



LIVING PLANET MONITOR

SOUTHERN AND EASTERN AFRICA

Monitoring Our Commitment to Sustainable Food Systems, Conservation of Land, Ecological Biodiversity, and Water Justice in Africa



The Living Planet Monitor gives you an overview of the situation in a particular continent in the world by monitoring indicators on food security, water resources, land use, and climate resilience. It is a key instrument for faith communities to stay informed on the current situation, share good practices and projects led by church-based organizations, and give hope and courage to transform the situation.



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foreword

Rev. Prof. Dr Jerry Pillay, General Secretary, WCC

In an era marked by rapid globalization and a pressing climate emergency, the urgent need for sustainable development and a nuanced understanding of the interplay between land use, water resources, and food security has never been more evident. As we face the far-reaching impacts of climate change, population growth, and socioeconomic disparities, addressing these interconnected challenges is crucial for our collective future.

The World Council of Churches (WCC) has long engaged with issues of climate change and its interconnection with bio-diversity and creation. The 11th Assembly of the WCC in Karlsruhe issued the Living Planet statement, highlighting the climate emergency, urging governments to urgently uphold the Paris Agreement targets, and encouraging its member churches to “walk the talk” towards an ecologically just lifestyle and actions.

The recent statements issued by the WCC Executive Committee on the intertwined issues of climate change, biodiversity, and its impact on land, water, and food affirm the assembly statement. The WCC has now established the Climate Justice and Sustainable Development (CCJSD) Commission with several working groups, including one on biodiversity as well as one on Land, Water, and Food Justice. This new approach integrates these challenges into a cohesive nexus, aiming for sustainable solutions to the challenges posed by climate change but also highlighting the interplay between land, water and food-related issues that are aggravated by climate change.

The Living Planet Monitor (LPM) of WCC is central to this strategy, offering comprehensive insights and up-to-date information on the status of these issues in different countries. The Living Planet Monitor is a substantial publication of WCC that responds to the Land, Water, and Food situations in various countries and showcases impactful projects and stories from churches worldwide in response to these challenges.

Faith-based organizations play a pivotal role in this context. Rooted in principles of stewardship, compassion, and social justice, churches possess a unique voice in advocating for sustainable resource use and environmental justice. Their global networks and local connections empower them to drive meaningful change, from grassroots initiatives to high-level policy advocacy. WCC, as a leading FBO, the global fellowship of churches representing almost 600 million Christians, is well placed to lead these issues from the front.

As you explore the well-researched articles and insights in this edition of the LPM, we invite you to reflect on our shared responsibility to care for both our planet and each other. The challenges we face are substantial, but by working together, we have the power to make a meaningful impact. We hope this publication inspires thoughtful conversations, creative solutions, and a renewed commitment to building a just and sustainable future where everyone can thrive with their right to land, water, and food ensured. To this end, the WCC is fully committed to addressing these issues holistically, and the Living Planet Monitor publication will be an important tool of the WCC in that direction.

introduction

Welcome to the inaugural issue of the Living Planet Monitor (LPM), a substantial new World Council of Churches (WCC) series offering a comprehensive outlook on how different regions manage their land, water and food resources. Through these volumes, we will share valuable insights through analysis and by highlighting real-world stories and good practices from churches and faith-based communities.

This publication is part of the WCC's broader strategy to address pressing ecological and economic issues within the framework of our Climate Justice and Sustainable Development (CCJSD) Commission and its working group on land, water, and food. The LPM is a key initiative under this strategy, with each volume exploring a different continent.

The LPM uses up to 24 indicators to assess the situation of land, water, and food in various countries and how they are being impacted by climate change. We aim to monitor these indicators globally, providing a platform for churches and communities to engage, share, and inspire action.

This edition of the Living Planet Monitor (LPM) investigates the critical nexus of land, water, and food in Africa. These interconnected issues are at the heart of sustainable development, and their impact is deeply felt across the continent. Our focus in this edition is to provide an in-depth look at South and East Africa, highlighting key indicators and the challenges.

With a rapidly growing population, rich biodiversity, and substantial natural resources, Africa stands at a pivotal moment. The decisions made today regarding land management, water conservation, and agricultural practices will shape the continent's resilience against climate change, conflict and other global pressures tomorrow.

As you study the articles in this edition, consider how these issues intersect in your context and how your community can shape sustainable solutions. The WCC is committed to promoting mutual learning and empowering churches, congregations, and communities to take active roles in addressing land, water, and food challenges, ensuring that the needs of the most vulnerable are met through responsible stewardship and compassionate action.

On behalf of the Public Witness and Diakonia (PWD) Programme of WCC and the Living Planet unit of PWD, we would like to congratulate the Land, Water, and Food Justice team, led by our programme executive, Dinesh Suna, the editor of the LPM, Solene Villota-Jetzer, the managing editor and their team for producing this well researched and inspiring publication.

We encourage you to read, share, and contribute to the future editions of LPM.

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editorial

sustainable world. In the spirit of continuous learning and action, we'll provide a sneak peek of our next issue's theme and recommending resources for those who wish to delve deeper into these crucial topics.

In the coming pages, you'll find in-depth interviews, case studies and project spotlights, and a detailed presentation of the current situation that paint a vivid picture of the climate-related challenges facing Southern and Eastern Africa as well as innovative solutions being developed at a grassroots level.

The Living Planet Monitor is a reminder of our commitment to sustainable food systems, conservation of land, ecological biodiversity, and protection of water resources. Through faith-based initiatives, we are tackling these issues in the framework of justice and human rights. We hope this periodic publication will help you in your understanding of these ecological issues affecting our living planet and inspire you with good practices from faith communities.

We look forward to receiving your feedback. If you have examples of good practices on behalf of your faith community, we would love to receive them and hopefully include them in our future publications.

On behalf of the editorial team,



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Dear readers,

Welcome to the inaugural issue of the Living Planet Monitor, an initiative led by the World Council of Churches through the Programme on Ecumenical Advocacy for Land, Water and Food Justice, within the Living Planet programme unit. This publication is dedicated to exploring the intersection of faith, climate change, food security, land use, biodiversity, and water accessibility across our global community. With each volume, we'll journey to a particular continent in the world and explore the specific context of one region, shining a light on unique challenges and inspiring solutions.

In this first edition, we turn our attention to Africa: specifically, Southern and Eastern Africa. Africa is a continent of immense diversity, facing complex environmental challenges, and it stands at the forefront of climate change impacts, with many regions facing severe droughts, unpredictable rainfall patterns, and increasing food insecurity. Yet, amid these challenges, we find stories of resilience, innovation, and hope.

Our feature interviews bring you stories from faith communities across Southern and Eastern Africa, each facing unique challenges but united in their commitment to stewardship of our shared Earth. You'll read about innovative projects that are not only addressing immediate needs but also building long-term resilience in communities that are most vulnerable to environmental and social upheavals.

As we explore these topics, we're reminded that the issues of climate change, food security, and water access are not isolated concerns—they're interconnected challenges that require holistic solutions. The projects and stories we share demonstrate how faith communities are uniquely positioned to address these complexities, weaving together spiritual teachings with practical action.

We're also excited to announce that this publication marks the beginning of a new journey. Moving forward, we'll be inviting you, our readers, to share your own stories and projects. Your experiences and insights are invaluable as we work together to create a more just and



1.

Understanding our world through key indicators

In today's interconnected world, data-driven insights are crucial for addressing global challenges related to land use, water resources, and food security. This unique publication series bridges a critical gap by compiling comprehensive data on these interconnected domains, enabling a deeper understanding of the complex land-water-food nexus. By offering key indicators at global, regional, and country levels, we provide the tools to analyze specific situations, identify trends, and plan targeted actions to meet the United Nations' Sustainable Development Goals (SDGs).

The strength and legitimacy of this publication lie in its data sources. We draw from authoritative United Nations organizations such as the Food and Agriculture Organization, the World Health Organization (WHO), and World Bank databases. Additionally, we incorporate data from peer-reviewed scientific articles, governmental and institutional reports, and other reputable sources. To ensure transparency and facilitate further learning and research, all cited data within the publication are referenced in the last section of the document. Readers may directly click on the reference number and will be directed to the relevant reference. This curated compilation of diverse, high-quality data sets the foundation for informed decision-making and effective policy development in addressing the intricate challenges at the intersection of land, water, and food systems.

THE GLOBAL GOALS For Sustainable Development





1.1 Indicators on land and biodiversity

The land indicators presented in this publication series offer an overview of how countries manage and utilize their terrestrial resources. We examine land cover and use, including arable land, land used for agriculture, and current forest cover. These indicators are vital for understanding biodiversity conservation efforts, the impacts of land degradation, and the effectiveness of land management policies. By tracking changes in land use over time, we can assess a country's progress toward sustainable land practices and identify areas requiring intervention. Land indicators also include an outlook on land rights in the region, notably looking at land tenure systems and women's rights to land.

Here are some useful definitions:

Land cover

Land cover¹ is defined as the observed physical cover on the earth's surface, including vegetation (natural or planted) and human constructions. Mapping land cover allows for assessment and monitoring of terrestrial ecosystems and changes within them, which are crucial for the sustainable management of natural resources.

Land use

Land use² is characterized by the arrangements, activities, and inputs people undertake in a certain land cover type to produce, change, or maintain it. The definition of land use in this way establishes a direct link between land cover and the actions of people in their environment.

Biodiversity

Biodiversity³ refers to the variety of living species on Earth, including plants, animals, bacteria, and fungi. A common way to measure biodiversity is to count the total number of species living within one particular area. Tropical regions, which are warm all year round, have the most biodiversity, whereas regions with cold or dry conditions have the least.

Land rights

Land rights⁴ broadly refer to the rights to use, control, and transfer a parcel of land. They include rights to occupy, enjoy, and use land and resources; to restrict or exclude others from the land; to transfer, sell, purchase, grant or loan, inherit and bequeath, develop or improve, rent or sublet; and to benefit from improved land values or rental income. Land rights usually fall within the categories of land laws, land tenure agreements, or planning regulations and are rarely associated with human rights law.



1.2 Indicators on water resources

Water is a fundamental resource for life and development. The water indicators presented in this publication series focus on availability, consumption patterns, and management practices. We look at renewable water resources, access to safe drinking water, and sanitation facilities. These metrics are essential for evaluating a country's water security, the sustainability of its water use, and the effectiveness of its water management policies. We also scrutinize whether it is under public or private control and its potential impact on the ability of the government to uphold the right to water for its population. Understanding these indicators is crucial as the world faces increasing water scarcity due to climate change, neoliberal agendas, and changing consumption patterns.

Here are some useful definitions:

Water availability

Water availability⁵ refers to how much water is physically accessible (water quantity) and whether that water is safe to use (water quality). The differences in water quantity and quality across the landscape and how they change through time determine whether there is enough water for human and ecosystems' needs.

Water use

Water use⁶ refers to water actually used by end users, such as households, services, and agriculture, within a territory for a specific purpose, such as domestic use, irrigation, or industrial processing.

Water scarcity

Water scarcity⁷ is a lack of fresh water available to meet the demands of humans due to physical or economic reasons. It is a relative concept as the amount of fresh water that can be physically accessed varies as supply and demand changes. Water scarcity intensifies as demand increases and/or water supply is affected by decreasing quantity or quality.

Water stress

Water stress⁸ occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use. Water stress causes deterioration of freshwater resources in terms of quantity (overexploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.).

1.3 Indicators on food security and agriculture

Food security is a critical aspect of human well-being and national stability. Our food indicators encompass various dimensions, including availability, access, utilization, and stability. We examine metrics such as prevalence of undernourishment, food price inflation, and agricultural productivity. These indicators help us understand a country's ability to feed its population, the nutritional status of its people, and the resilience of its food systems to shocks. In an era of climate uncertainty and global market volatility, these indicators are invaluable for identifying vulnerabilities and informing policy decisions.

Here are some useful definitions:

Food security

Food security⁹ exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

Moderate and severe food insecurity

A person is food insecure¹⁰ when they lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life. People experiencing moderate food insecurity have reduced the quality or quantity of their food and are uncertain about their ability to obtain food due to lack of money or other resources. Severe food insecurity is a situation in which a person has run out of food or has gone days without eating.

Prevalence of undernourishment or hunger

Hunger is an uncomfortable or painful physical sensation caused by insufficient consumption of dietary energy. It becomes chronic when the person does not consume a sufficient amount of calories on a regular basis to lead a normal, active, healthy life. The prevalence of undernourishment¹¹ estimates the extent of hunger in the world.

Prevalence of stunting

Stunting¹² is the impaired growth and development that children experience from poor nutrition, repeated infection, and inadequate psychosocial stimulation. Children are defined as stunted if their height-for-age is more than two standard deviations below the WHO

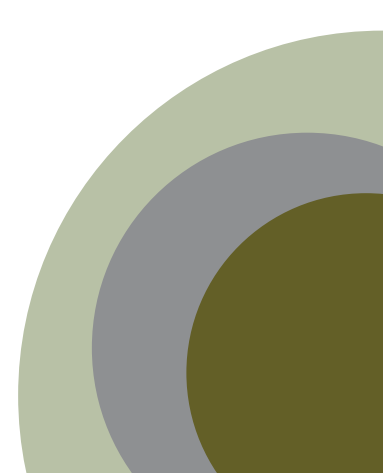
Child Growth Standards median.

By examining these interconnected indicators, we aim to provide a holistic view of each country's challenges and opportunities in managing its natural resources and ensuring the well-being of its population. This knowledge is crucial for policymakers, researchers, and engaged citizens alike, as we collectively work toward a more sustainable and food-secure future.

We hope this series will foster a deeper understanding of these critical issues and inspire informed discussions and actions toward addressing global challenges in land management, water resources, and food security.

