

Climate Action in Africa: Protecting Forests from Degradation and Biodiversity Loss through Collaborative Approaches

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Kariuki Muigua*

Abstract

This paper examines how Africa can strengthen climate action by protecting forests from degradation and biodiversity loss. The paper argues that forests play a crucial role in strengthening climate action and protecting people and planet. It posits that Africa has rich forest ecosystems that are integral in climate action while also providing other benefits for the people of Africa. However, despite ensuring the well-being of people and planet, the paper argues that forest ecosystems in Africa are facing mounting threats including through degradation and biodiversity loss. The paper notes that these challenges undermine the health of people and planet in Africa due to loss of vital ecosystem services including climate regulation. Consequently, the paper argues that protecting forests in Africa is vital towards strengthening climate action for sustainability. It discusses how collaborative approaches can be utilised to protect forests from degradation and biodiversity loss for effective climate action in Africa.

1.0 Introduction

Effective climate action is a key priority for Africa in the quest towards sustainability. Despite having the least greenhouse gas emissions, Africa stands out disproportionately as the most vulnerable region in the world to climate change and its impacts¹. It has been pointed out that Africa is already facing climate change and is amongst the regions that will experience the most devastating consequences of projected climate trends in the

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¹ United Nations Environment Programme., 'Responding to Climate Change' Available at <https://www.unep.org/regions/africa/regional-initiatives/responding-climate-change> (Accessed on 25/09/2025)

future². Many parts of Africa are warming at a faster rate than the global average and facing an above-average sea-level rise³. Climate change is profoundly impacting African countries in numerous ways by fuelling water scarcity, damaging agricultural harvests, affecting lifestyles, and amplifying gender and other dimensions of inequality⁴.

Climate change is therefore a major threat to Sustainable Development in Africa. Climate change hinders Sustainable Development in Africa by fuelling economic losses, affecting socio-economic growth and pushing millions of people into extreme levels of poverty⁵. It is also impacting food and water security, ecosystems and economies, fueling displacement and migration and worsening the threat of conflict over dwindling natural resources in Africa⁶. Extreme climatic events, including floods and droughts, are becoming increasingly frequent and severe in Africa undermining the continent's development agenda⁷.

From the foregoing, it is evident that climate change is a major challenge to both current and future development progress in Africa⁸. Consequently, effective climate action in Africa is necessary for Sustainable Development. African countries have been urged to act urgently now and ensure that systems are in place to deal with negative climate events

² African Development Bank Group., 'Africa and Climate Change' Available at <https://www.afdb.org/en/topics-and-sectors/sectors/climate-change/our-strategy> (Accessed on 25/09/2025)

³ Ibid

⁴ Fonjong. L., Matose. F., & Sonnenfeld. D., 'Climate change in Africa: Impacts, adaptation, and policy responses' Global Environmental Change., Volume 89, December 2024

⁵ African Development Bank Group., 'Climate Change in Africa' Available at <https://www.afdb.org/en/cop25/climate-change-africa> (Accessed on 25/09/2025)

⁶ World Meteorological Organization., 'Africa suffers disproportionately from climate change' Available at <https://wmo.int/media/news/africa-suffers-disproportionately-from-climate-change> (Accessed on 25/09/2025)

⁷ Food and Agriculture Organization of the United Nations., 'Climate change impacts, adaptation and links to sustainable development in Africa' Available at <https://www.fao.org/4/i0670e/i0670e03.htm> (Accessed on 25/09/2025)

⁸ Bishop. R., 'Confronting Climate Change' Available at <https://www.brookings.edu/articles/confronting-climate-change/> (Accessed on 25/09/2025)

in the continent now and in the future⁹. Further, it has been argued that Sustainable Development in Africa cannot be achieved without addressing the impacts of climate change on agriculture and food security, conflicts, natural resources, water and disease patterns, all of which have particular impact on the poor and vulnerable¹⁰.

