

(Re) Informing the Global North: The Place of Environmental Indigenous Knowledge in the Sustainable Development Discourse

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(Re) Informing the Global North: The Place of Environmental Indigenous Knowledge in the Sustainable Development Discourse

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Abstract

This paper critically examines the place of environmental indigenous knowledge in the Sustainable Development discourse. The paper observes that environmental indigenous knowledge is a rich body of valuable insights, practices, ideas and values that can unlock Sustainable Development in the Global South. Despite its appropriateness in promoting Sustainable Development, the paper notes that environmental indigenous knowledge is often sidelined and marginalized by Sustainable Development perspectives from the Global North. As a result, the paper argues that there is need to reinvigorate environmental indigenous knowledge towards attaining true Sustainable Development in the Global South. It discusses how this ideal can be attained towards forging harmony between people and planet for posterity.

1.0 Introduction

Achieving Sustainable Development is a noble dream for both people and planet. Sustainable Development is an innovative approach that seeks to foster harmony between humanity and nature by promoting development that meets the needs of the present generations without compromising the ability of future generations to meet their own needs¹. Sustainable Development has also been described as both an ideal and principle geared towards meeting human development goals and needs while at the same time ensuring the ability of nature to provide the natural resources and ecosystem services upon which the economy and society depends². It has been observed that Sustainable Development provides an integrated approach to development that improves the quality of our lives both as individuals and societies, fosters economic growth, protects our environment and its ecosystems and also preserves natural resources for future generations³.

Promoting Sustainable Development is therefore vital for both people and planet since through this approach, it is possible to create and maintain the conditions under which humanity and

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¹ World Commission on Environment and Development., 'Our Common Future.' Oxford, (Oxford University Press, 1987)

² Mensah. J., 'Sustainable Development: Meaning, history, principles, pillars, and implications for human action: Literature review' *Cogent Social Sciences*, Volume 5, Issue 1

³ United States Environmental Protection Agency., 'What is Sustainability.' Available at <https://www.epa.gov/sustainability/learn-about-sustainability> (Accessed on 25/07/2026)

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nature can exist in productive harmony to support present and future generations⁴. In addition, it has been observed that Sustainable Development provides a process of change through which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs⁵. This process seeks to bring sustainable change in our society, our economy and our environment while leaving no one behind as enshrined under the 2030 Agenda for Sustainable Development⁶.

Despite its appropriateness in forging harmony between people and planet, achieving Sustainable Development remains an unattained global dream. Global challenges including poverty, rising inequalities within and among nations, gender inequalities, unemployment, global health threats, conflicts, and environmental challenges such as climate change, biodiversity loss and pollution undermine progress towards Sustainable Development⁷. In particular, it has been observed that the Global South faces numerous economic, social and environmental challenges which hinder the attainment of Sustainable Development⁸. Consequently, it has become increasingly necessary to embrace innovative approaches towards promoting Sustainable Development especially in the Global South.

This paper critically examines the place of environmental indigenous knowledge in the Sustainable Development discourse. The paper observes that environmental indigenous knowledge is a rich body of valuable insights, practices, ideas and values that can unlock Sustainable Development in the Global South. Despite its appropriateness in promoting Sustainable Development, the paper notes that environmental indigenous knowledge is often sidelined and marginalized by Sustainable Development perspectives from the Global North. As a result, the paper argues that there is need to reinvigorate environmental indigenous knowledge towards attaining true Sustainable Development in the Global South. It discusses how this ideal can be attained towards forging harmony between people and planet for posterity.

⁴ Ibid

⁵ World Commission on Environment and Development., 'Our Common Future.' Op Cit

⁶ United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20SustainableDevelopment%20web.pdf> (Accessed on 25/07/2026)

⁷ United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Op Cit

⁸ African Development Bank., 'The way Forward to Achieving Sustainable Development in Africa.' Available at https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/ADRI5_chapter_8.pdf (Accessed on 25/07/2026)

2.0 Role of Environmental Indigenous Knowledge in the Sustainable Development Discourse

Indigenous knowledge in general has been described as a wide term that covers the understandings, skills and philosophies developed by societies with long histories of interaction with their environment and natural surroundings⁹. Indigenous knowledge has also been defined as a living body of knowledge that is developed, sustained and passed on from generation to generation within an indigenous or local community, often forming part of its cultural or spiritual identity¹⁰. It has been observed that indigenous knowledge usually originates from a local or traditional community that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, where the knowledge is embodied in the traditional lifestyle of a community, or contained in the codified knowledge systems passed on from one generation to another¹¹. Indigenous knowledge is usually accumulated and transmitted across generations within specific cultural contexts¹².