Action: The church's role in environmental stewardship

Faith-based organizations, especially churches and their related agencies, have a unique and vital role to play in addressing issues of land use, water resources, and food security. These topics are intrinsically linked to core Christian values of stewardship, compassion, and social justice. As trusted community leaders, and often as first responders due to their global and local presence, churches can raise awareness about these critical issues, mobilize local action, and advocate for policies that promote sustainable practices and equitable access to resources. By engaging with these topics, church organizations can fulfil their mission to care for God's creation and the most vulnerable members of society. Churches can also leverage their global networks to foster international cooperation and support, bridging gaps between policymakers and local communities. Moreover, by advocating for responsible land management, water conservation, and food security, churches demonstrate their commitment to holistic well-being—addressing not just spiritual needs, but also the physical and environmental challenges facing their communities and the world at large.





2. Outlook for Africa

Africa, the second-largest continent,¹³ accounts for one-fifth of Earth's total land area.¹⁴ Encompassing 54 countries, it boasts a diverse range of ecosystems, from lush tropical rainforests to expansive savannas and deserts. This vast continent is home to over 1.3 billion people¹⁵ and is characterized by a rapidly growing young population, increasing by more than 2%¹⁶ annually over the past 30 years. Half of Africa's population is under 20 years old, contributing to booming urbanization across the continent.

Africa possesses significant reserves of minerals, oil, and gas, as well as vast tracts of arable land. The continent also hosts unparalleled biodiversity, home to a quarter of the world's species and some of the planet's most iconic wildlife. Apart from Southern Africa and Northern African countries that have diversified economies, most African nations¹⁷ remain highly dependent on agriculture, predominantly subsistence farming. The agriculture and mining sectors collectively employ the largest number of Africans.

According to the World Meteorological Organization (WMO), Africa is responsible for only 10%¹⁸ of global greenhouse gas emissions; however, the continent bears the disproportionate burden of climate change impacts. In 2023 alone, an estimated 110 million people across the continent were affected by climate-related disasters. These negative impacts are having lasting effects on levels of food security, natural ecosystems, and livelihoods while fuelling conflict, displacement, and migration. There is an urgent need for global action and support to bolster Africa's adaptation and resilience efforts in the face of these mounting challenges.

2.1 Indicators: land and biodiversity

Africa boasts vast and diverse landscapes, ranging from extensive tropical forests to grasslands, drylands, and deserts. According to the Food and Agriculture Organization (FAO), forests cover approximately 650 million hectares,¹⁹ or a third of the continent, while grasslands account for another third. Cultivated land represents 12% of the total area,²⁰ more than double that of the European Union, making Africa the second-largest agricultural region after Asia. This cultivated

area has increased by 5%²¹ since 2000. Land degradation is also a significant concern, with 30 million hectares²² assessed as degraded in 2020, according to the FAO, primarily due to deforestation. The Convention on Biological Diversity (CBD) assesses the continent as a biodiversity hotspot, harbouring around a quarter of global biodiversity²³ and supporting the world's largest populations of large mammals. Yet, these ecosystems face mounting threats, with species populations declining by approximately 39% since 1970.²⁴

Land rights in Africa often operate under customary land rights systems,²⁵ also known as traditional or informal land rights, reflecting long-standing cultural norms. These systems can be incredibly complex, relying on a particular people's or tribe's historical association with the land, and they differ from formal land tenure rights based on centralized public registries. In Africa, formal and informal land ownership systems coexist, sometimes in a conflicting state due to government or corporations exploiting weak customary rights²⁶ or because of unjust distributions due to colonial legacies. This complex landscape of land rights makes it challenging to compile comprehensive statistics on land ownership across Africa. According to World Bank data, large portions²⁷ of agricultural land remain unregistered, particularly in Sub-Saharan Africa. Only 10% of rural land in Africa is formally documented, and a mere 4% of countries²⁸ have documented land in their capital cities. Furthermore, informal custodian rights and certain cultural norms hinder women's access to land. According to a study led by the FAO across 10 countries, only 12% of women reported owning land, compared to 31% of men.²⁹ There is also much regional variation: In Sub-Saharan Africa, women own 19% of landholdings, while in Northern Africa, this figure drops to less than 5%.³⁰

The FAO highlights the urgent need to manage the finite land available³¹ to accommodate agriculture, urban development, and natural resource management. Failure to secure land access and rights, combined with diminishing land resources, is leaving an increasing number of rural poor³² facing the prospect of land displacement and landlessness.

2.2 Indicators: water resources

According to the World Wildlife Fund (WWF), Africa holds 9% of global freshwater resources³³ but still faces a severe water crisis. The continent's water distribution is highly uneven, with 54% of the supply³⁴ held by just six countries, while 27 water-poor countries share only

7%.³⁵ The World Health Organization (WHO) reports Africa as the second-driest continent after Australia. The continent therefore struggles with water scarcity, affecting approximately one in three people³⁶ in the region. The WHO's Regional Office in Africa lists that 14 countries in Africa³⁷ are experiencing water stress, with another 11 are expected to join them by 2025. At that point, nearly half of Africa's predicted 1.45 billion population will likely face water stress or scarcity.

The Monthly Food Security Monitor, published by AGRA, estimated in May 2024 that agriculture was the largest water consumer, accounting for 85-88% of total water use.³⁸ However, the FAO reports that only 10% of the total cultivated area³⁹ is under irrigation, making food production highly rainfall dependent. Climate change is exacerbating water scarcity in Africa,⁴⁰ causing unpredictable weather patterns and intense events such as the persistent drought⁴¹ in the Horn of Africa, which threatens hundreds and thousands of lives, destabilizing communities.



In 2023, the United Nations Development Programme (UNDP) published in its most recent report that Africa is still far from reaching Sustainable Development Goal 6, “Ensure availability and sustainable management of water and sanitation for all,” with only 39% of the population⁴² having access to safely managed drinking water. Still, this represents a slight increase from 36% in 2015. Progress has been most notable in Northern and Southern Africa. Regarding sanitation, nearly three out of four Africans⁴³ still lack access to safely managed facilities. Only two out of 48 countries, Egypt and Tunisia, are on track to achieve universal coverage of at least basic sanitation by 2030. According to the United Nations International Children’s Emergency Fund (UNICEF), on average, Africans use only 30 to 40 litres of water⁴⁴ per day, and in the remotest areas, as little as 4 litres—far below the WHO-recommended 50 litres for basic sanitation. Limited access to safe water and sanitation facilities poses major health risks. Almost half of Africa’s population suffers from one of the six major water-related diseases.

As reported by the World Bank, during the 1990s, African countries, like many developing nations, were pressured to privatize public services,⁴⁵ including water, by donor agencies and international institutions. This was promoted as a means to improve efficiency, coverage, and investment. However, water privatization has progressed more slowly than in other sectors due to challenges such as high fixed costs, location specificities, and complex long-term concession agreements. Despite claims of improved production efficiency, case studies from African countries reveal that privatized water utilities⁴⁶ often do not outperform state-run utilities in terms of cost efficiency and service quality. Moreover, they tend to disadvantage the poorest citizens. A study performed by the World Bank showed that private sector charges were around 82% higher⁴⁷ than public utilities. Ensuring affordable, safe, and accessible water for all, particularly the most vulnerable, should be a fundamental government priority. Policies must explicitly uphold the right to water for all citizens.

2.3 Indicators: food security and agriculture

Africa’s food security outlook is extremely concerning, with a complex interplay of factors contributing to a worsening crisis. Conflicts, climate variability, economic challenges, and the lingering effects of the COVID-19 pandemic have collectively pushed millions⁴⁸ into food insecurity, with women and girls disproportionately affected. The Global and Regional

Food Security Outlook published by the FAO reports that the prevalence of moderate or severe food insecurity has risen from 47% in 2014 to 61% in 2022.⁴⁹ Central Africa is the most affected region, with 78% of its population⁵⁰ facing food insecurity. In 2023, reports from the FAO estimated that 146 million people across 36 countries faced acute food insecurity at crisis level, an increase of 12 million from 2022. Hunger continues to rise, reaching almost 20% in 2022,⁵¹ affecting over 280 million people.⁵² Malnutrition remains a critical issue, with 30% of children⁵³ under age five stunted in 2022. The food security crisis⁵⁴ affects rural populations most, as they often do not produce enough to feed their families and do not have the economic means to buy food. The Africa Centre for Strategic Studies states that conflict remains the primary driver, with 82%⁵⁵ of those facing acute food insecurity living in conflict-affected countries. The affordability of healthy diets is a major concern, with almost 80% of the population⁵⁶ unable to afford nutritious food in 2021. At the same time, obesity is also on the rise: the FAO reports adult obesity levels at 12.8% in 2016.⁵⁷ Adult and child obesity rates are highest in Northern and Southern Africa, at 25% and 27% respectively.⁵⁸ African countries therefore also now face a double burden of malnutrition as a major public health issue.

The agricultural sector, upon which about half the population depend for their livelihoods, struggles to meet the needs of the rapidly growing population. Africa has become a net importer of cereals,⁵⁹ despite steady increases in agricultural production over the past 30 years. The sector is dominated by small family farms, with 33 million farms of less than 2 hectares⁶⁰ accounting for 80% of all farms. Women play a crucial role in agriculture, often providing the majority of labour; however, their labour often goes unrecognized. Climate-related events, such as the prolonged El Niño,⁶¹ further exacerbate the food security crisis, particularly in Southern Africa. Addressing these challenges will require significant investments in sustainable agricultural growth, conflict resolution, climate adaptation, and economic development to improve food security and nutrition across the continent.



3.

Climate Change Impacts and the African Continent

3.1 The impacts of climate change throughout the African continent

Even though Africa only accounts for the smallest share of global GHG emissions (3.8%),⁶⁴ the African continent is particularly vulnerable to the impacts of climate change and rising temperatures and is facing severe and multifaceted challenges. The continent's diverse regions are affected in starkly different ways, exacerbating existing socioeconomic inequalities and development gaps. Many parts of Africa grapple with the devastating effects of prolonged droughts, while others are experiencing increased rainfall events and flooding. Southern Africa is grappling with a humanitarian and environmental crisis because of rising temperatures and lack of precipitation, resulting in a prolonged drought. Several countries, such as Zimbabwe, Zambia and Malawi, have declared states of emergency⁶⁵ whereas, since June 2024, West and Central Africa have been

suffering from torrential rains and severe flooding.⁶⁶ Chad is the worst-hit country, with 1.9 million people affected. As of October, one million people have been internally displaced within the region.

All African states have in common that the financial and technological means to adapt to climate change are much less than in wealthy, industrialized countries that at the same time have a historical responsibility for global warming.

3.2 An urgent need for adaptation and mitigation strategies

According to the WMO State of the Climate in Africa 2023 report,⁶⁷ African countries are losing 2-5% of their Gross Domestic Product (GDP) and diverting up to 9% of their budgets to respond to climate extremes. In sub-Saharan Africa, the cost of adaptation is estimated



What is climate change?⁶²

Climate change refers to long-term shifts in temperatures and weather patterns. Since the 1800s, human activities have been responsible for global warming, primarily due to burning fossil fuels like coal, oil, and gas. Burning fossil fuels generates greenhouse gas emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures. Energy generation, manufacturing and industry production, cutting down forests, and producing food are some main sectors causing greenhouse gases.⁶³ The consequences of climate change are not only increasing temperatures but also include intense droughts, water scarcity, severe fires, rising sea levels, flooding, catastrophic storms, and melting polar ice. These changing weather patterns affect our health, the ability to grow food, housing, work, and our safety.

to be between US\$ 30-50 billion per year over the next decade (or 2-3 percent of the region's GDP). By 2030, up to 118 million extremely poor people (living on less than US\$ 1.90 per day) in the African region could be exposed to drought, floods, and extreme heat, placing additional strain on poverty alleviation and development efforts.

The core issue is that African countries, which have contributed the least to the greenhouse gas emissions driving global warming, are the most affected by the consequences of climate change and have the least resources and capacities to adapt rapidly to accelerating weather-related hazards. Weaker infrastructure limited social safety nets, and reliance on climate-sensitive livelihoods, such as subsistence farming, leave these nations and their citizens extremely vulnerable. The most urgent needs now include increasing investments in climate adaptation and energy sovereignty, leapfrogging fossil fuel-based energy expansion and jumpstarting the development of renewable energy systems. The African continent must secure cheaper and cleaner energy for its population.

3.3 Impacts of climate change on food security, water resources, and land use

Climate change has a very significant impact on all of these fields. If current trends continue, crop production in Africa will decline by 2.9% in 2030 and by 18% by 2050; up to 200 million people will be at risk of extreme hunger by 2050; a crop revenue loss of approximately 30% will cause a 20-30% rise in poverty; and up to 50 million African will be pushed into water distress.⁶⁸ It is important to note that in Africa, 42.5% of the working class is employed in agriculture.

Additionally, monoculture is very sensitive to climate

disruption. There is a need for more varied crops, different agricultural and land restoration techniques, such as intercropping and Farmer Managed Natural Regeneration, and measures to protect biodiversity. At the same time, this is difficult to implement in a global economic structure that demands monocultural agricultural exports from African countries and if local economies are not supported to adapt and build resilience to climate change.

3.4 Lack of international climate financing

Compounding these adaptation challenges is the glaring lack of climate finance flowing to Africa from the world's wealthiest, most industrialized countries, which bear the historic responsibility for the climate crisis. The failure to meet the promised 100 billion dollars per year to fund the Green Climate Fund and generally the lack of funds reaching African countries are preventing them from building resilience where it is the most needed. The newly established Loss and Damage Fund agreed upon at COP28 in Dubai—arguably the COP's only positive outcome—provides some hope. However, there is little funding for it, and how it will work and who will benefit from the fund is far from clear.