Confronting climate change in Africa is therefore an important agenda towards sustainability. This goal is envisaged under the United Nations 2030 *Agenda for Sustainable Development*¹¹ which acknowledges that climate change is one of the greatest challenges of our time and its adverse impacts undermine the ability of all countries to achieve Sustainable Development¹². Sustainable Development Goal (SDG) 13 under the Agenda urges all states to take urgent action to combat climate change and its impacts towards Sustainable Development¹³. Further, African Union's *Agenda 2063*¹⁴ recognizes that while Africa has played a relatively minor role and contributed little to the accumulation of greenhouse gases and the attendant climate change, it is the most vulnerable region to climate change risks. Agenda 2063 seeks to foster environmentally sustainable and climate resilient economies and communities in Africa for Sustainable Development¹⁵.

This paper examines how Africa can strengthen climate action by protecting forests from degradation and biodiversity loss. The paper argues that forests play a crucial role in strengthening climate action and protecting people and planet. It posits that Africa has

⁹ Ibid

¹⁰ Food and Agriculture Organization of the United Nations., 'Climate change impacts, adaptation and links to sustainable development in Africa' Op Cit

¹¹ 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%20Sustainable%20Development%20web.pdf> (Accessed on 25/09/2025)

¹² Ibid

¹³ Ibid

¹⁴ Africa Union., 'Agenda 2063: The Africa we Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 25/09/2025)

¹⁵ Ibid

rich forest ecosystems that are integral in climate action while also providing other benefits for the people of Africa. However, despite ensuring the well-being of people and planet, the paper argues that forest ecosystems in Africa are facing mounting threats including through degradation and biodiversity loss. The paper notes that these challenges undermine the health of people and planet in Africa due to loss of vital ecosystem services including climate regulation. Consequently, the paper argues that protecting forests in Africa is vital towards strengthening climate action for sustainability. It discusses how collaborative approaches can be utilised to protect forests from degradation and biodiversity loss for effective climate action in Africa.

2.0 Forests and Climate Action in Africa

Forests are valuable ecosystems which provide numerous benefits for both humanity and nature. For example, it is estimated that forests support more than three-quarters of the world's terrestrial biodiversity¹⁶. Forests have been identified as one of the most biologically rich terrestrial systems¹⁷. Forests offer diverse sets of habitats for plants, animals and micro-organisms, and harbour most of the world's terrestrial species¹⁸. It has been pointed out that forests harbour and provide habitats for most of the Earth's terrestrial biodiversity including plant and tree species, mammals, amphibians and birds¹⁹.

In addition, forests also support human health. For instance, forest reduce risk of natural disasters such as floods, droughts, landslides and other extreme events thus enhancing

¹⁶ Greenpop., 'Forest Restoration' Available at <https://greenpop.org/forest-restoration/> (Accessed on 25/09/2025)

¹⁷ Secretariat of the Convention on Biological Diversity., 'Forest Biodiversity' Available at <https://www.cbd.int/doc/meetings/cop/cop-09/media/cop9-press-kit-forest-en.pdf> (Accessed on 25/09/2025)

¹⁸ Ibid

¹⁹ United Nation's 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 25/09/2025)

human health and well-being²⁰. Forests further provide us with clean air and water which are crucial for our health²¹. In addition, millions of people globally especially those in developing countries rely on traditional medicines for their health most of which originate from plants and trees found in tropical forests²². Further, forests are a source of subsistence, employment opportunities and income to about 25 per cent of the world's population²³. They provide numerous goods for use in households or for commercial purposes including timber, fuelwood, charcoal, medicinal herbs, fruits, and game meat among other products²⁴.

In addition to the foregoing benefits, forests are at the heart of climate action. It has been argued that forests are one of the most important solutions to the climate crisis since they absorb nearly one-third of greenhouse gas emissions generated from the burning of fossil fuels²⁵. Healthy forests play a key role in confronting climate change by acting as effective carbon sinks which absorb and store huge quantities of carbon from the atmosphere²⁶. It has been argued that forests provide humanity with an appropriate solution to remove greenhouse gases from the atmosphere and avoid the worst impacts of climate change²⁷. Forests play a key role in climate action through carbon sequestration. These vital ecosystems sequester carbon by capturing carbon dioxide from the atmosphere and

²⁰ United Nations., 'Forests' Available at <https://sustainabledevelopment.un.org/topics/forests> (Accessed on 25/09/2025)

²¹ United Nations Environment Programme., 'Forests' Available at <https://www.decadeonrestoration.org/types-ecosystem-restoration/forests> (Accessed on 25/09/2025)