In the environmental context, indigenous knowledge is rooted in the deep connection that indigenous peoples and local communities have with their land, resources, ecosystems and environment¹³. Environmental indigenous knowledge encompasses a deep understanding of local ecosystems, the behavior of wildlife, the medicinal properties of plants, weather patterns, and the complex interconnections between nature and human society among other phenomena¹⁴. In particular, it has been observed that environmental indigenous knowledge includes Traditional Ecological Knowledge (TEK) which is a term that describes 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 environment¹⁵. TEK has been described as a knowledge base acquired by indigenous peoples and local

⁹ United Nations Educational, Scientific and Cultural Organization., 'Local and Indigenous Knowledge Systems (LINKS)' Available at <https://en.unesco.org/links> (Accessed on 27/07/2026)

¹⁰ World Intellectual Property Organization., 'Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions' Available at https://www.wipo.int/edocs/pubdocs/en/wipo_pub_933_2020.pdf (Accessed on 27/07/2026)

¹¹ African Regional Intellectual Property Organization (ARIPO), *Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore*, Adopted by the Diplomatic Conference of ARIPO at Swakopmund (Namibia) on August 9, 2010.

¹² Jessen. T et al., 'Contributions of Indigenous Knowledge to ecological and evolutionary understanding' Available at <https://esajournals.onlinelibrary.wiley.com/doi/10.1002/fee.2435> (Accessed on 27/07/2026)

¹³ Filho. W et al., 'The Role of Indigenous Knowledge in Climate Change Adaptation in Africa' Available at <https://doi.org/10.1016/j.envsci.2022.06.004> (Accessed on 27/07/2026)

¹⁴ The Role of Indigenous Knowledge in Environmental Conservation., Available at https://www.linkedin.com/pulse/role-indigenous-knowledge-environmental-conservation-eurasia-carbon?utm_source=share&utm_medium=member_android&utm_campaign=share_via (Accessed on 27/07/2026)

¹⁵ Traditional Ecological Knowledge., Available at <https://www.bia.gov/service/fuels-management/traditional-knowledge> (Accessed on 27/07/2026)

communities all over the world through direct contact with their environment for many centuries¹⁶.

Environmental indigenous knowledge plays a crucial role in the Sustainable Development discourse. For instance, it has been observed that this rich body of knowledge has enabled indigenous peoples and local communities all over the world to maintain a deep, interconnected and harmonious relationship with their environments for millennia¹⁷. Through generations of lived experience, environmental indigenous knowledge has helped indigenous and local communities to develop an intricate understanding of the natural world, encompassing its ecosystems, flora, fauna, and the delicate balance that sustains life¹⁸. Environmental indigenous knowledge has enabled indigenous and local communities to develop local knowledge of plants, animals, ecosystem, landscapes, and resource management systems that have enabled them to work with nature for many centuries towards tackling environmental threats including climate change, environmental degradation and biodiversity loss for Sustainable Development¹⁹. In particular, environmental indigenous knowledge supports sustainable resource management practices including rotational farming, fire management, and fishing techniques that have been refined over generations to ensure resource abundance towards sound biodiversity conservation²⁰. Further, it has been observed that through their indigenous knowledge systems, indigenous and local communities have developed effective and sustainable strategies for adapting to climate change, including the cultivation of climate-resistant crop varieties and seasonal migration patterns²¹.

