</sup> United Nations Environment Programme., 'UNEP strategy for Environmental Education and Training' Available at <https://www.unep.org/about-un-environment/policies-and-strategies/un-environment-strategy-environmental-education-and> (Accessed on 06/01/2026)

<sup>6</sup> About Environmental Education and why it Matters., Op Cit

<sup>7</sup> United Nations Economic and Social Commission for Asia and the Pacific., 'Introduction to Environmental Education', Op Cit

<sup>8</sup> Ibid

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

on the Human Environment (Stockholm Declaration)<sup>9</sup> urges all countries to strengthen environmental education. Principle 19 of the Stockholm Declaration acknowledges that the education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension for sustainability<sup>10</sup>. In addition, the *Convention on Biological Diversity*<sup>11</sup> emphasizes the importance of public education and awareness as a tool for conservation and sustainable use of biological diversity<sup>12</sup>. Strengthening environmental education is therefore critical in the quest for sustainability.

This paper critically examines how environmental education can be strengthened in the African context by respecting African cultural norms. The paper argues that Traditional Ecological Knowledge (TEK) provides a viable and effective approach towards integrating African cultural norms into current environmental education for sustainability. The paper defines TEK. It observes that TEK has played a crucial role in fostering environmental education in Africa for many centuries by emphasizing harmony with nature. Despite its suitability in fostering sustainability, the paper notes that TEK is underutilised in current environmental education systems. It examines some of the challenges facing TEK in Africa. In light of these challenges, the paper discusses how TEK can be incorporated into current environmental education for sustainability.

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<sup>9</sup> United Nations, Report of the United Nations Conference on the Human Environment., Stockholm, 5-16 June, 1972, A/CONF. 48/14/Rev. 1

<sup>10</sup> Ibid

<sup>11</sup> Convention on Biological Diversity, 5 June 1992 (1760 U.N.T.S. 69)

<sup>12</sup> Ibid, article 13

## **2.0 Traditional Ecological Knowledge and Environmental Education in Africa: Opportunities and Challenges**

TEK has been defined as a cumulative body of knowledge, practices and beliefs, handed down from generation to generation by cultural transmission, which focuses on the relationship between living organisms (including humans) and their environment<sup>13</sup>. TEK has also been defined as the knowledge base acquired by indigenous peoples and local communities all over the world through direct contact with their environment for many centuries<sup>14</sup>. TEK has been also described as an evolving body of knowledge, practices, values and beliefs about the relationships between living beings and their environment, passed down through generations among indigenous and local communities<sup>15</sup>.

It has been observed that TEK stems from centuries-old observation and interaction with nature and is a valuable resource in ensuring sound environmental governance and conservation towards sustainability<sup>16</sup>. For example, TEK encompasses practical ways through which indigenous peoples and local communities ensure the balance of the environment in which they live, so that it may continue to provide ecosystem services such as water, fertile soil, food, shelter and medicines<sup>17</sup>. TEK has enabled indigenous peoples all over the world to conserve and sustainably manage natural resources and address environmental challenges including climate change and biodiversity loss<sup>18</sup>. It has been argued that TEK has cultural, spiritual, ecological and social significance making it

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<sup>13</sup> Traditional Ecological Knowledge., Available at <https://www.bia.gov/service/fuels-management/traditional-knowledge> (Accessed on 06/01/2026)

<sup>14</sup> Traditional Ecological Knowledge., Available at [https://www.edu.gov.mb.ca/k12/docs/support/sila\\_video/tek.pdf](https://www.edu.gov.mb.ca/k12/docs/support/sila_video/tek.pdf) (Accessed on 06/01/2026)

<sup>15</sup> 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 06/01/2026)

<sup>16</sup> United Nations Environment Programme., 'Indigenous Peoples and the nature they protect' Available at <https://www.unep.org/news-and-stories/story/indigenous-peoples-and-nature-they-protect> (Accessed on 06/01/2026)

<sup>17</sup> Ibid

<sup>18</sup> International Fund for Agricultural Development., 'Indigenous Peoples' Available at <https://www.ifad.org/en/indigenous-peoples#:~:text=Indigenous%20Peoples%20are%20the%20custodians,investments%20based%20on%20their%20perspectives> (Accessed on 06/01/2026)

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

a dynamic and valuable knowledge base in the pursuit of sustainability<sup>19</sup>. UNEP acknowledges that mainstreaming TEK into all relevant policies and decision making processes can foster sound environmental governance including through tackling the triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste<sup>20</sup>.

