ACTS ARA 2025

ARA -TLS KNOWLEDGE SYNTHESIS SYMPOSIUM 2025 - AFRICA

March 10 -12

Nairobi, Kenya

Overview

The ARA-TLS Knowledge Synthesis Symposium 2025 - Africa, held from March 10-12, 2025, in Nairobi, Kenya, convened experts, practitioners, and stakeholders to discuss critical issues in climate adaptation and resilience. The symposium, organized by the Adaptation Research Alliance (ARA) under its Tracking, Learning, and Sharing (TLS) framework, focused on cross-regional learning, knowledge synthesis, and fostering actionable strategies to enhance climate resilience. The event provided a collaborative platform for sharing insights, identifying adaptation priorities, climate financing advocacy and strengthening networks to drive impactful climate action. The symposium featured interactive sessions, focus group discussions (FGDs), and expert presentations on key themes such as climate change and health, human settlements, and climate finance.

The Symposium had three sections addressing climate change and health, climate resilient human settlement and climate finance respectively. Discussions mapped the current situation in Africa and addressed optimal ways of solving climate issues. The Symposium concluded on the third day when participants were actively involved in climate finance policies, priorities and Africa's positioning for COP 30.

Discussions highlighted the persistent underfunding of African climate adaptation needs, disparities in finance distribution, and bureaucratic barriers limiting access to multilateral funds. Experts proposed solutions including strengthening domestic financing mechanisms, enhancing youth participation in climate finance governance, and advocating for a fairer distribution between adaptation and mitigation finance.

A central theme throughout the symposium was the need for a unified African voice in climate negotiations. The discussions reinforced the importance of transparent climate finance allocation, innovative financing models, and locally led adaptation initiatives. The symposium concluded with a call to action, emphasizing the necessity of multi-stakeholder collaboration, sustainable adaptation strategies, and well-financed climate resilience efforts for Africa's long-term development.

List of Abbreviations

ARA	Adaptation Research Alliance
TLS	Tracking, Learning and Sharing
PPP	Public Private Partnerships
LE	Life Expectancy

Table of Contents

Table of Contents

1.0 Introduction and Background

The Adaptation Research Alliance (ARA) is a global coalition of researchers, practitioners, and policymakers committed to driving action-oriented research for climate adaptation. Rooted in a theory of change that emphasizes collaborative knowledge production, equitable partnerships, and research uptake, ARA advocates for locally led adaptation solutions that are both impact-driven and responsive to community needs. Through its advocacy mandate, ARA champions evidence- based policy influence, cross-sectoral collaboration, and the integration of diverse knowledge systems to enhance global climate resilience.

As part of this commitment, the TLS Knowledge Synthesis Symposium was convened in Nairobi, Kenya, in February 2025, bringing together 39 ARA Africa members. Co-hosted by Transition Research in collaboration with the African Centre for Technology Studies (ACTS), the symposium aimed to foster cross-regional learning, synthesize adaptation knowledge, and identify priorities for transformative adaptation research. A key focus of the discussions was climate finance advocacy, particularly advancing the Global Goal on Adaptation (GGA) and the New Collective Quantified Goal (NCQG) as the global community prepares for COP 30. By gathering experts, practitioners, and stakeholders, the event provided a platform for sharing insights, strengthening partnerships, and generating actionable strategies to advance climate resilience worldwide.

The African Center of Technology Studies as the Regional advocacy lead on NCQG and GGA had a primary aim of climate finance policies advocacy. This report illuminates the discussions from the ARA TLS Symposium and how they align with the Global Goal on Adaptation (GGA) key impact areas.

1.1 Rationale and Objectives

The symposium served as a platform to:

- Facilitate knowledge exchange among climate adaptation researchers and practitioners.
- Identify regional and cross-regional priorities for climate resilience.
- Strengthen networks and collaborations for effective adaptation interventions.
- Develop strategies for integrating adaptation knowledge into policies and educational curricula.
- To advocate for climate finance and interrogate other sources of climate finance
- To collectively design "the road to Belem" towards COP30

1.2 Methodology and Approach

The symposium employed a multi-stakeholder, participatory approach that included:

- Member spotlights showcasing innovative adaptation initiatives.
- Expert presentations
- Participant's presentation of their projects
- Focus Group Discussions (FGDs) to generate stakeholder-driven solutions.

- Interactive sessions aimed at fostering collaborations and partnerships.

2.0 Outcomes

2.1 Welcome and Introduction

The symposium commenced with a welcome address by Joel Onyango (ACTS), who warmly welcomed all participants and set the stage for a session centered on learning, sharing, and advocacy for climate adaptation. He extended a special acknowledgment to official ARA members, recognizing their critical role in advancing climate resilience.