Harnessing and utilising environmental indigenous knowledge can therefore accelerate progress towards Sustainable Development. According to the United Nations Environment Programme (UNEP), environmental indigenous knowledge, gained through trans-generational experiences, observations, and transmission, provides valuable insights that can contribute to sustainable ecosystem management and development²². In particular, it has been observed that TEK is at the heart of sound environmental governance and Sustainable Development since it has enabled indigenous peoples, local communities and rural women to live sustainably for many centuries²³. For example, TEK includes traditional and sustainable approaches to agriculture, hunting, fishing, water management, forestry and ecosystem management thus strengthening the resilience of

¹⁶ Traditional Ecological Knowledge., Available at https://www.edu.gov.mb.ca/k12/docs/support/sila_video/tek.pdf (Accessed on 27/07/2026)

¹⁷ Yuanyi. S., 'Indigenous Ecological Knowledge: Preserving Traditional Wisdom for Conservation' *Ukrainian Journal of Ecology.*, Volume 13, Issue 7 (2023)

¹⁸ Ibid

¹⁹ Sinthumule. N., 'Traditional Ecological Knowledge and its Role in Biodiversity Conservation: A Systematic Review' *Frontiers in Environmental Science.*, Volume 11 (2023)

²⁰ Yuanyi. S., 'Indigenous Ecological Knowledge: Preserving Traditional Wisdom for Conservation' Op Cit

²¹ Ibid

²² United Nations Environment Programme., 'Indigenous Peoples' Available at <https://www.unep.org/civil-society-engagement/major-groups-modalities/major-group-categories/indigenous-peoples> (Accessed on 27/07/2026)

²³ What is Traditional Ecological Knowledge?., Available at <https://edm-1.itrcweb.org/what-is-traditional-ecological-knowledge/> (Accessed on 27/07/2026)

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both people and planet in light of environmental threats such as climate change, biodiversity loss and environmental degradation towards Sustainable Development²⁴. In addition, environmental indigenous knowledge provides valuable insights into climate-resilient practices such as agroforestry, use of climate and drought-resilient crops, sustainable water management and disaster preparedness towards strengthening climate mitigation and adaptation²⁵.

Despite its crucial role as a driver of Sustainable Development, environmental indigenous knowledge, which is predominantly held by indigenous and local communities in the Global South, is usually ignored and marginalized by Sustainable Development perspectives which mostly originate from the Global North. For example, it has been observed that due to historical marginalization and political and economic power imbalances, indigenous peoples and local communities are often overlooked in key Sustainable Development decision-making processes including climate action, ecosystem management and biodiversity conservation undermining the place of environmental indigenous knowledge in the Sustainable Development discourse²⁶. Indigenous and local communities are frequently excluded from decision-making processes on environmental policies and their rights to lands and resources are not always respected hindering the use and transmission of environmental indigenous knowledge²⁷. In addition, it has been observed that environmental indigenous knowledge including TEK is often marginalized and not effectively integrated into formal conservation policies and decision-making processes that are predominantly shaped by the Global North²⁸. Further, in era characterized by rapid urbanization and modernization, there is a threat of erosion of indigenous cultures, including TEK, a challenge that can undermine the role of environmental indigenous knowledge in the Sustainable Development discourse²⁹. In addition, it has been pointed out that activities such as logging and mining taking place on lands and territories occupied and owned by indigenous and local communities pose increasing threats to indigenous cultures, livelihoods and knowledge systems³⁰.

In light of the foregoing concerns, it is imperative to recognise, mainstream and preserve environmental indigenous knowledge in order to foster Sustainable Development.

²⁴ 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 27/07/2026)

²⁵ United Nations Development Programme., 'Indigenous knowledge is crucial in the fight against climate change – here's why' Available at <https://climatepromise.undp.org/news-and-stories/indigenous-knowledge-crucial-fight-against-climate-change-heres-why> (Accessed on 27/07/2026)

²⁶ United Nations Development Programme., 'Indigenous knowledge is crucial in the fight against climate change – here's why' Op Cit

²⁷ Ibid

²⁸ Yuanyi. S., 'Indigenous Ecological Knowledge: Preserving Traditional Wisdom for Conservation' Op Cit

²⁹ Ibid

³⁰ United Nations Environment Programme., 'Indigenous Peoples' Op Cit

3.0 Embracing Environmental Indigenous Knowledge for Sustainable Development

Environmental indigenous knowledge plays a crucial role in the Sustainable Development discourse. Environmental indigenous knowledge systems including TEK provide valuable insights and practices that emphasize harmony between humanity and nature towards Sustainable Development³¹. It has been observed that these practices have a minimal impact on the environment and are highly adaptive to ecological changes, fostering healthy and resilient ecosystems³². Environmental indigenous knowledge systems play a key role in ensuring sound environmental governance, protecting biodiversity, combating climate change and realizing the ambitious vision of the United Nation's 2030 Agenda for Sustainable Development³³.