TEK is a valuable knowledge and resource base that can strengthen environmental education for sustainability. It has been observed that in the African context, TEK emphasizes harmony with nature enabling people all over the continent to live sustainably and protect the environment and natural ecosystems<sup>21</sup>. 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 interdependent<sup>22</sup>. According to this knowledge system, land, water, animals and plants and other natural resources are not just production factors with economic significance but an integral part of the universe which must be conserved and protected for the benefit of current and future generations<sup>23</sup>. Due to its emphasis on harmony with nature, it has been pointed out that TEK offers vital insights into environmental conservation and sustainability in Africa<sup>24</sup>. TEK is embedded

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<sup>19</sup> 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 06/01/2026)

<sup>20</sup> United Nations Environment Programme., 'Tapping into indigenous knowledge to protect nature' Available at <https://www.unep.org/news-and-stories/story/tapping-indigenous-knowledge-protect-nature> (Accessed on 06/01/2026)

<sup>21</sup> Traditional Ecological Knowledge and Global Climate Change; A Global South Perspective on Climate Solutions., Op Cit

<sup>22</sup> 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 06/01/2025)

<sup>23</sup> Naamwintome. B.A., & Millar. D., 'Indigenous Knowledge and the African Way Forward: Challenges and Opportunities' Available at <https://www.scirp.org/journal/paperinformation?paperid=68164> (Accessed on 06/01/2026)

<sup>24</sup> Fa. J.E., & Luiselli; L., 'Weaving the Middle Spaces Between Indigenous and Scientific Knowledge for Biodiversity Conservation and Ecology' Available at <https://onlinelibrary.wiley.com/doi/10.1111/aje.70030?af=R> (Accessed on 06/01/2026)

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

in centuries of observation and cultural practices of the people of Africa and can therefore inform sustainable resource use and the protection of ecosystems for sustainability<sup>25</sup>. 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 and sustainable ecosystem conservation practices tailored to local needs<sup>26</sup>.

Integrating TEK into current environmental education in Africa can therefore foster sustainability including through respecting African cultural and spiritual norms that emphasize harmony with nature. It has been observed that incorporating TEK into environmental education enables individuals, communities and organizations to recognise and appreciate the interconnectedness between people and the environment<sup>27</sup>. Through this, it is possible to foster inclusive, responsive and cultural-specific approaches that can strengthen environmental governance for sustainability<sup>28</sup>. Further, TEK can allow for the integration of cultural and scientific knowledge, fostering sound environmental stewardship and creating more holistic environmental education experiences<sup>29</sup>.

Despite its role in ensuring responsible environmental stewardship for sustainability, TEK has been underutilised in environmental education in Africa. For example, emphasis on modern scientific knowledge has resulted in TEK being marginalised and disregarded

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<sup>25</sup> Ibid

<sup>26</sup> Traditional Ecological Knowledge and Global Climate Change; A Global South Perspective on Climate Solutions., Op Cit

<sup>27</sup> 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 06/01/2026)

<sup>28</sup> Ibid

<sup>29</sup> Ibid

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

as inferior and unscientific<sup>30</sup>. It has been argued 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 seriously<sup>31</sup>. As a result, the role of TEK in environmental education continues to be ignored. Further, since TEK is usually passed down orally from generation to generation, there is a threat of it being lost<sup>32</sup>. Consequently, preserving TEK in Africa is critical in bolstering its role in environmental education now and in the future. In light of the foregoing concerns, it is imperative to incorporate TEK into current environmental education in order to respect and uphold African cultural norms for sustainability.

### **3.0 Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability**

TEK is a valuable knowledge base that can strengthen environmental education for sustainability. It has been observed that indigenous and traditional practices are vital for the planet's future since they can provide vital insights in areas such as sustainable agriculture, ecosystem conservation and restoration, climate change mitigation and adaptation, controlling wildfires and protection of endangered species<sup>33</sup>. Therefore, if sustainably harnessed, TEK can play an important role in strengthening environmental education. TEK can bolster environmental education by providing holistic, culturally-appropriate and place-based perspectives that recognise the interconnectedness of all living species and emphasize harmony with nature<sup>34</sup>.