The WCC Karlsruhe Assembly Statement, *The Living Planet: Seeking a Just and Sustainable Global Community*,⁶⁹ emphasizes:

Wealthier populations and countries that are responsible for the bulk of emissions must take the lead in reducing their own emissions and in financing emission reductions in poorer nations. They must also respond constructively to claims for reparations for the loss and damage already suffered and providing financial support



for the mitigation and adaptation measures that all must take, but not all have the means to achieve. The voices, experiences and perspectives of those most affected and most vulnerable groups, such as children, youth, people with disabilities, women, Indigenous Peoples, smallholder farmers, and poor and marginalized communities must be lifted up and amplified in all negotiations on climate change and environmental sustainability.

3.5 Faith-based organizations and climate activism

Churches in Africa can play a pivotal role in climate activism and community resilience. One major contribution that faith communities can bring is the narrative of justice and transformation to inspire hope and action. The African Faith Actors Network on Climate Justice, convened by the AACC, continues to spearhead national, regional, and global processes, including participation at Africa Climate Week and the climate COPs.⁷⁰

In 2023, parts of the region were hit by powerful cyclones and floods, leading to loss of lives, livelihoods, homes and critical infrastructure. In response, the All Africa Conference of Churches appealed to governments in developed countries to commit to the Paris Agreement goal of limiting global warming to the relatively safe threshold of 1.5 C and the full operationalization of the Loss and Damage Fund.⁷¹

It is also about walking the talk, as stated in the WCC Karlsruhe assembly statement, *The Living Planet*⁷²:

To “walk the talk” and to taking all such actions as we are able in our own contexts to help drive a just transition to a sustainable future, drawing inspiration from the Roadmap for Congregations, Churches and Communities for an Economy of Life and Ecological Justice 10 and the many other resources made available by the WCC and others.

3.6 The road ahead to COP29

As the world looks toward COP29 in Azerbaijan, African nations will undoubtedly make their voices heard, pressing for meaningful progress on equitable climate finance, loss, and damage mechanisms and accelerated support for renewable energy transitions.

Climate finance is of high interest for Africa. How much of it and how it will be organized are the issues. It is essential that climate finance be based on need, that it be in the form of grants instead of loans, which increases indebtedness, and that it reaches the most vulnerable, supporting women, youth, and Indigenous Peoples who are defending most of the crucial ecosystems that we need to mitigate climate change.

Mitigation is also of high interest for Africa. It is critical for the wealthiest 10% of this world to lower their emissions drastically if we are to have a chance to keep temperature rise to under 2° Celsius. We are afraid that the 1.5 C target is most likely gone. This means climate disruption and more need for climate finance.

The future sustainability and development of the African continent hangs in the balance, underscoring the moral imperative of the global community to finally deliver on its climate commitments by lowering its emissions, which represents the only viable solution to maintain the current rise in temperatures. The vulnerabilities of Africa can only be addressed in time through a dramatic scaling up of ambition and solidarity.



4.

Southern and Eastern Africa: Regional analysis of land use, water resources, and food security

Southern and Eastern Africa are characterized by arid deserts, savannas, lush forests, and fertile highlands. These regions have diverse cultures, languages, and histories. They also face challenges related to land, water, and food security. This publication shares how these factors affect these communities' livelihoods and development and their responses and actions toward land, water, and food justice.



4.1

Indicators: land and biodiversity

4.1.1 Southern Africa

Southern Africa exhibits diverse ecosystems but confronts considerable challenges in land use and biodiversity preservation. Historical land disparities in nations such as South Africa and Namibia have resulted in persistent land redistribution initiatives designed to rectify the inequities established by colonial policies. Nonetheless, these initiatives encounter environmental challenges. Land degradation, caused by overgrazing, deforestation, and agricultural expansion, persistently diminishes land productivity and adversely affects biodiversity.

Between 2001 and 2022, South Africa experienced a loss of approximately 255,000 hectares of tree cover,⁷³ primarily attributed to agricultural expansion and illicit land use practices. Deforestation leads to biodiversity loss and ecosystem degradation, jeopardizing food security and livelihoods.

Initiatives such as South Africa's White Paper on the Conservation and Sustainable Use of Biodiversity⁷⁴ seek to incorporate conservation into land use planning to safeguard ecosystems while fostering sustainable development. This policy emphasizes the significance of biodiversity in sustaining livelihoods and the economy, ensuring that land reform policies are congruent with environmental sustainability.

The historical disparities in land ownership, particularly in countries such as South Africa, Zimbabwe, and Namibia, have led to significant land redistribution initiatives. The objective of these initiatives is to rectify the colonial-era policies that concentrated land in the hands of a select few. Around 10% of the target had been achieved by 2022, with approximately 9 million hectares of land redistributed in South Africa and 3.3 million in Zimbabwe. However, there is still much work to be done.⁷⁵

4.1.2 Eastern Africa

Eastern Africa is experiencing considerable land degradation and biodiversity decline as a result of rapid population growth and unsustainable agricultural expansion. Kenya and Uganda have encountered significant deforestation rates, jeopardizing ecosystems such as the Mau Forest,⁷⁶ which is crucial for water regulation and climate stabilization. Deforestation alters precipitation patterns, diminishes water

catchment capacity, and heightens the risk of droughts and floods. In Uganda, the annual deforestation rate is estimated at 2.6%,⁷⁷ jeopardizing wetlands and other essential ecosystems.

Disputes over land tenure in rural areas exacerbate the situation,⁷⁸ as ambiguous or insecure land tenure systems result in conflicts over land utilization. Population pressures and resource competition adversely affect food production and biodiversity. Kenya's initiatives encompass the Forest Conservation

and Management Act; however, however, challenges remain due to ongoing deforestation and the pressures of agricultural expansion.

In Tanzania, significant deforestation caused by slash-and-burn agriculture, illegal logging, and charcoal production has resulted in the degradation⁷⁹ of essential ecosystems such as the Eastern Arc Mountains. The Tanzanian government has established forest reserves and conservation initiatives; however, enforcement poses a significant challenge. The lack of modern agricultural methods intensifies the pressure on the land.

Ethiopia confronts considerable land degradation resulting from deforestation, overgrazing, and unsustainable agricultural practices. The Ethiopian government has launched comprehensive afforestation initiatives, including the Green Legacy Initiative,⁸⁰ to rehabilitate degraded environments and mitigate the impacts of climate change. Nonetheless, conflicts concerning land ownership and usage rights persistently obstruct these initiatives.

To resolve these issues, integrated strategies that incorporate sustainable land management, reforestation, and climate resilience initiatives are essential.

4.2

Indicators: water resources

4.2.1 Southern Africa

Water scarcity in Southern Africa constitutes one of the region's most significant challenges. Countries such as South Africa and Zimbabwe are significantly dependent on prominent river systems, including the Limpopo and Zambezi rivers. Nonetheless, climate change, unpredictable precipitation, and recurrent droughts are placing considerable pressure on these water resources. Droughts have diminished water availability⁸¹ for agriculture, adversely impacting food



production and inciting disputes over water access.

Recent reports indicate that Southern Africa has suffered a 33% reduction in water availability over the past two decades,⁸² a situation anticipated to deteriorate further due to persistent climate change. By 2050, the United Nations Environment Programme's Law and Environment Assistance Platform projects a 20% reduction in water flow in the Zambezi River Basin, posing a threat to water security for human consumption and agriculture.⁸³

Access to safe water and sanitation

Access to safe water and sanitation continues to be a considerable challenge in Southern Africa, exhibiting substantial disparities between urban and rural regions, especially in South Africa and Eswatini. Recent reports underscore the advancements achieved yet also reveal the existing deficiencies.

As of 2022, approximately 75% of South Africa's population had access to safely managed drinking water, with the figure declining to around 60%⁸⁴ in rural regions. Although 73% of the population had access to improved sanitation services, only 47% had access to safely managed sanitation, which entails facilities that guarantee appropriate treatment and disposal of waste. Moreover, 14% of households continued to engage in open defecation, predominantly in rural regions.

Eswatini confronts increasingly formidable challenges. In 2022, approximately 68% of the population had access to basic drinking water, whereas

only 43% utilized safely managed services,⁸⁵ especially in rural areas. Access to basic sanitation was 60%, with rural areas significantly trailing urban centres.

These statistics emphasize the imperative for sustained investment in infrastructure, especially in rural areas, to bridge the disparity in water and sanitation access throughout the region.

4.2.2 Eastern Africa

The situation in Eastern Africa is equally critical. The region relies on water sources such as Lake Victoria and the Nile River; however, escalating demands from agriculture, urbanization, and hydropower initiatives, including Ethiopia's Grand Ethiopian Renaissance Dam, have generated disputes among nations regarding water rights. The output from the dam is anticipated to be about 15,000 GWh per year, approximately 0.5 times more than the average hydropower generation from the Aswan High Dam over the past four decades.⁸⁶ The dependence on rain-fed agriculture in Eastern Africa renders the region particularly susceptible to climate change, which has already resulted in more frequent and severe droughts. In 2022, Kenya faced its most severe drought in 40 years, resulting in millions lacking access to potable water.⁸⁷

Access to safe water and sanitation

Eastern Africa encounters significant obstacles in obtaining water and sanitation, as there are substantial disparities between urban and rural populations.

4.3 Indicators: food security and agriculture

4.3.1 Southern Africa

The most recent WHO/UNICEF Joint Monitoring Programme indicates that 60% of the population in Eastern Africa is without access to safely managed drinking water, with rural areas experiencing an even greater percentage of this issue. In 2022, only 27% of the region's population had access to safely managed sanitation services, while 200 million individuals continued to engage in open defecation.⁸⁸

Additionally, hygiene services are inadequate, as 40% of the populace lacks access to basic handwashing facilities. A five- to sixfold increase in progress is necessary to achieve the SDG 6 on water and sanitation in the region. This includes the expansion of infrastructure for the safe management of water and sanitation services and the resolution of inequalities, particularly for marginalized communities.

As of 2022, 59% of the Kenyan populace had access to basic drinking water, while only 29% of the population had access to safely managed water services.⁸⁹ Water infrastructure challenges in rural areas have resulted in a significant number of residents relying on unimproved water sources. Sanitation access is even more restricted, with only 30% of the population having access to basic sanitation services and 14% benefiting from safely managed sanitation.

Ethiopia is confronted with significant obstacles, as only 51% of the populace has access to basic drinking water, with rural areas experiencing the most severe water shortages.⁹⁰ To guarantee that all citizens have access to safely managed water and sanitation services, current endeavours must be multiplied by up to six.

Agriculture is a pivotal element of Southern Africa's economy, with nations such as South Africa and Zimbabwe relying significantly on staple crops like maize. Nonetheless, the region's susceptibility to climate change, characterized by rising temperatures and unpredictable precipitation, has significantly affected food production. The International Food Research Institute (IFPRI) reports that droughts and pest infestations, such as the fall armyworm, have diminished maize yields by as much as 40% in certain years, resulting in food insecurity.⁹¹

Food insecurity in Southern Africa is at critical levels, intensified by climate change, conflict, and economic instability. In 2023, more than 30 million individuals in Southern Africa experienced severe hunger, with many requiring immediate food aid. Countries such as Zimbabwe, Angola, and Malawi have experienced significant adverse effects from droughts and unpredictable rainfall patterns, resulting in a marked decrease in agricultural output. In Eswatini, Lesotho, and Namibia, over 30% of the population faces food insecurity at crisis levels or worse.

Zimbabwe and Madagascar are severely affected, experiencing extensive malnutrition attributed to droughts,⁹² inadequate harvests, and economic



instability. Famine-like conditions are being reported in the southern regions of Madagascar, especially in areas severely impacted by extended droughts.

In response, numerous Southern African nations⁹³ are implementing agroecological approaches, including enhanced irrigation methods and crop diversification. These strategies are crucial for fostering resilience to climate shocks and guaranteeing food security.

4.3.2 Eastern Africa

Eastern Africa encounters substantial food security challenges, especially in nations such as Ethiopia, Somalia, and South Sudan. Prolonged droughts, economic instability, and hostilities have precipitated extensive hunger and malnutrition.

In Ethiopia, Somalia, and South Sudan, extended droughts, lack of economic stability, and conflict have resulted in widespread hunger and malnutrition, presenting Eastern Africa with severe food security challenges. Currently, over 22 million individuals in the region are experiencing food insecurity, according to the World Food Programme (WFP). Crop yields have been significantly affected by droughts, and pastoralist communities are currently grappling with restricted access to water and grazing land.⁹⁴

In response, governments and non-governmental organizations are advocating for adaptive strategies, including the introduction of drought-resistant crops like millet and sorghum.⁹⁵ The objective of these initiatives is to enhance agricultural productivity and to foster resilience in vulnerable communities. Another critical objective is to boost market access for smallholder farmers in order to preserve the viability of rural economies in the face of climate-related obstacles.⁹⁶

In Southern and Eastern Africa, land, water, and food interact in complex ways. These issues require integrated approaches that consider environmental sustainability, economic development, and social equity. Regional cooperation, infrastructure investment and community-based resource management are all critical for Southern Africa's and Eastern Africa's food security, water, and land justice.





5.

Country spotlights: South Africa, Zimbabwe, Kenya, and Ethiopia

5.1 South Africa: land, water, and food indicators

Situated at the southernmost tip of the African continent, South Africa boasts a diverse landscape ranging from coastal plains to inland plateaus and mountain ranges. With a population of over 60 million, it is one of Africa's most populous nations. Economically, South Africa boasts a mixed economy with robust sectors such as mining, manufacturing, agriculture, and services. However, challenges like unemployment, inequality, and poverty persist, requiring ongoing efforts to ensure inclusive growth and development. While significant progress has been made since the end of apartheid, the country continues to grapple with the legacies of its past, including social

and economic disparities. The impacts of climate change are increasingly felt across South Africa, with rising temperatures, droughts, and extreme weather events posing significant challenges to agriculture, water resources, and biodiversity.

