

Forest Governance in the Global South: Uniting Local Tribes, Scientists, and Charities in a Unified Team Effort Integrating Traditional Ecological Knowledge (TEK)

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Forest Governance in the Global South: Uniting Local Tribes, Scientists, and Charities in a Unified Team Effort Integrating Traditional Ecological knowledge (TEK)

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Abstract

This paper discusses how effective forest governance can be achieved in the Global South. The paper observes that the Global South has some of the most valuable forest ecosystems on the planet providing opportunities to foster Sustainable Development. However, despite being endowed with vast and rich forests, the paper notes that these ecosystems are facing mounting threats in the Global South. The paper examines some of the key threats to forests in the Global South and their impacts on people and planet. In light of the foregoing, the paper argues that sound forest governance is a key agenda in the Global South towards protecting and conserving these vital ecosystems for the benefit of both people and planet. In order to achieve this dream, the paper discusses how local tribes, scientists and charities can be united towards collaborative efforts integrating Traditional Ecological Knowledge (TEK).

1.0 Introduction

Forests are some of the most valuable and important ecosystems on the planet. It is estimated that forests cover more than 30 percent of Earth's land surface and play a vital role in maintaining biodiversity, protecting land and water resources, and mitigating climate change¹. The United Nations Environment Programme (UNEP) notes that forests are precious ecosystems that provide crucial services for people and planet including through acting as reservoirs of biodiversity, keeping the planet cool and healthy, and contributing to the economic, social and cultural lives of millions of people all over the world especially indigenous peoples and local communities².

It has been observed that forest ecosystems comprise of a complex web of life including plant species such as trees, animal species, fungi and bacteria interacting with each other³. Through these complex interactions, forests provide crucial ecosystem services that ensure the health and well-being of both people and planet. In particular, forests are biodiversity hotspots since they provide habitat to nearly 80 per

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¹ Global Environment Facility., 'Forests' Available at <https://www.thegef.org/what-we-do/topics/forests> (Accessed on 18/07/2026)

² United Nations Environment Programme., 'Forests' Available at <https://www.unep.org/topics/forests> (Accessed on 18/07/2026)

³ Forest Ecosystems., Available at <https://www.green.earth/blog/5-types-of-ecosystems#:~:text=Forest%20ecosystems%20are%20an%20incredibly,mammals%20to%20insects%20and%20birds.> (Accessed on 18/07/2026)

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cent of land-based species⁴. Forests harbour and provide habitats for most of the Earth's terrestrial biodiversity including plant and tree species, mammals, amphibians and birds⁵. In addition, forests have been described as one of the planet's most powerful tools against climate change⁶. It has been observed that healthy forests play a crucial role in confronting climate change by acting as carbon sinks, absorbing and storing billions of metric tonnes of carbon annually⁷. In addition, forests also support millions of livelihoods globally especially for the rural poor, women, indigenous peoples and local communities who depend on these vital ecosystems for food, water, fuel and natural medicines⁸.

Forests are therefore important ecosystems which provide numerous benefits for both humanity and nature. However, it has been observed that forests all over the world are increasingly threatened by a wide range of pressures, including deforestation, land-use change including conversion for agriculture and infrastructure development, invasive alien species, as well as severe droughts and wildfires that are worsened by climate change⁹. It is estimated that the world is losing about 4.7 million hectares of tropical forest every year, demonstrating the urgent need to protect these valuable ecosystems¹⁰. In particular, deforestation and forest degradation have been identified as major threats that affect both the quality and quantity of vital ecosystems services provided by forests¹¹. In light of these threats, effective forest governance is a key global agenda towards protecting these valuable ecosystems for Sustainable Development.

This paper discusses how effective forest governance can be achieved in the Global South. The paper observes that the Global South has some of the most valuable forest ecosystems on the planet providing opportunities to foster Sustainable Development. However, despite being endowed with vast and rich forests, the paper notes that these ecosystems are facing mounting threats in the Global South. The paper examines some of the key threats to forests in the Global South and their impacts on people and planet. In light of the foregoing, the paper argues that sound forest governance is a key agenda in the Global South towards protecting and conserving these vital ecosystems for the benefit of both people and planet. In order to achieve this dream, the paper discusses how local tribes, scientists and charities can be united towards collaborative efforts integrating Traditional Ecological Knowledge (TEK).