Due to the marginalization and exclusion that environmental indigenous knowledge faces from Sustainable Development policies and decision-making processes, it is imperative (re) inform the Global North by reinvigorating this rich and valuable body of knowledge in order to foster sustainability. In particular, there is need to recognise and respect traditional ecological practices in the Global South³⁴. It has been correctly observed that in order to harness its potential, there is need to recognize and respect environmental indigenous knowledge and the role it plays in the Sustainable Development discourse³⁵. Mainstreaming environmental indigenous knowledge in Sustainable Development policies and decision-making processes also provides a valuable approach towards (re) informing the Global North. In particular, by integrating environmental indigenous knowledge including TEK in climate action, resource governance and biodiversity conservation efforts, it is possible to promote context-specific, culturally-appropriate and local solutions towards achieving Sustainable Development³⁶. In addition, involving indigenous peoples, local communities and rural women in Sustainable Development policies and decision-making processes is key towards ensuring the relevant, appropriate and contextual use of environmental indigenous knowledge to drive sustainability³⁷.

Upholding the rights of knowledge-holders is also vital towards bolstering the role of environmental indigenous knowledge in the Sustainable Development discourse. For example, it

³¹ United Nations Development Programme., 'Indigenous knowledge is crucial in the fight against climate change – here's why' Op Cit

³² Ibid

³³ International Labour Organization., 'Sustainable Development Goals: Indigenous Peoples in Focus' Available at https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/@ifp_skills/documents/publication/wcms_503715.pdf (Accessed on 27/07/2026)

³⁴ 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 27/07/2026)

³⁵ The Role of Indigenous Knowledge in Environmental Conservation., Available at https://www.linkedin.com/pulse/role-indigenous-knowledge-environmental-conservation-eurasia-carbon/?utm_source=share&utm_medium=member_android&utm_campaign=share_via (Accessed on 27/07/2026)

³⁶ United Nations Development Programme., 'Indigenous knowledge is crucial in the fight against climate change – here's why' Op Cit

³⁷ Ibid

has been observed that recognising and protecting the land rights of indigenous and local communities is a key approach in bolstering their role in environmental protection, biodiversity conservation and climate action through their environmental indigenous knowledge systems and practices³⁸. UNEP notes that when the rights of indigenous peoples are protected, especially their rights to land, territories and resources, their culture and nature thrives³⁹. It is therefore necessary to protect the land rights of indigenous and local communities in order to allow them to practice their environmental indigenous knowledge systems and practices towards Sustainable Development.

Investing in cultural preservation is also necessary towards anchoring the place of environmental indigenous knowledge in the Sustainable Development discourse. Cultural preservation is a key approach towards ensuring that environmental indigenous knowledge systems and practices are not lost and are transmitted to future generations in order to foster Sustainable Development⁴⁰. This can be achieved through strengthening environmental indigenous education and documenting oral traditions and cultural practices⁴¹. In addition, it has been observed that modern technologies including Artificial Intelligence (AI) can be effectively used to harness and conserve environmental indigenous knowledge including through the development and deployment of AI models that rely on indigenous languages and environmental indigenous knowledge data sets⁴².

4.0 Conclusion

Environmental indigenous knowledge plays a fundamental role in the Sustainable Development discourse. It is therefore necessary to harness and utilise this rich body of knowledge by recognising and respecting it, integrating it into Sustainable Development policies, involving indigenous and local communities in environmental decision-making processes and investing in cultural preservation⁴³. Embracing environmental indigenous knowledge is an effective approach towards moving away from the Global North and positioning the Global South as norm-shaper in the Sustainable Development discourse.

³⁸ 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 27/07/2026)

³⁹ Ibid

⁴⁰ 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 27/07/2026)

⁴¹ Ibid

⁴² Perera. M et al., 'Indigenous peoples and artificial intelligence: A systematic review and future directions' Available at <https://journals.sagepub.com/doi/10.1177/20539517251349170#:~:text=Abstract,Discuss%20Literature%20under%20each%20category> (Accessed on 27/07/2026)

⁴³ United Nations Development Programme., 'Indigenous knowledge is crucial in the fight against climate change – here's why' Op Cit

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