²² Secretariat of the Convention on Biological Diversity., 'Forest Biodiversity' Op Cit

²³ European Investment Bank., 'Forests at the Heart of Sustainable Development: Investing in Forests to Meet Biodiversity and Climate Goals' Available at https://www.eib.org/attachments/lucalli/20220173_forests_at_the_heart_of_sustainable_development_en.pdf (Accessed on 25/09/2025)

²⁴ Introduction: Livelihoods, forests, and conservation., Available at <https://www.cifor-icraf.org/knowledge/publication/1837/> (Accessed on 25/09/2025)

²⁵ International Union for Conservation of Nature., 'Forests and Climate Change' Available at <https://iucn.org/resources/issues-brief/forests-and-climate-change> (Accessed on 25/09/2025)

²⁶ 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 25/09/2025)

²⁷ Ibid

transforming it into biomass through photosynthesis²⁸. The sequestered carbon is then accumulated in the form of biomass, deadwood, litter and in forest soils²⁹. As a result, forests have been identified as one of the most potent solutions to the climate crisis³⁰.

Africa has rich forests ecosystem which play a key role on bolstering climate action. These include tropical rainforests such as the Congo basin rainforests, the Upper Guinea forests of West Africa, forests on mountains and mangrove forests along the East African coast³¹. It has been argued that forests in Africa significantly contribute to climate change mitigation by acting as carbon sinks, sequestering atmospheric carbon dioxide, and keeping it in their soil and biomass³². In particular, 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 action³³. In addition, mangrove forests along the East African coast are effective carbon sinks and have been described as carbon removal powerhouses, storing up to 5 times more carbon per area than tropical forests and absorbing it from the atmosphere about 3 times as quickly as tropical forests³⁴. Mangroves have been identified as some of

²⁸ United Nations Economic Commission for Europe., 'Carbon Sinks and Sequestration' Available at <https://unece.org/forests/carbon-sinks-and-sequestration#:~:text=Forests%20sequester%20carbon%20by%20capturing,litter%20and%20in%20forest%20soils>. (Accessed on 25/09/2025)

²⁹ Ibid

³⁰ International Union for Conservation of Nature., 'Forests and Climate Change' Op Cit

³¹ Forests., Available at <https://www.africanworldheritagesites.org/natural-places/forests.html> (Accessed on 25/09/2025)

³² 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 25/09/2025)

³³ United Nations Environment Programme., 'Supporting sound ecosystem management' Available at <https://www.unep.org/regions/africa/regional-initiatives/supporting-sound-ecosystem-management> (Accessed on 25/09/2025)

³⁴ 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 25/09/2025)

the most carbon-rich ecosystems in the world, storing on average 1,000 tonnes of carbon per hectare in their biomass and underlying soils³⁵.

African forests are therefore a valuable resource towards confronting climate change. However, these valuable ecosystems are facing mounting threats. Human activities including deforestation, agricultural expansion into forests and unsustainable extraction of resources are fuelling degradation and loss of forest biodiversity³⁶. Forests in Africa and all over the world are being degraded because of logging, firewood cutting, pollution and invasive pests³⁷. In addition, trees outside forest ecosystems are also disappearing to make way for houses, roads and dams and for intensive agriculture³⁸. It has been argued that Africa has the highest global net loss of forests³⁹. 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 rate⁴⁰. The health and vitality of major forest ecosystems in Africa including the Congo Basin Rainforest is being threatened by human activities including agricultural expansion, mineral exploitation, growing energy needs, and transport and infrastructure development⁴¹.

The foregoing challenges are undermining effective climate action in Africa. Deforestation and forest degradation is a major source of greenhouse gas emissions undermining effective climate action in Africa⁴². It has been argued that there is a direct

³⁵ United Nations Environment Programme., 'Why protecting & restoring blue carbon ecosystems matters' Available at <https://www.unep.org/explore-topics/oceans-seas/what-we-do/protecting-restoring-blue-carbon-ecosystems/why-protecting> (Accessed on 25/09/2025)

³⁶ Nzabarinda. V et al., 'Expanding forest carbon sinks to mitigate climate change in Africa' Op Cit