⁴ United Nations., 'Forests - nature's solution to carbon pollution' Available at <https://www.un.org/en/climatechange/science/climate-issues/forests> (Accessed on 18/07/2026)

⁵ United Nations Environment Programme., 'Earth's Biodiversity depends on the World's Forests' Available at <https://www.unep-wcmc.org/en/news/earths-biodiversity-depends-on-the-worlds-forests> (Accessed on 18/07/2026)

⁶ United Nations., 'Forests - nature's solution to carbon pollution' Op Cit

⁷ United Nations Development Programme., 'Forests can help us limit climate change – here is how' Available at <https://climatepromise.undp.org/news-and-stories/forests-can-help-us-limit-climate-change-here-how> (Accessed on 18/07/2026)

⁸ United Nations., 'Forests' Available at <https://sustainabledevelopment.un.org/topics/forests> (Accessed on 18/07/2026)

⁹ International Union for Conservation of Nature., 'Restoring Forest Ecosystems Provides Multiple Benefits to Society' Available at <https://www.iucn.org/news/europe/201905/restoring-forest-ecosystems-provides-multiple-benefits-society> (Accessed on 18/07/2026)

¹⁰ United Nations Environment Programme., 'Forests' Op Cit

¹¹ United Nations Development Programme., 'Forests can help us limit climate change – here is how' Op Cit

2.0 Forest Governance in the Global South: Prospects and Challenges

The Global South is home to some of the planet's most important forests including the Amazon which is the world's largest tropical rainforest¹²; the Congo basin which is the second-largest tropical rainforest in the world¹³; and the Southeast Asian rainforests¹⁴. In addition to these government-managed forests, it has been observed that the Global South holds a significant portion of the world's private forests which are being increasingly recognized for their vital role in meeting global climate and biodiversity goals¹⁵.

The Global South's forests are some of the world's most valuable ecosystems providing numerous benefits for both people and planet. For example, the Amazon rainforest has been identified as the world's richest and most-varied biological reservoir, containing several million species of insects, mammals, plants, birds, and other forms of life, with many still to be discovered¹⁶. In addition, the Amazon rainforest supports the livelihoods of millions of indigenous peoples and local communities in several South American forest including Brazil, Peru, Venezuela, Bolivia, Colombia and Ecuador, who rely on it as a source of food, freshwater, medicines and fuel among other ecosystem services¹⁷. In addition, the Congo Basin Forest in Africa has been identified as one of the world's most valuable ecosystems since it stores more than 60 billion metric tons of carbon making it an indispensable regional and global resource in climate action¹⁸. This ecosystem also serves as critical habitat for numerous species including many endangered species in the continent¹⁹.

In addition to tropical rainforests, mangrove forests in the Global South are vital ecosystems. These ecosystems are carbon removal powerhouses with the ability to store up to 5 times more carbon per area than tropical forests and absorb it from the atmosphere about 3 times as quickly as tropical forests²⁰.

¹² United Nations Economic Commission for Latin America and the Caribbean., 'Natural Resources Outlook in Latin America and the Caribbean. Executive summary' Available at <https://www.cepal.org/en/publications/48997-natural-resources-outlook-latin-america-and-caribbean-executive-summary#:~:text=Abstract,reconsidered%20role%20of%20natural%20resources>. (Accessed on 12/06/2026)

¹³ Global Environment Facility., 'Forests' Op Cit

¹⁴ Ibid

¹⁵ Setiajiati. F., & Mitani. Y., 'Private Forests in the Global South: Untangling Research Trends and Gaps' Available at <https://link.springer.com/article/10.1007/s40725-026-00269-9> (Accessed on 19/07/2026)

¹⁶ Amazon Rainforest., Available at <https://www.britannica.com/place/Amazon-Rainforest> (Accessed on 19/07/2026)