Indicators: land and biodiversity

Land cover and use – South Africa covers over 120 million hectares,⁹⁷ with a coastline stretching more than 3000 km. Its topography varies from desert and semi-desert in the northwest to sub-humid and wet along the eastern coast, with half the country⁹⁸ classified as arid or semi-arid. According to the FAO, agriculture uses 80% of the land area,⁹⁹ but only 12% is arable,¹⁰⁰ with the rest being used for pastures or other agricultural purposes. Notably, 70% of land¹⁰¹ is suitable for grazing, making

livestock farming the largest agricultural sector. Most arable land¹⁰² is already in use and faces productivity loss through erosion, salinization, and acidification. Forest cover accounts for 5% of land,¹⁰³ with less than 1% being indigenous forest. Approximately 5% of land¹⁰⁴ is estimated to be degraded. The Forest Department in South Africa aims for an annual afforestation rate of 12 to 14 hectares.¹⁰⁵

Biodiversity – According to the CBD, South Africa is one of the world’s most biologically diverse countries, holding 10%¹⁰⁶ of global plant biodiversity, 7%¹⁰⁷ of reptile, bird, and mammal species, and 15%¹⁰⁸ of marine species. This biodiversity significantly drives tourism. However, South African biodiversity faces serious threats due to habitat loss and climate change: 10%¹⁰⁹ of birds and frogs, 20%¹¹⁰ of mammals, and 13%¹¹¹ of plants are endangered.

Land rights – Land remains a highly politically charged social issue in South Africa, rooted in a long period of violent dispossession, settler colonialism, and apartheid. The application of these discriminatory laws¹¹² resulted in extreme inequalities in land ownership throughout the 20th century. The 1913 Natives Land Act¹¹³ saw thousands of Black families forcibly removed from their land, limiting African land ownership to 7%. Today, private ownership¹¹⁴ and control of land by white farm owners and corporations continues to dominate the agrarian economy. Since 1997, land policy reforms¹¹⁵ aim to redistribute agricultural land to Black beneficiaries to address past discriminatory laws.

As of 2017, according to the Land Audit Report published by the South African government, 94% of land¹¹⁶ is registered in the Deeds Office, with efforts underway to survey and register the remaining 6%. Individuals, companies, and trusts own 90% of available registered land¹¹⁷. Moreover, there is significant concentration in land ownership, with 7% of landowners¹¹⁸ owning 97% of farm and agricultural land.¹¹⁹ Gender disparity in land ownership is significant, with women owning only 13% of land,¹²⁰ compared to 71% owned by men.¹²¹

Indicators: water resources

Water availability and use – According to the FAO, South Africa has 50 billion m³ of renewable water resources¹²² available, with 20% withdrawn¹²³ annually. The agricultural sector consumes 63% of the water.¹²⁴ The South African government reports that 90% of households¹²⁵ have access to piped water, and 84% to sanitation services¹²⁶; however, rural communities still lack this infrastructure. The availability of acceptable

quality water is the most urgent development constraint for South Africa. All surface waters are already in use, necessitating water importation¹²⁷ from neighbouring countries to meet demand. The Institute for Security Studies estimates that South Africans consume 235 litres of water¹²⁸ daily per person, significantly above the global average of 173 litres.

Water scarcity – South Africa is a water-scarce country, primarily due to low natural resource availability and increasing water demands. It is located within a “drought belt”¹²⁹ and is the fifth¹³⁰ most water-scarce country in Sub-Saharan Africa. The country’s average rainfall of 465 mm¹³¹ is half the world average, compounded by a remarkably high evaporation rate. This situation is exacerbated by global climate change impacts on weather patterns. The WFP has reported that the El Niño phenomenon¹³² is currently disrupting rainfall patterns further in Southern Africa, drying up crops and increasing food insecurity. Even with current government measures to safeguard the resource, South Africa is projected to face a water crisis in the next 20 years.¹³³

Water management – Water management in South Africa is primarily a public responsibility, with the government employing a decentralized governance approach since the reform of the National Water Act in 1998.¹³⁴ The government is tasked with equitably distributing water for public benefit. Maintenance of clean water is managed by locally based water service authorities. Despite these structures, the South African government still faces significant challenges in ensuring sustainable water management for the country. The current management approach aims to address historical inequities in water access while balancing increasing demand and limited supply.

Water privatization – Since the 1990s, the South African government has adopted a liberal economic model,¹³⁵ including privatization strategies of public services, such as the delivery of water and sanitation services. Even though there has been an increase in provision of services in some areas, overall, since 1994, 10 million South Africans¹³⁶ have had their water disconnected because of increased prices,¹³⁷ notably because of the introduction of prepaid water meters, hitting poor communities the hardest.



Indicators: food security and agriculture

Food security and nutrition status – Despite South Africa’s status as a “food-secure” nation producing sufficient food for its population, one in four people, around 13 million,¹³⁸ regularly experiences hunger. In 2022, 20%¹³⁹ of the population faced moderate or severe food insecurity, particularly in rural and marginalized communities. Stunting affects 22%¹⁴⁰ of children under five years old. The percentage of undernourished individuals has increased by 4% over the past two decades, reaching 8%¹⁴¹ in 2022. Alarming, 68%¹⁴² of the population cannot afford a healthy diet, resulting in low dietary diversity and insufficient nutritional intake.

Type of agriculture and major crops – The agricultural sector is extremely diverse thanks to the country’s varied climate and includes all major grains, oilseeds, fruits and vegetables, sugar, nuts, wine, as well as livestock. Industrial agriculture, which is export driven,¹⁴³ is the dominant form of food production in the country, with commercial farmers representing 91% of agricultural production. Climate change poses additional risks to food production, with droughts and extreme weather events affecting agricultural yields.

Subsidies for the agricultural sector – Since the reforms of the mid-1990s, South Africa has reduced its support to farms, remaining below 5%¹⁴⁴ since 2010. Wheat and sugar receive single-commodity support¹⁴⁵ due to import tariffs.

5.2 Zimbabwe: land, water, and food indicators

Zimbabwe is a landlocked country located in Southern Africa, bordered by South Africa, Botswana, Zambia, and Mozambique. With a population of approximately 15 million, Zimbabwe is known for its diverse landscapes, including the Victoria Falls, one of the world’s largest waterfalls. Economically, Zimbabwe faces significant challenges, with important levels of public debt, hyperinflation, and limited foreign investment. The country’s economy is dependent on agriculture, mining, and tourism. Economic sanctions and political instability have hindered economic growth and development. Zimbabwe gained independence from the United Kingdom in 1980, following a prolonged struggle against colonial rule. The country’s post-independence history has been marked by political tensions, economic crises, and land reform controversies. Climate change poses significant risks to Zimbabwe, with the country being highly vulnerable to droughts, floods, and other extreme weather events.

Indicators: land and biodiversity

Land cover and use – In 2020, according to Global Forest Watch, 45%¹⁴⁶ of Zimbabwe was covered by forest. However, deforestation is a significant issue, with an annual rate of 1.7%, more than twice the global average. Agricultural land use accounts for 42%¹⁴⁷ of the total land area, remaining stable over the past decade. Zimbabwe has 4,130,000 hectares¹⁴⁸ of arable land, of which 25%¹⁴⁹ is cultivated. As of 2010, land degradation affects 142,000¹⁵⁰ people living on agricultural land, a 30% increase in a decade.



Biodiversity – Zimbabwe boasts rich biodiversity¹⁵¹: it is home to various flora and fauna, including significant populations of African elephants, lions, leopards, and Cape buffaloes. According to data gathered by the European Commission, protected areas¹⁵² cover approximately a third of Zimbabwe’s land mass,¹⁵³ harbouring most of the country’s biodiversity. However, this biodiversity faces increasing pressure from climate change, overexploitation, habitat loss, pollution, invasive species, as well as illegal poaching. The number of species going extinct are increasing.

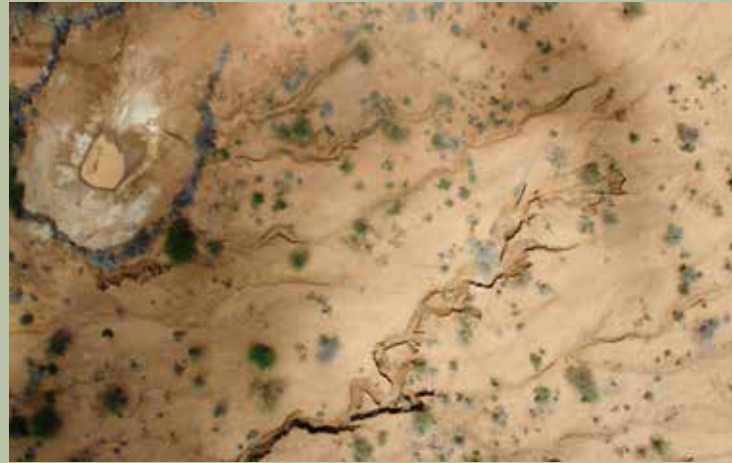
Land rights – Zimbabwe’s land rights history is complex, being rooted in colonial-era inequities, with white farmers controlling 75%¹⁵⁴ of prime agricultural land. Since independence in 1980, land reform programmes¹⁵⁵ have led to controversial land seizures from the government. Current tenure types¹⁵⁶ include freehold ownership, communal area occupancy rights, and government-granted leases, typically for 99-year terms. Land rights remain insecure for many, with conflicts arising from the rapid resettlement process. Women face challenges in land ownership; while they are legally able to own land, only 11%¹⁵⁷ of women report owning land, compared to 22% of men.

Indicators: water resources

Water availability and use – Zimbabwe has a total annual internal renewable water resources of 12.26 k³.¹⁵⁸ According to data gathered by the European Commission, 80%¹⁵⁹ of this water is used for agriculture, including irrigation, fish farming, and livestock. The country’s major reservoir¹⁶⁰ capacity comes from Lake Kariba, shared with Zambia. Water resources in Zimbabwe are highly dependent on variable rainfall, and it’s estimated that the country will experience a 38%¹⁶¹ decline in national water availability per capita by 2050 due to climate change. As of 2019, 77%¹⁶² of households have access to improved sources of drinking water, an increase from 76%¹⁶³ in 2014. Additionally, 68%¹⁶⁴ of households have access to improved, unshared sanitation facilities, while 22%¹⁶⁵ of the population still practise open defecation.

Water scarcity – Zimbabwe faces significant water scarcity challenges, with an average annual rainfall of 657 mm,¹⁶⁶ varying from over 1000 to only 300–450 mm, depending on location. According to data from the UNDP, chronic water shortages¹⁶⁷ are more pronounced in urban areas, where increasing water consumption needs exacerbate the problem. The country’s water scarcity is further compounded by recurrent droughts, the COVID-19 pandemic, and rapid urbanization, with over 32%¹⁶⁸ of the population now living in urban areas. Climate change is projected to increase water scarcity as global temperatures rise.

Water management – Zimbabwe’s water management is governed primarily by the Water Act of 1998¹⁶⁹ and the National Water Authority Act of 1998.¹⁷⁰ Under these laws, all water resources are vested in the president and cannot be privately owned. Effective management¹⁷¹ of water resources is critical to Zimbabwe’s economic growth, as droughts and an inability to manage water resources cost the country a significant percentage of its GDP. The government faces challenges in developing irrigation systems for smallholders, particularly considering the land reform and resettlement programme. Despite these challenges, Zimbabwe has made some progress in improving access to water and sanitation, though significant disparities remain between urban and rural areas.



Indicators: food security and agriculture

Food security and nutrition status – Data from the FAO show that Zimbabwe still faces significant food security challenges, with 74%¹⁷² of the population experiencing moderate or severe food insecurity in 2022. The prevalence of undernourishment, while decreasing since the early 2000s, has been rising since 2017, reaching 38%,¹⁷³ an increase of 5% over 20 years. Stunting affects 22% of children under five years of age.¹⁷⁴ The OCHA has estimated that 6 million people¹⁷⁵ are expected to be food insecure during the 2024–25 lean season because of the effects of El Niño on the semi-arid climate. According to the WFP, urban food insecurity has worsened, with over a quarter of urban residents skipping meals almost daily and only 54%¹⁷⁶ consuming an acceptable diet.



Type of agriculture and major crops – Even though agriculture is particularly important for Zimbabwe, sustaining 60%¹⁷⁷ of livelihoods and accounting for 20%¹⁷⁸ of formal employment, productivity is low and insufficient to feed the population. Small-scale farming dominates, with limited industrial agriculture. Country data gathered by the FAO establish that nationally,¹⁷⁹ the major crops are maize, pearl millet, sorghum, and cotton. Tobacco¹⁸⁰ is the largest cash crop.

Subsidies for the agricultural sector – Zimbabwe has a history of high-level subsidies for crops and agricultural inputs, such as wheat, fertilizer, and seeds. The World Bank reported that in 2017, the government distributed seed and fertilizer to 1.4 million small-scale farmers,¹⁸¹ for a total of \$91 million.



5.3 Kenya: land, water, and food indicators

Kenya is located in Eastern Africa. It has a total area of 582,646 km²,¹⁸² of which about 97% is land and the remaining 3% is water. Of the land area, approximately 490,000 km²¹⁸³ (more than 80% of the land area) is classified as arid and semi-arid land. In the southeast, it is bordered by the Indian Ocean, and in the southwest lies Lake Victoria. The climate varies from tropical along the coast to arid inland. The terrain includes low plains, central highlands separated by the great rift valley, and a fertile plateau. Kenya's population was projected to be 52 million¹⁸⁴ by mid-2024. Although Kenya's economy exceeds that of most African countries, challenges of rising economic inequality and environmental degradation persist. In 2021, according to national statistical data, the poverty rate stood at 38%.¹⁸⁵ The agricultural sector contributes largely to the economy in Kenya: approximately 33%¹⁸⁶ to the GDP. Kenya faces climate risks ranging from droughts to floods. These extreme events heavily affect agriculture, water resources, and biodiversity.