³⁷ United Nations Environment Programme., 'Forests' Op Cit

³⁸ Ibid

³⁹ Greenpop., 'Forest Restoration' Op Cit

⁴⁰ Igin. M., 'Deforestation in Africa: Causes, Effects, and Solutions' Available at <https://earth.org/deforestation-in-africa/> (Accessed on 25/09/2025)

⁴¹ World Bank Group., 'Sustaining Forests and Livelihoods in a Changing World' Available at <https://www.worldbank.org/en/news/feature/2013/01/29/sustaining-forests-livelihoods-changing-world> (Accessed on 25/09/2025)

⁴² Nzabarinda. V et al., 'Expanding forest carbon sinks to mitigate climate change in Africa' Op Cit

link between deforestation, forest degradation and increased carbon emissions in Africa⁴³. Further, deforestation and forest degradation also 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-being⁴⁴.

In light of the foregoing challenges, it is imperative to protect forests in Africa from degradation and biodiversity loss towards sound climate action.

3.0 Protecting Forests in Africa from Degradation and Biodiversity Loss through Collaborative Approaches

Africa hosts some of the most unique forest ecosystems including the Congo Basin Forest and mangrove forests along the East African Coast. These ecosystems are valuable regional and global resources in climate action since they absorb and store huge volumes of carbon⁴⁵. In addition, forests in Africa provide a host of other benefits for people and planet including vital ecosystem services such as clean air, food, energy and water while also supporting livelihoods and biodiversity⁴⁶. However, forests in Africa are facing mounting threats from human activities leading to deforestation, forest degradation and biodiversity loss⁴⁷. Protecting forests in Africa is therefore key towards strengthening climate action while also ensuring the health and well-being of both humanity and nature.

Protecting forests from degradation and biodiversity loss is a key agenda both globally and in Africa. For example, SDG 15 under the 2030 Agenda for Sustainable Development seeks to inter alia protect, restore and promote sustainable use of terrestrial ecosystems

⁴³ Ibid

⁴⁴ United Nations Development Programme., 'Forests can help us limit climate change – here is how' Op Cit

⁴⁵ United Nations Environment Programme., 'Supporting sound ecosystem management' Op Cit

⁴⁶ Nzabarinda. V et al., 'Expanding forest carbon sinks to mitigate climate change in Africa' Op Cit

⁴⁷ Igini. M., 'Deforestation in Africa: Causes, Effects, and Solutions' Op Cit

including forests for sustainability⁴⁸. It urges all countries to sustainably manage forests, halt deforestation, restore degraded forests and increase afforestation and reforestation activities in order to effectively protect forests from degradation and biodiversity loss⁴⁹. In addition protecting and restoring forests is part of the key objectives under the *United Nations Decade on Ecosystem Restoration*⁵⁰ in order to protect biodiversity, prevent the mass extinction of species, end poverty, combat climate change and enhance human well-being⁵¹. Further, the *Bonn Challenge*⁵² is a global goal that seeks to restore 350 million hectares of the world's degraded and deforested lands by 2030. The Bonn Challenge has resulted in millions of hectares of degraded and deforested lands being restored globally thus strengthening climate action, enhancing biodiversity conservation, and creating jobs⁵³.

At a continent level, African Union's *Agenda 2063*⁵⁴ acknowledges the special place of forests in Africa's economic, social, and cultural well-being as vital sources of food, energy, construction material, employment, local and foreign trade as well as cultural identity. Agenda 2063 further recognises that forests provide vital environmental services for Africans including controlling soil and water erosion, regulating climatic variability, conserving lakes and wetlands, and freshwater systems⁵⁵. It seeks to ensure that Africa's forests are fully conserved and sustainably used⁵⁶.

Protecting forests from degradation and biodiversity loss is therefore a well-established agenda both globally and in Africa. Achieving this ideal involves several strategies

⁴⁸ United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' Op Cit

⁴⁹ Ibid

⁵⁰ United Nations Environment Programme., 'Preventing, Halting, and Reversing Loss of Nature' Available at <https://www.decadeonrestoration.org/> (Accessed on 26/09/2025)

⁵¹ Ibid

⁵² The Bonn Challenge., Available at <https://www.bonnchallenge.org/> (Accessed on 26/09/2025)

⁵³ Ibid

⁵⁴ African Union., "Agenda 2063: The Africa we Want." Op Cit

⁵⁵ Ibid

⁵⁶ Ibid

including restoration, reforestation, assisted natural regeneration of trees, agroforestry, and afforestation among other initiatives⁵⁷. It has been argued that halting the loss and degradation of forest ecosystems and promoting their restoration has the potential to contribute over one-third of the total climate change mitigation required by 2030 to meet the objectives of the Paris Agreement⁵⁸. Achieving this goal requires collaborative approaches that involve all stakeholders⁵⁹.