¹⁷ The Nature Conservancy., 'The Amazon' Available at <https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/amazon-rainforest/> (Accessed on 19/07/2026)

¹⁸ United Nations Environment Programme., 'Supporting sound ecosystem management' Available at <https://www.unep.org/regions/africa/regional-initiatives/supporting-sound-ecosystem-management> (Accessed on 19/07/2026)

¹⁹ World Bank Group., 'Journey into the Congo Basin – The Lungs of Africa and Beating Heart of the World' Available at <https://www.worldbank.org/en/news/feature/2022/10/24/journey-into-the-congo-basin-the-lungs-of-africa-and-beating-heart-of-the-world> (Accessed on 19/07/2026)

²⁰ Wood. K., Ashford. O., 'How Blue Carbon Can Tackle the Climate, Biodiversity and Development Crises' Available at <https://www.wri.org/insights/what-is-blue-carbon-benefits-for-people-planet> (Accessed on 19/07/2026)

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In addition, mangrove forests shield coastal communities against storms, sea-level rise, erosion and flooding among other adverse weather and climatic events²¹.

Forests in the Global South can therefore unlock Sustainable Development including through strengthening climate action, supporting biodiversity and providing a source of livelihoods for millions of indigenous peoples and local communities. However, forests in the Global South are some of the most threatened ecosystems on the planet. Human activities including deforestation, agricultural expansion into forests and unsustainable extraction of resources are fuelling degradation and loss of forest biodiversity especially in the Global South²². For example, it has been observed that Africa has the highest global net loss of forests²³. It is estimated that nearly 4 million hectares of African forests are being cut down each year, which is almost double the speed of the world's deforestation rate²⁴.

The loss of forests in the Global South undermines the livelihoods and well-being of millions of people who rely on these ecosystems for food, water, natural medicines, fuel and cultural needs²⁵. It has been correctly observed that deforestation and forest degradation fuels biodiversity loss and impacts the availability of critical ecosystem services such as clean air, water, food, and medicines with serious impacts for human health and well-being²⁶. There is also a direct link between deforestation and climate change. It is estimated that deforestation and forest degradation currently account for approximately one fifth of global greenhouse gas emissions responsible for climate change²⁷.

In light of the foregoing concerns, it is imperative to strengthen forest governance in the Global South for Sustainable Development.

3.0 Towards a Unified Team Effort Integrating Traditional Ecological Knowledge (TEK) for Sound Forest Governance in the Global South

There is need to strengthen forest governance in the Global South in order to protect and conserve these valuable ecosystems for Sustainable Development. Forest governance covers rules, policies, approaches and actors involved in the management, use and conservation of forest ecosystems²⁸. It has been observed that forest governance covers laws, decision-making processes, institutions, different actors, and outcomes

²¹ United Nations Environment Programme., 'Mangrove Forests' Available at <https://www.unep.org/topics/ocean-seas-and-coasts/blue-ecosystems/mangrove-forests> (Accessed on 19/07/2026)

²² Nzabarinda. V et al., 'Expanding forest carbon sinks to mitigate climate change in Africa' Available at <https://www.sciencedirect.com/science/article/pii/S1364032124005756#:~:text=In%20the%20process%20of%20photosynthesis,gas%20emissions%20and%20climate%20change> (Accessed on 19/07/2026)

²³ Greenpop., 'Forest Restoration' Available at <https://greenpop.org/forest-restoration/> (Accessed on 19/07/2026)

²⁴ Igini. M., 'Deforestation in Africa: Causes, Effects, and Solutions' Available at <https://earth.org/deforestation-in-africa/> (Accessed on 19/07/2026)

²⁵ Ibid

²⁶ United Nations Development Programme., 'Forests can help us limit climate change – here is how' Op Cit

²⁷ Ibid

²⁸ Food and Agriculture Organization of the United Nations., 'Forest Governance' Available at <https://www.fao.org/sustainable-forest-management/toolbox/modules/forest-governance/basic-knowledge/en/?type=III> (Accessed on 19/07/2026)

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at various levels aimed at ensuring sound use, protection and conservation of forests and their resources for Sustainable Development²⁹. This concept covers issues such as who are involved in decision-making processes on the use, protection and conservation of forests, how such decisions are made and implemented, enforcement of policies and rules on forests, and how different actors are held accountable for violation of rules and policies on forests³⁰.