Indicators: land and biodiversity

Land cover and use – Total agricultural land in Kenya is 48.7%.¹⁸⁷ As of 2021, Kenya's forest cover stood at 6.3%,¹⁸⁸ making up 36,110.9 km². From 2000 to 2021, Kenya's tree cover decreased by 1% due to deforestation. The current administration's¹⁸⁹ goal is to restore 10.6 million hectares of degraded land by planting 15 billion trees¹⁹⁰ by 2032.

Biodiversity – Kenya's biodiversity¹⁹¹ lies mainly in forests and wildlife parks and reserves. According to data from the European Commission, approximately 12%¹⁹² (72,890 km²) of Kenya's land area makes up protected areas. Marine protected areas along the coastal ecosystem cover about 0.76% (857 km²) of Kenya's land area. Kenya is home to diverse large mammals,¹⁹³

including the African elephant, black rhino, leopard, buffalo, and African lion. This wildlife is central to the tourism industry¹⁹⁴ in Kenya. However, 30 mammals, 43 birds, 73 fish, and 234 plants¹⁹⁵ found in Kenya are on the list of threatened species. About 42%¹⁹⁶ of Kenya's GDP is derived from natural resources, reinforcing the need for sustainable use of its inherent natural resources.

Land rights – Land rights are shaped by pre-colonial, colonial, and post-colonial influences.¹⁹⁷ During the pre-colonial period, land was governed by customary law, with no individual ownership. During the colonial period, English law was introduced in settler areas, while customary laws were maintained in areas set for local populations. The post-colonial era retained many colonial land policies, with the Registered Land Act regulating customary land and councils of elders empowered to resolve land disputes. Additionally, settlement schemes were established to resettle landless Africans.

Data centralized by the Kenyan government show that there are substantial gender disparities¹⁹⁸ in land ownership in Kenya, with men more likely to hold title deeds for both agricultural and non-agricultural land. Women own a much smaller portion of privately owned land and have fewer title deeds, highlighting the need for greater gender equity in land rights.

Indicators: water resources

Water availability and use – Water resources are stressed in Kenya. Of the total land area of 582,646 km²,¹⁹⁹ of which about 97% is land, the remaining 3% is water. Kenya's water resources are classified into surface water and groundwater. Five basins²⁰⁰ (Lake Victoria, Rift Valley, Athi River, Tana River, and Ewaso Ngiro basins) account for 90% of Kenya's total annual renewable supply. Data collected by the European Commission highlight that Lake Victoria Basin is the most productive surface water resource, accounting for





59%²⁰¹ of surface water and 54%²⁰² of total renewable freshwater. The total volume of freshwater withdrawn by major economic sectors amounts to 33%²⁰³ of the total resource. Water used²⁰⁴ by animals amounts to 236 million m³/year; 210 million m³/year is used for crop production, households utilize 47 million m³/year, and 5 million m³/year is used in industrial production. A total of 59%²⁰⁵ of people in Kenya have access to safe drinking water, and 29% of them have access to improved sanitation facilities.

Water scarcity – In 1992, Kenya was declared water scarce, with available water resources calculated at 647 m³ per capita²⁰⁶; this is below the international acceptable threshold of 1000 m³. Kenya generally experiences two seasonal rainfall²⁰⁷ peaks of long rain (March–May) and short rain (October–December). Mean annual rainfall over the country is 680 mm.²⁰⁸ It varies from about 200 mm²⁰⁹ in the semi-arid to arid zone to about 1800 mm²¹⁰ in the humid zone. The total water²¹¹ demand in 2010 was 3218 million m³/year against available 22,564 million m³/year. The demand will rise to 21,468 m³/year²¹² in the 2030 against available 26,634 million m³/year. Kenya’s water resources are expected to fall to as low as 293 m³²¹³ per capita by 2050.

Water management – Water resource management in Kenya is done in accordance with the Water Act 2016.²¹⁴ Article 62 of the constitution of Kenya²¹⁵ provides that all water catchment areas, rivers, lakes, and other water bodies as defined by an Act of Parliament shall be held by the national government in trust for the people of Kenya. Additional efforts and programmes to safeguard water resources include the Water Resource Authority of Kenya’s Strategic Plan (2023–2027),²¹⁶ the country’s Big 4 development agenda,²¹⁷ and the strategic objective on water and sanitation, as well as achieving SDG 6 on ensuring access to water and sanitation for all.

Water privatization – The Water (Amendment) Bill²¹⁸ was published in 2023, seeking to promote private investment in the water sector through the public–private partnership (PPP) model. The Bill proposes to amend the Water Act, 2016 to allow Water Works Development Agencies (which are national government entities) to operate national public water works and to provide water services by entering into bulk water-purchasing agreements structured as PPPs. The Bill also allows the National Water Storage Authority to enter bulk water-purchasing agreements.

Indicators: food security and agriculture

Food security and nutrition status – In 2021, the World Bank reported 72%²¹⁹ of Kenya’s population as experiencing moderate or severe food insecurity, indicating a widespread challenge in accessing sufficient and nutritious food. Additionally, 28%²²⁰ of the population was undernourished, reflecting a significant public health concern. In 2022, UNICEF reported that 18%²²¹ of children were stunted. A majority of Kenyan households in 2021, more than 80%,²²² met four or fewer of the healthy diet recommendations set by the WHO and the FAO, indicating widespread nutritional deficiencies.

Type of agriculture and major crops – According to country data by the FAO, the agricultural sector contributes 33%²²³ of the GDP in Kenya. The sector employs more than 40%²²⁴ of the total population and more than 70%²²⁵ of Kenya’s rural people. The sector accounts for 65%²²⁶ of the export earnings. Approximately 78%²²⁷ of farmers in Kenya engage in small-scale farming. Smallholder farmers account for a third of total farmland and produce about 41% of the country’s food grains. According to the Kenya Institute for Public Policy Research and Analysis (KIPPRA), in

2021, smallholder farmers generated output estimated at around \$3.41 billion,²²⁸ which was double the output value, i.e., \$1.25 billion, generated by large-scale farmers. This result highlights the critical economic role of small-scale farming in driving agricultural production and supporting livelihoods in the country. Kenya's agriculture is centred on key crops²²⁹ such as maize, sugarcane, tea, coffee, and horticulture. Alongside these, livestock²³⁰ such as chickens, goats, sheep, and cattle are vital to the agricultural sector.

Subsidies for the agricultural sector – In Kenya, the National Accelerated Agricultural Inputs Access Program (NAAIAP)²³¹ was first introduced in 2007, covering inorganic fertilizer and improved maize seed targeting small-scale farmers. The total project budget represented \$34.3 million.²³² The current government introduced the Kenyan National Fertilizer Subsidy Program, which was implemented in September 2022²³³ during the short rains season to expand food production and mitigate soaring food prices.

5.4 Ethiopia: land, water, and food indicators

Ethiopia is a landlocked country located in the Horn of Africa, bordered by Eritrea, Djibouti, Somalia, Kenya, South Sudan, and Sudan. With a population of approximately 120 million, Ethiopia is known for its ancient cultural heritage, including the rock-hewn churches of Lalibela and the ancient city of Axum. Economically, Ethiopia has experienced rapid growth in recent years but still faces challenges such as poverty, unemployment, and infrastructure development. The country's economy is primarily based on agriculture, with coffee being a major export, alongside emerging sectors like manufacturing and services. Ethiopia has ambitious development goals but struggles with ethnic tensions and regional conflicts.

Ethiopia is one of the oldest independent countries in Africa, having successfully resisted European colonization except for a brief Italian occupation from 1936 to 1941. The country's modern history has been marked by periods of monarchy, military rule, and democratic transition. Ethiopia faces significant environmental challenges, including deforestation, soil erosion, and vulnerability to climate change impacts such as droughts and irregular rainfall patterns. These environmental issues pose risks to food security and economic stability in a country where a substantial portion of the population relies on agriculture for their livelihoods.



Indicators: land use and biodiversity

Land cover and use – Ethiopia covers an area of 1,104,300 square km.²³⁴ As of 2021, according to the World Bank, 34%²³⁵ of the land area was agricultural land. Some estimates suggest that more than 65%²³⁶ of total land surface is fertile for agricultural purposes. Ethiopia's forest cover in 2020 was close to 16.7 million hectares,²³⁷ accounting for 15% of the total land area. Data collected by the European Commission suggest that the country lost close to 4 million hectares²³⁸ of its forest cover between 1990 and 2020. Land degradation is a significant issue, with more than 85%²³⁹ of the land degraded to various degrees.

Biodiversity – The country has a diverse set of ecosystems ranging from humid forests and extensive wetlands to deserts, with more than 6500 vascular plant species,²⁴⁰ of which 12%²⁴¹ are endemic. Ethiopia is home to 284 species of wild mammals²⁴² and 861 species of birds.²⁴³ Protected areas cover 14% of the country, playing important roles in conservation, recreation, eco-tourism, and employment. The main direct threats²⁴⁴ to biodiversity include habitat conversion, unsustainable utilization of resources, invasive species, replacement of local varieties and breeds, climate change, and pollution. As a result of these threats,²⁴⁵ many species are threatened: 103 trees and shrubs, 31 birds, one reptile, nine amphibians, two fish, and 14 other invertebrate species.

Land rights – Ethiopia's land tenure system has undergone significant changes over the years. Under the 1995 Constitution,²⁴⁶ the state retained ownership of all land and the right to seize and redistribute as needed. Farmers were provided with a "holding right"²⁴⁷ that gives them some rights of ownership, except for sale and mortgage. In the late 1990s, the government embarked on an ambitious programme to document and register land held by rural households, known as the "first-level" land certification programme.²⁴⁸ By 2013, this programme covered 90%²⁴⁹ of all rural households. However, the claims of pastoralists²⁵⁰ to land and pasture, particularly in the South, are poorly recognized or upheld by authorities. According to the World Bank, in 2018, Ethiopia still reported a high gender gap when it comes to land ownership: 14% of women²⁵¹ own land, compared to 32% of men.²⁵² In terms of accessing land rights, challenges remain, including the lack of mechanisms to secure rights of pastoralists²⁵³ to customary grazing lands.



Indicators: water resources

Water availability and use – Ethiopia has abundant water resources, with total estimated renewable freshwater and groundwater resources of 124 billion m³/year.²⁵⁴ The country is traversed by 12 major rivers, including the Nile. It receives an average annual precipitation of 848 mm,²⁵⁵ mostly occurring between July and September. Total water withdrawal is 5.6 billion m³/year,²⁵⁶ with 94% used for crops, irrigation, and livestock; 6% for domestic use; and 0.1% for industry. Despite these resources, access to safe water and sanitation remains a challenge. According to UNICEF, only half of the population²⁵⁷ has access to basic water supply coverage, and less than 10%²⁵⁸ has access to basic sanitation coverage. According to the World Bank database, approximately 60 million Ethiopians²⁵⁹ lack access to safe drinking water, and over 112 million²⁶⁰ are without basic sanitation facilities, with 22 million²⁶¹ continuing to practise open defecation.

Water scarcity – Despite its abundant water resources, Ethiopia faces significant water challenges. The country has one of Africa's lowest rates²⁶² of access to water supply, sanitation, and hygiene. Key water stress metrics suggest Ethiopia is water stressed, with total annual renewable water resources per person at 1,162 m³,²⁶³ below the water stress threshold of 1,700 m³ per person per year. According to the United States Agency for International Development (USAID), water supply is concentrated in western Ethiopia (Abay Basin), while water stress²⁶⁴ is highest in the east, especially the Awash Basin, due to low supply and high demand. Climate change is expected to increase the frequency and severity of flooding and drought risks, with several basins²⁶⁵ already vulnerable to drought.

Water management – Ethiopia's water resources are considered the common property of the government and people of Ethiopia, as stated in the 1999 Water

Resources Management Policy. Proclamation No. 197/2000²⁶⁶ defines the responsibilities and powers of the Ministry of Water Resources and specifies water permit and dispute resolution guidelines. However, water governance²⁶⁷ in Ethiopia faces challenges, including ongoing revisions of policies and strategies, lack of coordination among water sector actors, low sectoral funding, and inadequate water quality monitoring in most basins. Despite these challenges, Ethiopia has made substantial progress in increasing water supply coverage and is working on increasing sanitation coverage through behaviour change promotion and low-cost technology solutions.

Water privatization – Current investment to meet the SDGs in accessing water and sanitation is estimated at \$2,935.8 million.²⁶⁸ At this time, private sector involvement²⁶⁹ in the water and sanitation sector is limited to service contracts, contractors, consultants, suppliers, artisans, and tap attendants. The government remains the dominant actor in the sector, with regional water bureaus being the main implementers of water supply and sanitation activities. Private maintenance and management actors²⁷⁰ are not yet involved in providing any water and sanitation services in the country.

Indicators: food security and agriculture

Food security and nutrition status – Food security remains a core challenge in Ethiopia. According to the FAO, in 2022, 22%²⁷¹ of the Ethiopian population was undernourished and 58%²⁷² of the population suffered from moderate or severe food insecurity. Chronic

malnutrition is a persistent issue: the Food and Land Coalition estimates that chronic malnutrition costs Ethiopia close to 17%²⁷³ of its GDP each year. While the prevalence of stunting in children under age five has been steadily decreasing since the early 2000s, it still affects 34%²⁷⁴ of this age group. Weather-related drought²⁷⁵ remains one of the key causes of food insecurity. Accessibility to healthy diets is a major concern, with 84%²⁷⁶ of the population unable to afford a healthy diet in 2021, and no substantial progress has been made in this area since 2017.