It has been argued that collaborative approaches that involve all levels of government and all stakeholders including the private sector and local communities can lead to better forest conservation efforts⁶⁰. For instance, governments can set and implement laws and policies towards protecting forests including through establishing forest conservation areas, determining which species can be planted in reforestation or agroforestry schemes and what types of organizations can be given rights to access and manage forests⁶¹. Further, collaborative approaches involving the private sector are key in unlocking financing for forest restoration and conservation activities and research initiatives⁶².

In addition, collaborating with the public including local communities and indigenous peoples is vital towards effectively protecting forests from degradation and biodiversity loss⁶³. For example, it has been pointed out that indigenous peoples and local communities relate to forests socially, economically, politically and spiritually⁶⁴. Due to

⁵⁷ Muigua. K., 'Restoring Landscapes and Ecosystems for Climate Mitigation' Available at <https://kmco.co.ke/wp-content/uploads/2024/02/Restoring-Landscapes-and-Ecosystems-for-Climate-Mitigation.pdf> (Accessed on 26/09/2025)

⁵⁸ International Union for Conservation of Nature., 'Forests and Climate Change' Op Cit

⁵⁹ Ibid

⁶⁰ Collaborative management of forests., Available at <https://cgspace.cgiar.org/items/4bef8c64-4634-411e-9123-d0f03ab31b6a> (Accessed on 26/09/2025)

⁶¹ Ibid

⁶² United Nations., 'The Private Sector in Forest Financing' Available at <https://www.un.org/en/desa/private-sector-forest-financing> (Accessed on 26/09/2025)

⁶³ Forest Governance., Available at <https://www.un-redd.org/sites/default/files/2021-10/mpdf.pdf> (Accessed on 26/09/2025)

⁶⁴ UN-REDD Programme., 'Indigenous Peoples see the importance of protecting forests but can the rest of the world follow?' Available at <https://www.un-redd.org/post/indigenous-peoples-see-importance->

their heavy reliance on forests for the livelihoods and well-being, the health and vitality of forests is a matter of survival for indigenous peoples and local communities globally⁶⁵. Indigenous peoples and local communities in Africa have therefore developed sustainable practices including the use of traditional knowledge, sustainable agriculture and resource management to ensure that forests and other natural resources are well protected⁶⁶. Their indigenous and traditional practices are rooted in a deep understanding of and respect for ecological systems and promote sustainable resource use⁶⁷. Consequently, the practices of indigenous peoples and local communities have a minimal adverse impact on the environment and are highly adaptive to ecological changes, fostering healthy and resilient ecosystems including forests⁶⁸. Collaborating with indigenous peoples and local communities is therefore necessary towards effectively protecting forests from degradation and biodiversity loss.

4.0 Conclusion

Forests in Africa are vital carbon sinks which play a key role in strengthening the continent's response to climate change. However, in light of mounting threats due to human activities, it is imperative to protect forests from degradation and biodiversity loss for effective climate action. Collaborative approaches involving all stakeholders including governments at the national and local levels, the private sector and the public including indigenous peoples and local communities are more effective towards achieving sustainable governance and management of forests⁶⁹. Utilising collaborative approaches is therefore an effective strategy towards protecting forests from degradation and biodiversity loss for sound climate action in Africa.

[protecting-forests-can-rest-world-follow#:~:text=Why%20are%20Indigenous%20Peoples%20vital,biodiversity%2C%20according%20to%20the%20UNEP.](#) (Accessed on 26/09/2025)

⁶⁵ United Nations Development Programme., 'Forests can help us limit climate change – here is how' Op Cit

⁶⁶ UN-REDD Programme., 'Indigenous Peoples see the importance of protecting forests but can the rest of the world follow?' Op Cit

⁶⁷ Ibid

⁶⁸ Ibid

⁶⁹ Forest Governance., Op Cit

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