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<sup>30</sup> The African Manifesto for Science, Technology and Innovation., Available at [https://atpsnet.org/wp-content/uploads/2017/05/the\\_african\\_manifesto\\_for\\_sti.pdf](https://atpsnet.org/wp-content/uploads/2017/05/the_african_manifesto_for_sti.pdf) (Accessed on 06/01/2026)

<sup>31</sup> Owusu-Ansah, F., & Mji, G., 'African indigenous knowledge and research' Op Cit

<sup>32</sup> Ibid

<sup>33</sup> United Nations Environment Programme., 'Tapping into indigenous knowledge to protect nature' Op Cit

<sup>34</sup> Traditional Ecological Knowledge: The Cornerstone of Indigenous Climate Adaptation in Canada., Available at <https://indigenousclimatehub.ca/tag/traditional-ecological-knowledge-tek/page/2/#:~:text=Understanding%20Traditional%20Ecological%20Knowledge,challenges%20posed%20by%20climate%20change.> (Accessed on 07/01/2026)

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

Africa has a rich reservoir of TEK that is anchored in the cultural norms of the people of Africa. It has been observed that the African worldview embodies wholeness, community and harmony which are deeply embedded in cultural values<sup>35</sup>. TEK in Africa affirms that the universe is a spiritual and a material whole in which all beings are interrelated and interdependent<sup>36</sup>. By embracing this worldview, indigenous peoples and local communities in Africa have been able to live in harmony with nature for many centuries. Incorporating TEK into current environmental education in Africa is therefore necessary in quest towards sustainability.

It is therefore important to develop holistic environmental education frameworks in Africa that embrace TEK. Through this, it is possible to foster approaches and initiatives that are locally relevant and culturally-sensitive towards achieving sustainability<sup>37</sup>. Further, it is imperative to foster synergies between TEK and modern scientific knowledge systems in Africa<sup>38</sup>. It has been observed that mainstreaming TEK with modern science can ensure collaborative approaches that empower indigenous peoples and local communities, foster knowledge exchange between these two systems, and ensure that scientific approaches and practices respect the cultural norms and knowledge systems of the people of Africa<sup>39</sup>.

In addition, it is imperative to uphold the rights of indigenous peoples and local communities in Africa in order to effectively harness TEK for sustainability. It has been observed that for many centuries, indigenous peoples and local communities have suffered grave human right violations including displacement from their lands and

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<sup>35</sup> Owusu-Ansah. F., & Mji. G., 'African indigenous knowledge and research' Op Cit

<sup>36</sup> Naamwintome. B.A., & Millar. D., 'Indigenous Knowledge and the African Way Forward: Challenges and Opportunities' Op Cit

<sup>37</sup> United Nations Environment Programme., 'UNEP strategy for Environmental Education and Training' Op Cit

<sup>38</sup> Johansson. G., & Kalorii. D., 'Traditional Ecological Knowledge (TEK) and Climate Change Adaptation: Bridging the Gap for Hydrological Resilience' Op Cit

<sup>39</sup> Ibid

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

territories<sup>40</sup>. This undermines their livelihoods and cultural practices including the use of TEK in environmental conservation<sup>41</sup>. Consequently, it has been observed that recognising and protecting the land rights of indigenous peoples is vital in bolstering their role in environmental protection, biodiversity conservation and climate action through their TEK<sup>42</sup>. Strengthening indigenous education in Africa is also vital towards incorporating TEK into current environmental education. For example, it has been observed that strengthening and formalizing indigenous education in Africa can make space for indigenous methods of knowing and learning and protect the intellectual heritage of mostly marginalised indigenous peoples and local communities<sup>43</sup>.

There is also need for African governments to invest in cultural preservation. This is an effective strategy towards ensuring that TEK is not lost and can be passed to future generations for utilization in ecological conservation<sup>44</sup>. Establishing knowledge bases for indigenous and local knowledge including through documenting oral traditions and cultural practices can ensure that TEK is preserved and transmitted to future generations for sustainability now and tomorrow<sup>45</sup>.

#### **4.0 Conclusion**

TEK is a valuable resource that can strengthen environmental education in Africa. It is therefore important to incorporate this knowledge system into current environmental education in the continent including through strengthening indigenous education,

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<sup>40</sup> United Nations Environment Programme., 'Indigenous Peoples and the nature they protect' Op Cit

<sup>41</sup> Ibid

<sup>42</sup> Ibid

<sup>43</sup> Harnessing Indigenous Knowledge Systems for Global Knowledge Cooperation., Available at [https://www.idos-research.de/fileadmin/user\\_upload/pdfs/publikationen/aktuelle\\_kolumne/2024/German\\_Institute\\_of\\_Development\\_and\\_Sustainability\\_EN\\_Segueda\\_Banerjee\\_28.10.2024.pdf](https://www.idos-research.de/fileadmin/user_upload/pdfs/publikationen/aktuelle_kolumne/2024/German_Institute_of_Development_and_Sustainability_EN_Segueda_Banerjee_28.10.2024.pdf) (Accessed on 07/01/2026)

<sup>44</sup> 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](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 07/01/2026)

<sup>45</sup> United Nations., 'Indigenous People's Traditional Knowledge Must Be Preserved, Valued Globally, Speakers Stress as Permanent Forum Opens Annual Session' Available at <https://press.un.org/en/2019/hr5431.doc.htm> (Accessed on 07/01/2026)

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

upholding the rights of indigenous peoples and local communities, fostering synergies between TEK and modern science and investing in cultural preservation<sup>46</sup>. Incorporating TEK into current environmental education is therefore an effective approach towards respecting and upholding African cultural norms for sustainability.