Type of agriculture and major crops – The Food and Land Coalition views agriculture as a crucial driver of economic growth in Ethiopia, contributing to almost half²⁷⁷ of the nation's GDP and 80%²⁷⁸ of total employment. The sector is dominated by small-scale farmers who practise rain-fed mixed farming using traditional methods. They account for 95% of total agricultural land²⁷⁹ and produce more than 90%²⁸⁰ of total agricultural output. These smallholders produce 94% of food crops and 98% of coffee,²⁸¹ Ethiopia's leading export product, compared with private and state commercial farms that produce the rest.²⁸² Major cash crops²⁸³ for export include, as mentioned, coffee, with Ethiopia being the origin of Arabica coffee, fresh vegetables, sesame seeds, and pulses. Despite its agricultural potential, Ethiopia remains a net importer²⁸⁴ of agricultural goods, including wheat, cooking oil, sugar, and sugar products. The government has set plans to replace wheat imports²⁸⁵ with local production by introducing more irrigated farming techniques.



6. Stories from faith-based organizations

6.1 Mahamba Food Security Project, Methodist Church of South Africa

Interview with Dr Nomonde Mqhayi-Mbambo

Dr Nomonde Mqhayi-Mbambo, a medical doctor based in Johannesburg, is the circuit president of the Women's Manyano in the Highveld, Johannesburg, and Eswatini districts of the Methodist Church of Southern Africa. Through her leadership, she drives important food and nutrition initiatives within the church, including the Mahamba project. This project addresses immediate food insecurity by providing essential food assistance to individuals and families, while also promoting long-term solutions such as community gardens and educational programmes. By fostering active participation from congregation members, the project builds a strong sense of community and empathy. In addition to her local work, Dr Mqhayi-Mbambo serves as vice moderator of the Health and Healing Commission at the World Council of Churches.

What are the most significant climate change impacts observed in your context related to land, water, and food?

Climate change has worsened land degradation in South Africa and Eswatini, particularly in dry and semi-arid regions. We're witnessing increased soil erosion, loss of vegetation, and reduced land productivity, all driven by rising temperatures and shifting rainfall patterns. Additionally, plant and animal species are relocating to different areas. Plants that once thrived in now drier regions are struggling to grow. These shifts in ecosystems are affecting biodiversity and making it harder to produce food on the available land.

Droughts have become more frequent and more severe in both South Africa and Eswatini, affecting water availability for farming, drinking, and hydroelectric power generation. From 2015 to 2017, South Africa experienced a major drought, which made it difficult for cities like Cape Town to secure enough water. In



Eswatini, changing rainfall patterns have reduced river flows, impacting irrigation and water supply systems critical for agriculture and drinking water.

In terms of food accessibility and affordability, climate change has led to significant declines in agricultural yields and livestock farming, resulting in rising food prices. Water scarcity from droughts has severely impacted agriculture and food security, posing major challenges for both countries.

What inspired the church to engage in this initiative, and how does your church incorporate environmental stewardship into its teachings or practices?

The inspiration for this initiative came from the church's commitment to addressing the pressing issue of food insecurity, which affects many in our community. The Food Security Project was created to provide access to nutritious food for individuals and families in need, while also allowing the church to live out its core values. These values are embodied in our five pillars: Spirituality; Evangelism & Church Growth; Justice, Service & Reconciliation; Economic Empowerment & Development; and Education, with

a strong focus on justice, education, and economic empowerment.

Our church actively involves its leadership, members, and the surrounding community in initiatives like the Mahamba Food Security Project, which operates in both Johannesburg, South Africa, and Mahamba, Eswatini. These efforts help foster social cohesion within the church and the broader community, bringing people together to address food security and build stronger connections.

How is the programme implemented?

The Church established a project team made up of its members to guide the planning and execution, ensuring that the initiative was rooted in local leadership. Resources such as space, equipment, and funding were allocated to support the activities. The implementation took place in phases, starting with the food pantry, community garden, educational programmes, and outreach initiatives. As these components were rolled out, the team regularly monitored the project's progress, gathered feedback from beneficiaries, and made necessary adjustments to improve its impact. The Mahamba project includes a Garden for Food Security led by youths and Manganeli groups, as well as two free-range chicken production projects aimed at economic empowerment. One of the free-range chicken production projects is overseen by Mongameli Reverend Mbambo and the other by Bomake.

Please share about a significant moment that you are proud of in this project.

One of the most significant moments I'm proud of in this project took place during the Agribusiness Workshop on Food Security, held at the Mahamba Circuit 1024 in Eswatini in June/July 2024, under the Methodist Church of Southern Africa. Agriculture, especially farming, offers not only financial stability but also food security, and I had the privilege to showcase this through purpose-driven farming that balances profit and community well-being.

My approach extends beyond profitability, focusing on economic empowerment and the welfare of the community. By educating farmers on agribusiness, the initiative enhances their business acumen, fostering a sense of accountability and sustainability. What we celebrate is not just financial gains but the overall prosperity and resilience of the farming communities.

Mahamba Circuit has become a shining example of sustainable growth, demonstrating how purposeful training can transform farming into a holistic endeavour. It ensures that members sow not just crops

but also the seeds of a better future.

A highlight of this session was sharing my knowledge with the remarkable women of the Women's Fellowship from the Heswa District during the Eswatini Mission Outreach hosted at Mahamba. Seeing their faces light up with amazement as I explained the value of our beautiful culture and indigenous knowledge was a deeply rewarding experience.

As much as I taught, I also learned from them. Their understanding of farming, food security, and climate change, expressed in their own words, was inspiring. These women reminded me of the intelligence, enthusiasm, and eagerness to learn that exist in our church leaders. This experience reaffirmed my faith in the power of our community and our ability to inspire one another.

Together, we can continue working toward a brighter, more sustainable tomorrow!

6.2 St Patrick's High School 157 KW Solar Plant, Zimbabwe

In this interview, we sit down with Mr Darlington Musekiwa, the Regional Coordinator at the Anglican Central Diocese of Zimbabwe's Relief Development Social Service Desk, to discuss an exciting new initiative in Chiundura Rural, Gweru District, Midlands Province, Zimbabwe. The focus of our conversation is the installation of a solar power plant designed to provide sustainable and clean energy to the Anglican Church mission at this location. Mr Musekiwa will shed light on how this project aligns with the diocese's commitment to sustainable development and its broader impact on the local community.



What inspired the church to engage in this initiative, and what does your church aim to achieve through the project?

The Anglican Church was inspired to pursue this solar power plant initiative due to persistent challenges with unreliable electricity supply at the mission, including

frequent load shedding, power disconnections from unpaid bills, and faults in the distribution system. The mission also sought to decrease its reliance on fuel wood, aligning with climate change mitigation efforts by reducing deforestation linked to wood consumption from the farm. By transitioning to solar energy, the project aims to provide a consistent, clean power source, lower electricity production costs, and create an additional revenue stream through the sale of surplus energy units.

What are some of the challenges and limitations experienced in this project?

The diocese faced a significant challenge with the capital requirement for the project, which exceeded its budget of \$300,000. Fortunately, Trinity Wall Street Church provided the additional funding needed. The process of obtaining permits, certificates, and licenses was lengthy and complex, requiring expert advice. As a result, the net meter was issued only a year after the project began, causing some loss of generated energy during that period.

Please tell us about significant milestones of this project and what you believe this kind of success is attributable to.

Significant milestones of the solar power project include the expansion of the solar power plant to solarize several boreholes, replacing traditional electricity-powered pumps with solar-powered ones. The church initiated partnerships with TZABA [Trans-Vaal, Zimbabwe and Botswana Association] and surrounding dioceses to support their access to water at the parishes. The Anglican Church in the Diocese of Central Zimbabwe is proud to have over ten sites supported by boreholes that are also food security hubs.

Key to the project’s success was the collaboration with significant partners. The Anglican Diocese of Central Zimbabwe entered into a tripartite agreement with Trinity Church Wall Street, which provided essential financial support and capacity-building resources. Additionally, Tatanga Energy was engaged as a consultant to train diocesan staff in the technical aspects of solar project implementation.

The diocese worked with government departments and regulatory agencies to navigate the complex process of obtaining necessary permits. Furthermore, the diocese partnered with United Society Partners in the Gospel on climate justice initiatives, including the RESTOR programme, which focuses on waste management and monitoring environmental degradation in five Anglican dioceses in Zimbabwe. Our motto, “Waste smart, we care,” guides this comprehensive approach.

What is the level of impact and what do you look forward to in the future of the Solar Power Project?

The Solar Power Project, valued at \$7 million, represents a significant investment in sustainable energy. The project involves the development of a 5 MW solar power plant, where the diocese holds a 60% share and will receive 60% of the profits from energy sales. Given that feasibility studies confirm the project’s viability, the diocese is enthusiastic about leveraging church land for this sustainable energy initiative.

Looking ahead, the Central Diocese of Zimbabwe anticipates that this project will not only provide a reliable revenue stream but also enhance its capacity to support vital initiatives. We expect the proceeds from energy sales to enhance land use and ministry work, including crucial food security programmes across Zimbabwe. The diocese is optimistic that the project’s success will attract additional partners and investors, further amplifying its positive impact on both local communities and broader sustainable development goals.



THE 5 MW SOLAR FIELD UNDER *TEGES* VEHICLE





6.3 The Ethiopian Orthodox Church's Role in Forest Conservation and Climate Change Mitigation, Ethiopia

This article examines the significant contribution of the Ethiopian Orthodox Church to forest conservation and climate change mitigation efforts in Ethiopia. With a forest management tradition dating back to the 4th century, the church currently oversees approximately 400,000 hectares of “church forests” throughout the country.

The piece provides an in-depth look at the Church’s Church Forest Initiative programme, analyzing how religious practices, community involvement, and contemporary conservation methods are being integrated to address deforestation and climate change impacts. It explores the theological foundations of the church’s environmental stewardship as well as the practical implementation of conservation programmes.

In this interview, we spoke to Tewaney Seifesellassie from the Ethiopian Orthodox Tewahedo Church, where he is an official at the Ethiopian Orthodox Church Development and Inter-Church Aid Commission (EOC-DICAC). For the past 15 years, he has been working in the Climate, Livelihood Improvement Matters and Peace Advocacy and Ethics Department, with a focus on climate justice issues. Tewaney is also involved with the Global Act Alliance, where he serves as part of a reference group and participates in a co-chairing community of practice.

What are the most significant climate change impacts you’ve observed in your region or country over the past five to ten years?

In Ethiopia, we’ve observed various climate change impacts over the past years. El Niño, which raises the temperature of the Eastern Pacific Ocean, has affected our atmospheric temperature. This has led to changes in weather patterns, causing droughts and floods across the country. These changes have resulted in food insecurity by altering crop and pest dynamics. We’ve seen an increase in desert locusts, affecting our production of

cereals, vegetables, and fruits. The productivity in many regions has been hit, particularly in the south, east, and central parts—specifically the Ethiopian Somali region, Oromia, and the upper regions. The spillover effects include soil depletion, forcing people to extract more natural resources and practise extensive agriculture. Millions of people have been affected. Also, during floods, we've seen an increase in waterborne diseases like cholera due to water contamination. Overall, these climate impacts have significantly changed our weather patterns and agricultural productivity, affecting both our environment and people's livelihoods.

Do you think the whole country is affected in the same way, or are some regions suffering more than others?

While the whole country is affected, the impact varies across regions. The southern part, home to pastoralist communities, is particularly hard hit. The eastern areas, including the Ethiopian Somali region and East Hararge, are also severely affected. There's a spillover effect on the entire country through food price escalation, which impacts the overall economy. In the Tigray and Amhara regions, we're seeing intense drought affecting millions, compounded by ongoing conflicts. So, while the effects are felt nationwide, certain regions are experiencing more severe and direct impacts than others.

Which environmental changes have exacerbated these conflicts or social tensions?

In Ethiopia, environmental changes have exacerbated several conflicts and social tensions. First, land degradation due to intensive farming has led people to exploit forest areas for virgin land, causing conflicts between communities. Second, regional conflicts have arisen over green pastures for livestock. As a federal country with regions based on ethnicities, we're seeing ethnic conflicts over fertile land at border areas. For example, there's a conflict between Tigray and Amhara regions over fertile land in the Raya and Azebu areas. Third, water-related conflicts have emerged between upstream and downstream communities along rivers. Intensive farming of water-consuming crops like sugarcane in upper catchments affects water availability downstream, leading to disputes. As well, access to drinking water has become a source of conflict between communities as water resources become scarcer. These environmental pressures are contributing to and intensifying existing social and regional tensions across the country.



Project: The Church Forest Initiative, Ethiopian Orthodox Church

Background

The Ethiopian Orthodox Church plays a significant role in forest conservation through its Church Forest Initiative programme. There are approximately 35,000 churches across Ethiopia, each surrounded by forests ranging from 1 to 19,000 hectares. In total, these church forests account for about 400,000 hectares of forest cover in the country.

The church's involvement in forest preservation is rooted in its long history and theological reflection. Ethiopia accepted Christianity in 34 AD (Acts 8:27), but it became a state religion in Ethiopia in the 4th century, during the Axumite Empire when the building of churches began on a large scale. Today, the Ethiopian Orthodox Church has built over 75,000 parish churches and has ten million Tsewa Mahiber (prayer groups) used for various advocacy works. Of these 75,000 churches and monasteries, 35,000 are surrounded by forests. These forests have been managed and protected by the churches and the communities living around them. This practice demonstrates the church's long-standing experience and commitment to forest conservation and management in Ethiopia.