Forest governance therefore encompasses all interactions, both formal and informal, that control how people interact with forests³¹. It has been observed that effective forest governance is associated with the principles of transparency, participation, and accountability³². Through sound forest governance, it is possible to ensure the sustainable use and management of forests including through tackling the drivers of deforestation and forest degradation thus ensuring the conservation of these valuable ecosystems for the present of current and future generations³³.

The Global South has the capacity to achieve sound forest governance for posterity. In particular, it has been observed that TEK is a valuable resource that can ensure sound forest governance in the Global South towards Sustainable Development³⁴. TEK refers to a body of knowledge, practices, and beliefs about the relationship between living beings and their environment, passed down across generations through oral traditions, and is deeply rooted in the cultural and spiritual practices of indigenous and local communities³⁵. TEK has also been defined as a collection of knowledge held by communities with a long history of direct dependence on the environment and natural resources³⁶. It has been observed that TEK is a knowledge base acquired by indigenous peoples and local communities all over the world through direct contact with their environment for many centuries³⁷. TEK is a wide body of knowledge that covers various aspects including traditional and sustainable approaches to agriculture, hunting, fishing, water management, forestry and ecosystem management and it is therefore an appropriate tool towards strengthening the resilience of both people and planet in light of environmental threats such as climate

²⁹ Understanding Forest Governance., Available at <https://fgi.efi.int/why-forest-governance-is-important/understanding-forest-governance/> (Accessed on 19/07/2026)

³⁰ Ibid

³¹ Forest Governance., Available at <https://www.forestcarbonpartnership.org/forest-governance-0> (Accessed on 19/07/2026)

³² Ibid

³³ Food and Agriculture Organization of the United Nations., 'Forest Governance' Op Cit

³⁴ Yang, Y., Mashi, S.A., Nnachi, N.I., 'Integrating Traditional Ecological Knowledge Into Forest Governance: Pathways to Sustainable Development in Protected Forest Ecosystems' Available at <https://onlinelibrary.wiley.com/doi/abs/10.1002/eet.70117> (Accessed on 19/07/2026)

³⁵ Traditional Ecological Knowledge: The Cornerstone of Indigenous Climate Adaptation in Canada., Available at <https://indigenousclimatehub.ca/2024/04/traditional-ecological-knowledge-the-cornerstone-of-indigenous-climate-adaptation-in-canada/> (Accessed on 19/07/2026)

³⁶ What is Traditional Ecological Knowledge?., Available at <https://edm-1.itrcweb.org/what-is-traditional-ecological-knowledge/> (Accessed on 19/07/2026)

³⁷ Traditional Ecological Knowledge., Available at https://www.edu.gov.mb.ca/k12/docs/support/sila_video/tek.pdf (Accessed on 19/07/2026)

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change, biodiversity loss and environmental degradation³⁸. In particular, it has been observed that TEK is at the heart of environmental governance since it has enabled indigenous peoples and local communities to live sustainably for many centuries³⁹.

Harnessing TEK is therefore crucial towards bolstering environmental governance in the Global South. For instance, TEK emphasises positive attitudes towards forests since they are a source of livelihoods, cultural and spiritual well-being for indigenous and local communities in the Global South⁴⁰. It has been observed that TEK has been utilised for many centuries in the form of customs, rituals, myths and taboos towards ensuring the sustainable use, management and conservation of forests among many indigenous and local communities in the Global South⁴¹. For instance, among some indigenous and local communities, forests are regarded as sacred and therefore TEK prohibits hunting, farming, and collection of fuelwood among other practices that can lead to deforestation and forest degradation⁴².