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<sup>46</sup> Johansson. G., & Kalorii. D., 'Traditional Ecological Knowledge (TEK) and Climate Change Adaptation: Bridging the Gap for Hydrological Resilience' Op Cit

## References

About Environmental Education and why it Matters., Available at <https://naaee.org/about/ee>

Convention on Biological Diversity, 5 June 1992 (1760 U.N.T.S. 69)

Fa. J.E., & Luiselli; L., 'Weaving the Middle Spaces Between Indigenous and Scientific Knowledge for Biodiversity Conservation and Ecology' Available at <https://onlinelibrary.wiley.com/doi/10.1111/aje.70030?af=R>

Harnessing Indigenous Knowledge Systems for Global Knowledge Cooperation., Available at [https://www.idos-research.de/fileadmin/user\\_upload/pdfs/publikationen/aktuelle\\_kolumne/2024/German\\_Institute\\_of\\_Development\\_and\\_Sustainability\\_EN\\_Segueda\\_Banerjee\\_28.10.2024.pdf](https://www.idos-research.de/fileadmin/user_upload/pdfs/publikationen/aktuelle_kolumne/2024/German_Institute_of_Development_and_Sustainability_EN_Segueda_Banerjee_28.10.2024.pdf)

International Fund for Agricultural Development., 'Indigenous Peoples' Available at <https://www.ifad.org/en/indigenous-peoples#:~:text=Indigenous%20Peoples%20are%20the%20custodians,investments%20based%20on%20their%20perspectives>

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)

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>

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](https://www.linkedin.com/pulse/harnessing-indigenous-knowledge-climate-change-africa-aatifah-latief/?utm_source=share&utm_medium=member_android&utm_campaign=share_via)

Naamwintome. B.A., & Millar. D., 'Indigenous Knowledge and the African Way Forward: Challenges and Opportunities' Available at <https://www.scirp.org/journal/paperinformation?paperid=68164>

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

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>

The African Manifesto for Science, Technology and Innovation., Available at [https://atpsnet.org/wp-content/uploads/2017/05/the\\_african\\_manifesto\\_for\\_sti.pdf](https://atpsnet.org/wp-content/uploads/2017/05/the_african_manifesto_for_sti.pdf)

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/>

Traditional Ecological Knowledge., Available at <https://www.bia.gov/service/fuels-management/traditional-knowledge>

Traditional Ecological Knowledge., Available at [https://www.edu.gov.mb.ca/k12/docs/support/sila\\_video/tek.pdf](https://www.edu.gov.mb.ca/k12/docs/support/sila_video/tek.pdf)

Traditional Ecological Knowledge: The Cornerstone of Indigenous Climate Adaptation in Canada., Available at <https://indigenousclimatehub.ca/tag/traditional-ecological-knowledge-tek/page/2/#:~:text=Understanding%20Traditional%20Ecological%20Knowledge,challenges%20posed%20by%20climate%20change>

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>

United Nations Environment Programme., 'Indigenous Peoples and the nature they protect' Available at <https://www.unep.org/news-and-stories/story/indigenous-peoples-and-nature-they-protect>

United Nations Environment Programme., 'Tapping into indigenous knowledge to protect nature' Available at <https://www.unep.org/news-and-stories/story/tapping-indigenous-knowledge-protect-nature>

United Nations Environment Programme., 'UNEP strategy for Environmental Education and Training' Available at <https://www.unep.org/about-un-environment/policies-and-strategies/un-environment-strategy-environmental-education-and>

United Nations Environment Programme., 'Youth, education and environment' Available at <https://www.unep.org/topics/youth-education-and-environment>

United Nations, Report of the United Nations Conference on the Human Environment., Stockholm, 5-16 June, 1972, A/CONF. 48/14/Rev. 1

*Respect African Cultural Norms: Incorporating Traditional Ecological Knowledge into Current Environmental Education for Sustainability*

United Nations., 'Indigenous People's Traditional Knowledge Must Be Preserved, Valued Globally, Speakers Stress as Permanent Forum Opens Annual Session' Available at <https://press.un.org/en/2019/hr5431.doc.htm>

United States Environmental Protection Agency., 'What is Environmental Education?' Available at <https://www.epa.gov/education/what-environmental-education>