The importance of forests to Ethiopian Orthodox churches

First, forests have a biblical and theological significance. More than 30 tree species are mentioned in the Bible,

often as metaphors for righteousness. Second, the church views forests as symbols of goodness and spiritual purity. Trees or forest products are embedded in many church sacramentals, such as altar tables, crucifixes, rosaries, and frankincense. Three of the seven sacraments use olive oil from the *Olea africana* tree. Third, the outdoor layout of churches typically includes gardens for meditation and appreciation of nature, reflecting the belief that God is revealed through his creation, as emphasized by many monastic icons depicting a harmonious life with nature. Churches are often built on mountaintops, and it is believed that the combination of prayer and forest conservation creates holy water underground, which is used for healing various ailments. Fourth, the church teaches that humans have a responsibility to care for creation, based on biblical principles. This includes practices like letting the land rest every seventh year. Moreover, the theme of environmental conservation is regularly included in church prayers and liturgy. These factors combine to make forests an integral part of the Ethiopian Orthodox Church's spiritual, cultural, and practical traditions.

Activities and implementation

The Church Forest Initiative programme has implemented several strategies to protect and expand our church forests. First, the churches are providing capacity-building training, targeting the communities that live around the forested areas. These training sessions aim to raise awareness in local communities and promote the use of intensive agriculture rather than extensive agriculture, which leads to deforestation. This includes irrigation techniques and use of improved seeds to increase yields. So far, the programme has reached

about 350,000 people; they expect to reach 15 million people by 2027. Second, the programme addresses the need to provide alternative energy sources, such as biogas, solar energy, and energy-savings methods to reduce reliance on charcoal. The churches are also looking into how to provide alternative livelihoods for local communities with non-timber forest products, such as honey production.

The programme is also applying natural resource management and soil and water conservation practices. Annually, there is an objective to plant seven to ten million seedlings from June to September, both within church forests as enrichment planting and in surrounding areas. Farmer-managed natural regeneration techniques are utilized to increase forest biomass by pruning and treating existing trees. Area closure methods have been implemented to protect areas around church forests to allow for natural seed dispersal and forest expansion.

Finally, the Orthodox church is engaging in advocacy and interreligious dialogue, sharing our theological reflections on conservation with other faiths and implementing joint programmes. They are spreading these conservation messages through 53 dioceses, incorporating them into services, Sunday schools, and environmental awareness programmes.

Challenges

The first challenge is population growth: the population has risen from 51 million 50 years ago to 130 million today. With 85% of Ethiopians being farmers, there is a huge demand for agricultural land. As productivity declines, people are turning to extensive agriculture, encroaching on forests for virgin land. The natural



forest cover has drastically reduced from 40% about 100 years ago to just 3% now, with most remaining forests being church forests.

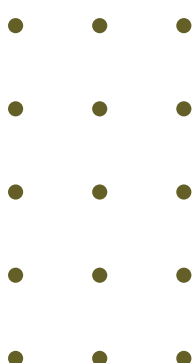
Other challenges that the programme faces are related to energy demand, food production, and settlements. People are now approaching church lands for survival, saying, “I want this for our survival too.” The Orthodox Church is committed to convincing both local communities and governments to protect these areas. Historically, people acknowledged that certain lands belonged to the church, but it was mostly theoretical. Now, the church is working to get official land certification for church forests to legally protect them.

Cultural changes are also a challenge. In the past, there used to be a tradition of planting trees to honour the dead, which contributed to forest growth. Now, people are switching to stone tombs instead.

The Orthodox Church is addressing these challenges through its programmes, working with the government for land certification and trying to conserve forests while balancing the needs of the growing population.

Future plans

Looking ahead, the Orthodox Church plans to explore the carbon sequestration potential of these forests and to seek UNESCO intangible heritage registration. It will continue its protection measures, focusing on alternative energy, intensive agriculture, enrichment planting, and scaling up non-timber forest products.



Case study. From forest dependency to sustainable prosperity: The 2024 impact of the Ethiopia Interfaith Initiative for Forest Conservation and Climate Action in Limu, Kosa

By Dereje Tilahun, project manager for the Ethiopia Interfaith Initiative for Forest Conservation and Climate Action at the Ethiopian Orthodox Church Development and Inter-Church Aid Commission

Introduction

In 2024, a transformative success story emerged from Limu Genet Kebele (Suntu) in Oromia Regional State’s Jimma Zone. A group of 15 dedicated individuals—five of whom are women—embarked on a remarkable journey, moving from forest dependency to sustainable agricultural practices. This change was driven by the Ethiopia Interfaith Initiative for Forest Conservation and Climate Action, a project supported by the Ethiopian Orthodox Church Development and Inter-Church Aid Commission (EOC-DICAC).

Background

Before their involvement with the project, the group’s livelihood was intricately linked to local forests. They relied on cutting trees for firewood and timber to generate income, contributing to deforestation and environmental degradation. Recognizing the need for a sustainable alternative, the Ethiopia Interfaith Initiative stepped in to provide support and guidance.

The transformation

1. **Transition to seedling production:** With assistance from EOC-DICAC, the group made a significant shift. They received vital support, including various seeds, nursery tools, and comprehensive training. This intervention enabled them to start producing seedlings—specifically papaya, avocado, olea, and gravilia. By 2024, the group had successfully raised 255,000 seedlings and earned a net profit of 185,000 Ethiopian Birr from their sales. This new income source marked a profound departure from their previous reliance on forest resources.
2. **Strategic investment in land:** The financial success from seedling sales allowed the group to make a strategic investment. They used 50,000 Ethiopian Birr to rent land for five years, dedicated to growing papaya and avocado. This investment not only secures their future income but also supports their commitment to sustainable and environmentally friendly agriculture.
3. **Forest enrichment and restoration:** In addition to their seedling production, the group raised 120,000 exotic and indigenous forest tree seedlings. These seedlings were used for enrichment planting in forest areas where the group had previously encroached for their livelihood. This initiative helped restore degraded forest lands, enhancing biodiversity and promoting ecological balance.

Support and capacity building

The success of the group in 2024 was made possible through the robust support provided by the Ethiopia Interfaith Initiative for Forest Conservation and Climate Action:

- **Seed provision:** The initiative supplied a

variety of seeds crucial for seedling production, including both fruit and forest tree varieties.

- **Nursery tools:** Essential tools were provided to manage the nursery effectively.
- **Training and follow-up:** The group received thorough training and ongoing support, equipping them with the skills needed to succeed in their new agricultural and reforestation endeavours.

Impact and achievements

The group's shift from forest dependency to sustainable agriculture and forest enrichment has brought about several positive outcomes:

- **Economic advancement:** The net profit of 185,000 Ethiopian Birr from the sale of 255,000 seedlings significantly improved the group's financial stability. Their investment in land for cultivating papaya and avocado further strengthens their economic prospects.
- **Environmental conservation:** Moving away from forest exploitation has allowed the group to contribute to local reforestation efforts. Raising and planting 120,000 forest tree seedlings in previously encroached areas has helped restore degraded lands and promote biodiversity.
- **Enhanced livelihoods:** The group's investment in land and commitment to sustainable farming practices reflect a strong dedication to long-term prosperity. Their efforts in forest enrichment and sustainable agriculture align with broader goals of environmental conservation and climate action.

Conclusion

The success of the Limu Genet Kebele group in 2024 exemplifies the profound impact of the Ethiopia Interfaith Initiative for Forest Conservation and Climate Action. The group's journey from a forest-dependent lifestyle to successful seedling production, land investment, and forest restoration highlights the effectiveness of faith-based and interfaith initiatives in driving environmental conservation and promoting sustainable development. Their achievements serve as an inspiring model for other communities seeking to transition to more sustainable and environmentally friendly livelihoods.





6.4 Women Collective Kenya: Championing Climate and Social Justice

Interview with Ruth Mumbi from Women Collective Kenya, a grassroots women's movement

In this compelling interview, Ruth Mumbi, a human rights defender from Nairobi, sheds light on the crucial work of Women Collective Kenya. As climate change intensifies in Eastern Africa, this grassroots organization stands at the forefront of intertwined battles for climate justice, water rights, and women's empowerment. Discover how local activism is reshaping the fight against environmental and social inequalities in Kenya's urban and rural landscapes.

Ruth Mumbi is an activist, feminist, and grassroots human rights defender from one of the biggest informal settlements in Nairobi, Kenya. Her journey into activism and community organizing in her community started after witnessing the plight of women in the community facing challenges in accessing safe and affordable reproductive health services, illegal evictions of poor people from their land, and police brutality and summary executions against young people. She is a 2013 finalist of the Frontline Award for Human

Rights Defenders at Risk and former fellow of the University of York Protective Fellowship (2014–15), member of the Steering Committee of the Africa Water Justice Network, and coordinator of the Water Justice Working Groups – Kenya.

Can you tell us more about your organization, Women Collective Kenya?

Women Collective Kenya is a grassroots women's movement resisting injustices, oppression, and inequalities. Our work focuses on amplifying the voices of marginalized women in rural and urban areas. We work with communities to facilitate transformative and sustainable change, addressing the systemic and structural barriers that perpetuate gender inequality and discrimination.

What are the main focus areas of Women Collective Kenya?

We focus on several interconnected areas: ecological and climate justice, water justice, land rights and habitat, and reproductive justice. Our Ecological and Climate Justice project, for instance, recognizes the need for locally led climate actions. We bring an intersectional approach that analyzes unequal power relations, particularly on gender, sex, and social status.

In terms of water justice, we are working on a project called Strengthening Grassroots Water Justice

Movements. We recognize that water injustice and climate injustice are intricately linked. With 28 million out of 53 million Kenyans lacking access to safe water, our work is crucial.

For land rights and habitat, we are supporting families who were brutally evicted from the Kariobangi informal settlement in 2020. We are helping them organize, seek legal aid, and even work toward creating a Women's Eco-Village as a sustainable solution.

What are the most significant climate change impacts you have observed in your region over the past five to ten years?

We have seen extreme weather events and climate shocks, including increased rainfall and prolonged droughts. This has led to flooding and displacement, especially in the eastern part of Nairobi, and drought in rural areas of Migori, where we work. These changes have severely impacted livelihoods, creating food insecurity and increased poverty.

How have these climate changes affected communities, particularly women?

Women have been especially impacted as climate change is a multiplier of injustices. Women already face discrimination, violence, and inequalities. In Nairobi, many women in informal areas are unable to get adequate housing and education for their children due to displacement and disruption from flooding. Water is also contaminated from water sources during flooding.

In Migori, women are forced to seek casual work in dangerous industries where they face sexual abuse and health impacts due to reduced yields from droughts and flooding on their farms. The Nairobi River and its tributaries are becoming more polluted, further exacerbating these issues.

Can you tell us about your water justice project?

Our Strengthening Grassroots Water Justice Movements project seeks to build a grassroots movement of water justice actors resisting water privatization in all its forms. The Government of Kenya has introduced laws and policies that promote the privatization and commercialization of water through public-private partnerships. We work with community water action groups called water justice working groups to develop grassroots movements to resist water privatization and promote water access.

We work in Nairobi, Mombasa, Migori, and Kiambu counties. In 2023, we were able to stop a law in the County Assembly of Nairobi that would have privatized water under the #KillTheBill campaign. The

project also builds partnerships with other movements in Africa. In April 2024, a delegation of water justice actors toured Cape Town to meet with local water justice actors to share and learn.

What about your work on climate action?

Our Grassroots Feminist Climate Action project works with women in Migori County who face abuse and exploitation by green agro-industries. These industries, supported by Western investors, claim to have a sustainable approach to providing solutions to deforestation by offering "green alternatives to fuel." However, their practices often violate the human rights of women employees and pollute the environment and water sources.

We are supporting these women in community organizing and advocacy. We have even instituted a court case against one of the companies, Vuma Biofuels, for these abuses and pollution. In Nairobi, we are working to build a cadre of young grassroots women focusing on the gender dimensions of climate action through a young women's climate action political school and a podcast.

Have you noticed any changes in your beneficiaries' attitudes toward climate change?

Yes, we have seen a significant shift. Our beneficiaries are more aware of the linkages between their conditions and climate change and are also more engaged in climate action. They are beginning to see how climate issues intersect with other challenges they face, like water access and land rights.

Is there a particular success story you would like to share?

One of our most significant successes was the #KillTheBill campaign in 2023. Working with the Nairobi Water Justice Working Group, we organized community conversations, petitions, signature collections, and picketing against the Nairobi Water and Sanitation Bill 2023, which would have privatized water services. By the end of 2023, the bill was withdrawn, and a multi-stakeholder team was formed to draft a new bill without privatization aspects.

This success really highlights how community organizing and grassroots action, especially those focusing on the most affected, like women and girls, can be effective in creating change and impact.

What type of challenges do you face in your work?

We have faced threats and intimidation for exposing corporate malpractices. I have been personally targeted for being vocal about social justice issues and defending

vulnerable people. During the flooding, I critiqued the government's response and pointed out how class plays a role in who gets affected: for example, how buildings owned by millionaires on riparian land were not demolished, while poor people's homes were. Because of this, I have been profiled and threatened. In Migori, our contact person has been threatened for exposing corporate impunity. She cannot even stay at home due to fears for her safety. It is a stark reminder of the risks involved in challenging powerful interests.

We've also experienced attempts by companies to divide communities and counter our advocacy. In Migori, the company we are challenging has tried to bribe part of the community to oppose our efforts. They have created a committee that goes around claiming that we want the company to fail and that we are against investment and job creation. It is a deliberate attempt to divide the community. We now have a situation where most young people and women support our agenda, while some elders and others, who we suspect are being given incentives, are carrying out propaganda against us. One of our coordinators, who was an employee of the company and acted as a whistleblower, was sacked for sharing information with us. She has been suffering retaliation because of her courage in exposing violations.

Despite these challenges, what keeps you going?