Utilising TEK can therefore ensure sound forest governance in the Global South for Sustainable Development. In order to achieve this goal, there is need for collaborative efforts involving local tribes, scientists and charities towards integrating TEK in environmental governance with emphasis on the sustainable use, management and conservation of forests. For example, given their role as custodians of TEK, involving local tribes including indigenous and local communities is key towards harnessing their wisdom for sound forest governance through sustainable resource extraction, sustainable land management practices, and forest restoration activities including afforestation, reforestation and agroforestry among other forms of TEK⁴³. The participation of local tribes such as indigenous and local communities provide invaluable traditional insights and practices that have helped preserve and ensure the responsible use of forest ecosystems since time immemorial⁴⁴.

Scientists can also play a fundamental role towards integrating TEK for effective forest governance in the Global South. It has been observed that in most cases, TEK is marginalised and disregarded in contemporary environmental governance since it is viewed as inferior and unscientific⁴⁵. The neglect of

³⁸ 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 19/07/2026)

³⁹ What is Traditional Ecological Knowledge?, Op Cit

⁴⁰ Sinthumule. N. I., & Mashau. M.L., 'Traditional ecological knowledge and practices for forest conservation in Thathe Vondo in Limpopo Province, South Africa' *Global Ecology and Conservation.*, Volume 22, June 2020

⁴¹ Ibid

⁴² Ibid

⁴³ Role of the Community Forest Associations in Kenya., Available at <https://blog.afro.co.ke/community-forest-association/#:~:text=Community%20Forest%20Associations%20play%20an,provisions%20of%20the%20Societies%20Act>. (Accessed on 19/07/2026)

⁴⁴ Akalibey. S et al., 'Integrating indigenous knowledge and culture in sustainable forest management via global environmental policies' *Journal of Forest Science.*, Volume 70, Issue 6 (2024), pp 265-280

⁴⁵ The African Manifesto for Science, Technology and Innovation., Available at https://atpsnet.org/wp-content/uploads/2017/05/the_african_manifesto_for_sti.pdf (Accessed on 19/07/2026)

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TEK in favour of contemporary science in environmental governance can lead to the loss and erosion of vital ecological knowledge, practices and wisdom that have enabled indigenous peoples and local communities to live in harmony with nature throughout human history⁴⁶. By involving scientists, it is possible to synergise TEK with conventional methods of forest conservation thus providing a hybrid governance model that integrates the wisdom of local tribes and modern scientific and data-driven solutions⁴⁷. It has been correctly observed that integrating TEK with conventional scientific methods of conservation holds a great promise since both of bodies of knowledge have broad applications in natural resource conservation including forest governance⁴⁸. Scientists therefore have a key role to play in integrating TEK with contemporary governance approaches towards effective forest governance on the Global South.

In addition, involving charities is key towards sound forest governance in the Global South. It has been observed that charities can strengthen the use of TEK in forest governance including through mobilizing funds to support conservation efforts⁴⁹. In addition, charities are more appropriate at working with local tribes at the community level to strengthen forest governance while enhancing livelihoods⁵⁰. Involving charities can therefore bolster community participation towards utilising TEK for sound forest governance in the Global South⁵¹.

4.0 Conclusion

Due to the abundance of forest resources in the Global South, effective forest governance is key towards ensuring that these ecosystems are sustainably used, managed and conserved for posterity. In particular, uniting local tribes, scientists and charities provides a collaborative and unified team effort that bolster and integrate TEK towards sound forest governance in the Global South for Sustainable Development.

⁴⁶ Oando. O.C., 'Incorporating traditional ecological knowledge into science education, a case study of Mbita sub-county' Available at <https://rjikm.org/index.php/rjikm/article/view/120> (Accessed on 19/07/2026)

⁴⁷ Sinthumule. N. I., & Mashau. M.L., 'Traditional ecological knowledge and practices for forest conservation in Thathe Vondo in Limpopo Province, South Africa' Op Cit

⁴⁸ Ibid

⁴⁹ International Institute for Sustainable Development., 'Five Organizations Launch Partnership to Protect Intact Forests' Available at <https://sdg.iisd.org/news/five-organizations-launch-partnership-to-protect-intact-forests/> (Accessed on 19/07/2026)

⁵⁰ Ibid

⁵¹ Ibid

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