We believe in the importance of our work. We're giving voice to the most vulnerable and fighting for climate and social justice. It's challenging, but we see the impact we're making in these communities, and that drives us forward. We're not just addressing immediate needs but working toward long-term, sustainable solutions. Whether it's building an eco-village, fighting for water rights, or empowering women to stand up against corporate exploitation, we're committed to creating lasting change. The solidarity we've seen, both within communities and from our supporters globally, gives us hope. We're part of a larger movement for justice, and every small victory—whether it's defeating a harmful bill or providing relief during a crisis—reinforces our determination to continue this crucial work.





7. Sacred connections: Exploring the harmony of God, humanity, and creation in Africa

Maina Kevin Wanjau is a member and leader of the Young Theologians Initiative for Climate Action in Kenya and a commissioner in the Commission on Climate Justice and Sustainable Development, World Council of Churches.

In Africa, land, water, and food are more than just resources; they are sacred gifts that are deeply connected to the spiritual, cultural, and social lives of most African communities. Indigenous knowledge and practices have always seen these elements as gifts from God, given to humanity to care for and steward and to be used in a prudent manner. This reflection looks at the biblical foundations and indigenous wisdom that highlight the deep relationship between God, humanity, and creation.

God as the owner of all

The Bible often reminds us that the earth and everything in it belong to God. Psalm 24:1 says, “The earth is the Lord’s, and everything in it, the world, and all who live in it.” This verse emphasizes that God is the ultimate owner of all creation, and we are here to take care of it responsibly.

Land: A sacred trust

In African traditions, land is not just property; it is a sacred trust that is passed down through generations and is continuing in the family systems. The Bible also views land as a gift from God. In Leviticus 25:23, God says, “The land must not be sold permanently, because the land is mine and you reside in my land as foreigners and strangers.” This belief fits well with the African view that land cannot be owned outright but is held in trust for future generations.

Water: Source of life and blessing

Water is essential for life and is seen as a blessing in both biblical and African contexts. Isaiah 44:3 says, “For I will pour water on the thirsty land, and streams on the dry ground; I will pour out my Spirit on your offspring, and my blessing on your descendants.” African indigenous knowledge also treats water sources as sacred, protecting and managing them communally to ensure they are used sustainably and fairly. It is the loss of these values and knowledge that is causing pollution in our waters, but the guidance is given by our African traditions. In some African contexts, water bodies are seen as the residing places of spirits, and this leads to it being treated with more respect.

Food: Nourishment and community

In African cultures, food is closely tied to and at the centre of community life and a great symbol of hospitality. It is seen as a gift from God to be shared. The Bible story of manna in the wilderness (Exodus 16) teaches us to rely on God’s provision and to share fairly. African traditions similarly emphasize communal sharing of food and recognize it as a sign of God’s care and abundance.

Indigenous knowledge and stewardship

African practices offer valuable lessons on sustainable living and stewardship, such as rotational farming, water conservation, and communal land management. These practices are rooted in deep respect for the environment. The Bible also calls for stewardship in Genesis 2:15, where God places Adam in the Garden of Eden to “work it and take care of it.” This resonates with indigenous principles of caring for the land and ensuring its fertility for future generations. The wisdom of the Kikuyu community in Kenya further illuminates this point through the proverb *uyu ananite nginya akamia rui naiguru*, which translates to “this person has become very naughty that he/she defecates at the source of the river.” This proverb underscores how individual behaviour can impact the entire community. It serves as a reminder that our actions, particularly toward natural resources, have far-reaching consequences for the collective well-being.

By blending biblical teachings and indigenous knowledge, we are reminded of our duty to care for the earth with respect and responsibility. Reflecting on land, water, and food challenges us to honour these gifts, recognize God’s sovereignty, and uphold the wisdom of our ancestors in our modern practices. This approach not only deepens our spiritual understanding but also promotes sustainable and just relationships with creation, essential for the well-being of both current and future generations in Africa and beyond.

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8.

Seeds of change: Your stories, tomorrow's topics

Contact us

Thank you for joining us on this journey through Southern and Eastern Africa's land, water, and food landscape. Your engagement with these critical issues is a vital step toward creating a more sustainable and equitable world.

We want to hear from you! Do you have stories or projects related to land management, water conservation, or food security in your community? Share them with us by writing to infowcc@wcc-coe.org. Your experiences could inspire others and feature in our upcoming editions.

Looking ahead

In our next edition, we'll turn our attention to North, Central, and West Africa, exploring the unique challenges and innovative solutions emerging from these diverse regions within the African continent. Stay tuned for insights that will broaden your global perspective.

Further reading

To deepen your understanding of the topics we've discussed, we recommend the following resources:

FAO, IFAD, UNICEF, WFP and WHO.

2023. *The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural-urban continuum*. Rome, FAO.

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For more accessible reads:

Goodell, Jeff. *The Water will come: Rising seas, sinking the cities, and the remaking of the civilized world*. New York: Back Bay Books / Little, Brown and Company, 2018.

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We hope these resources will inspire you to continue learning and take action.

Remember, every small step toward sustainability counts. Together, we can make a difference.

Thank you for your dedication to understanding and addressing these crucial global issues. Until next time, stay curious and keep nurturing our shared Earth!

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Appendix

The NIFEA Consultation on Land as Commons, Not Commodity²⁸⁶, held on 28-30 August 2024 in Limuru, Kenya, gathered theologians, faith leaders, and activists to explore the spiritual and social importance of land in Africa. Participants reflected on how faith teaches us to see land as a shared resource rather than a commodity, critiqued systems that treat land purely for profit, and worked on strategies to promote sustainable, just land use. The outcome was a theological communiqué that is helpful to faith communities to reflect and further their efforts in protecting food security, conserving land, and advancing water justice.

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Photo Description and Credits

Front Cover

>>> A young woman crosses a bridge in Kuron, a remote community in South Sudan's Eastern Equatoria State, where the Catholic Church has established the Holy Trinity Peace Village.

The Peace Village is supported by Norwegian Church Aid, a member of the ACT Alliance.

Photo credit: Paul Jeffrey for the ACT Alliance. Norwegian Church Aid in Kuron, South Sudan. Taken on 1 October 2021.

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>>> Bean diversity helps farmers tackle climate change: Sunny Mbeeta Abwooli, chairwoman of the Kyamaleera Woman's Handicraft Association.

Photo credit: 2016 CIAT / Georgina Smith, 14 July 2016.

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>>> Young boy covering his face with his hands, being splashed with water.

Photo credit: Hashtag Melvin, 25 February 2023.

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>>> Entrepreneurial farmer who restored the soil on her plot through installing water harvesting, Hosana, Ethiopia.

Photo credit: 2015 CIAT/Georgina Smith, 22 August 2015.

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>>> Sustainable Development Goals (SDGs), icon grid.

Image Credit: Global Goals.

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>>> Early morning in Karukochom, a remote community in South Sudan's Eastern Equatoria State.

The Peace Village is supported by Norwegian Church Aid, a member of the ACT Alliance.

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>>> Person holding water in their cupped hands.

Photo Credit: Yassin Doukhane, 21 June 2019.

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>>> People carrying fruits and vegetables on their heads.

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Source: <https://www.pexels.com/photo/people-carrying-fruits-and-vegetables-on-their-heads-13279766>.

>>> Street vendor selling tiger nuts, Kano, KN, Nigeria.

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Source: <https://www.pexels.com/photo/street-vendor-selling-tiger-nuts-in-kano-nigeria-28752786>.

>>> A group of people celebrating Meskel on a street in Addis Ababa, Ethiopia,

Photo Credit: Lan Yao, 19 January 2022.

Source: <https://www.pexels.com/photo/group-of-people-celebrating-meskel-on-street-in-ethiopia-20865947>.

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>>> Close-up of a giraffe drinking water.

Photo Credit: Francesco Ungaro, 4 August 2023.

Source: <https://www.pexels.com/photo/close-up-of-a-giraffe-drinking-water-26729499>.

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>>> A child in brown clothes washing his hands under pouring water.

Photo Credit: Safari Consoler, 10 March 2021.

Source: <https://www.pexels.com/photo/a-kid-in-brown-clothes-washing-hands-on-pouring-water-11612437>.

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>>> A brown cow with long horns in a zoo.

Photo Credit: Surja Sen Das Raj, 1 July 2023.

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>>> Dead cattle in war-torn South Sudan: A woman walks by a dead cow in Dong Boma, a Dinka village in South Sudan's Jonglei State, on April 12, 2017.

The Lutheran World Federation, a member of the ACT Alliance, is helping villagers restart their lives with support for housing, livelihood, and food security.

Photo Credit: Paul Jeffrey/Life on Earth.

Source: https://oikoumene.photoshelter.com/search/result/I0000UxEA_D.F23E?terms=south-sudan-2017-jeffrey-E2013.JPG&.

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Photo Credit: Albin Hillert/WCC, Mar 2018.

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>>> Indigenous Seed Bank Story: Ogaye Format shows the diverse vegetables and new cultivation methods he is using on his farm with support from the Alliance and partners.

Photo Credit: ©2019 CIAT/Georgina Smith.

Photo Source: <https://www.flickr.com/photos/ciat/51002607653/in/album-72157718520277636>.

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Photo Credit: 2012CIAT/Neil Palmer, Taken on 27th July 2012.

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>>> Women carry water to their homes on April 12, 2017, in Dong Boma, a Dinka village in South Sudan's Jonglei State

Photo Credit: Paul Jeffrey, 13 Dec 2019.

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Photo Credit: Magda Ehlers, 5 October 2017.

Source: <https://www.pexels.com/photo/bird-s-eye-view-of-farmland-636342>.

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Photo Credit: JB, 17 November 2023.

Source: <https://www.pexels.com/photo/an-aerial-view-of-victoria-falls-in-zimbabwe-27878404>.

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>>> Arid terrain in Kimanjo, Laikipia County, Kenya.

Photo Credit: Athuman Komora Garisse, 1 October 2021.

Source: <https://www.pexels.com/photo/arid-terrain-in-kenya-9807749>.

>>> A woman carries water in the Holy Trinity Peace Village in Kuron, a remote community in South Sudan's Eastern Equatoria State.

Photo Credit: Paul Jeffrey/Life on Earth Pictures, 29 Sep 2021.

Source: <https://actalliance.photoshelter.com/search/result/I00007.80IIzoIzU?terms=water%20africa&>.

>>> African man ploughing the field with oxen.

Photo Credit: Keith Lobo, 3 November 2021.

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Photo Credit: Breston Kenya, 11 August 2018.

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>>> Men drawing water from Itare River, Rift Valley, Kenya.

Photo Credit: Sande Murunga/CIFOR, 19 March 2017.

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>>> Diverse seeds at the farmer run seed bank at Vihiga set up together with partners in Western Kenya,

Photo Credit: 2019 CIAT/ Georgina Smith, 16 December 2019.

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Photo Credit: Gregg Brekke / SixView Studios.

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Photo Credit: Emeline Hassenforder, 3 March 2018.

Source: https://www.flickr.com/photos/water_alternatives/38770434654/in/album-72157669411679916.

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Man and horse walking through a narrow passage in a valley, Oromia, Ethiopia.

Photo Credit: Gift Habeshaw, 13 February 2021.

Source: <https://www.pexels.com/photo/man-and-horse-walking-through-narrow-passage-in-valley-6851851>.

6.1. Mahamba Food Security Project, Methodist Church of South Africa, p. 35.

>>> Food Security Project in South Africa.

Photo Credit: Methodist Church Southern Africa Circuit 1024, Mahamba Food Security Project.

6.2. St Patrick's High School 157 KW Solar Plant, Zimbabwe, p. 36 and 37.

>>> Solar Plant, Zimbabwe.

Photo Credit: Central Diocese of the Anglican Church, Zimbabwe.

6.3. The Ethiopian Orthodox Church's Role in Forest Conservation and Climate Change Mitigation, Ethiopia, p. 38, 39, 40.

>>> Ethiopia Forest Programme.

Photo Credit: Ethiopian Orthodox Church Development and Inter Church Aid Commission.

>>> Case study: From forest dependency to sustainable prosperity: The 2024 impact of the Ethiopia Interfaith Initiative for Forest Conservation and Climate Action in Limu, Kosa, p. 41, 42.

Photo Credit: Ethiopian Orthodox Church Development and Inter Church Aid Commission.

6.4. Women Collective Kenya: Championing Climate and Social Justice, p. 43, 45.

Photo Credit: Women Collective Kenya, Ruth Mumbi.

7. Sacred connections: Exploring the harmony of God, humanity, and creation in Africa, p. 46.

>>> A senior woman in traditional African clothing, Wamba, Samburu County, Kenya.

Photo Credit: Collines Omondi, 11 May 2023.

Source: <https://www.pexels.com/photo/a-senior-woman-in-traditional-african-clothing-16863349>.

8 Seeds of change: Your stories, tomorrow's topics, p. 48.

>>> Dinner October 2019 with Asia & Pacific and Africa Regional Celebrations.

Photo Credit: Magnus Aronson/CoS, 29 October 2018.

Source: https://actalliance.photoshelter.com/search/result/I0000E4_m9dTIpjE?terms=&

Appendix, p. 50.

>>> Rev. Dr Sam Kobia (Methodist Church in Kenya and former WCC GS) offered a Christian perspective on land as commons in an interfaith panel. Left to right: Athena Peralta (WCC director of the Commission on Climate Justice and Sustainable Development), Rev. Dr Sam Kobia, Dr Rogate Mshana (Oikotree, and former WCC Acting Assistant GS).

Photo Credit: Athena Peralta/WCC.

Source: Provided by photographer.

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The Living Planet Monitor gives you an overview of the situation in a particular continent in the world by monitoring indicators on food security, water resources, land use, and climate resilience. It is a key instrument for faith communities to stay informed on the current situation, share good practices and projects led by church-based organizations, and give hope and courage to transform the situation.

If you have an interesting story or a good practice to share on the issues of land, water, and food or its nexus, please write to us at infowcc@wcc-coe.org.

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