In his remarks, he highlighted the importance of strong policy engagement in shaping global climate finance mechanisms, particularly the Global Goal on Adaptation (GGA) and the New Collective Quantified Goal (NCQG). He emphasized that advocacy in these areas is crucial for ensuring meaningful and inclusive adaptation action. Joel also reflected on the legacy of the African Centre for Technology Studies (ACTS), noting its 35-year history at the forefront of policy research in climate and development. He underscored ACTS' evolving role, highlighting its transition from a think tank to a doing tank, with a stronger focus on translating research into tangible, action-driven solutions.

On behalf of the organizing team, he expressed appreciation for the participants' engagement and encouraged them to contribute actively to the discussions, reinforcing the symposium's commitment to fostering actionable insights and collaborative learning.

2.2 Key Discussion Areas of the Symposium

The discussions reported here are along the key areas of the GGA in Africa. This may contain reported speeches and project presentations done by the participants.

2.2.1 Water Security & Management.

The symposium emphasized water scarcity and drought as critical challenges for Africa. Prolonged dry spells are affecting both agriculture and human consumption. Discussions highlighted the need for localized water management strategies, including rainwater harvesting, groundwater recharge, and integrating traditional water conservation techniques into modern solutions. A project was presented on this theme;

Promoting Collaborative Governance and Effective Policy Implementation for Sustainable Water Resource Management in Tanzania – by *Jacob Mogendi*

The presentation by Jacob Mogendi highlighted the persistent challenges in Tanzania's water resource management, particularly within the Great Ruaha River Basin. Despite the establishment of the Institutional Water Management Framework (IWMF), governance weaknesses, illegal water abstraction, and environmental degradation continue to threaten sustainability. Climate change has exacerbated the situation by reducing water levels, intensifying competition between key sectors such as irrigation

farming, hydropower generation, and national park conservation. The ineffective enforcement of existing policies has led to increased disputes, with local communities, government agencies, and private stakeholders struggling to find equitable solutions.

To address these challenges, the discussion emphasized the need for strengthened multi-stakeholder governance, improved transparency in water data sharing, and revised water allocation policies that balance competing sectoral demands. The integration of technology, including AI-powered monitoring and remote sensing, was proposed to detect and curb illegal water use. Additionally, public awareness campaigns and accessible conflict resolution mechanisms were recommended to promote responsible water usage and reduce disputes. These policy recommendations aim to enhance sustainable water governance, ensuring equitable access while safeguarding ecosystems and economic resilience in Tanzania.

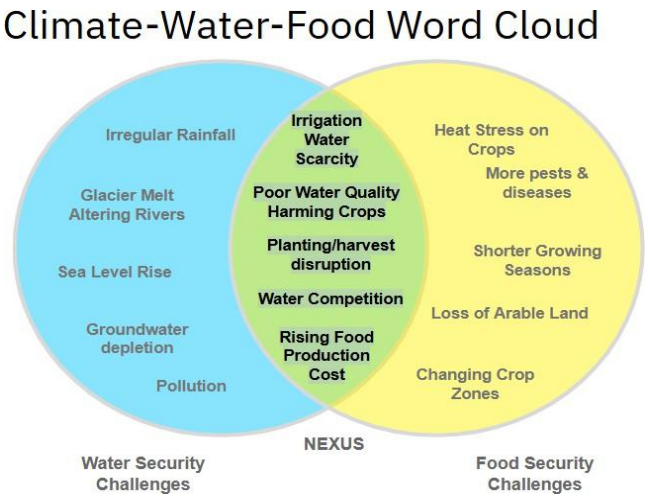
2.2.2 Food Security & Agriculture

To set the context, Climate Change and Food security was identified as the top priority by Africa member organizations of ARA. Climate change poses a significant threat to food security in Africa, aggravating existing vulnerabilities in agricultural systems that millions rely on for sustenance and livelihoods. Rising temperatures, erratic rainfall, prolonged droughts, and extreme weather events such as floods and cyclones disrupt food production, reduce crop yields, and lead to loss of livestock. These climate-induced stresses further degrade soil quality and water availability, intensifying competition for resources.
Smallholder farmers, who produce the bulk of Africa's food, are particularly at risk due to limited access to climate-resilient technologies, financial support, and adaptive strategies. Additionally, post-harvest losses increase as rising temperatures and humidity favor pests and diseases. With a rapidly growing population, climate change threatens not only food availability but also affordability and accessibility, exacerbating malnutrition and hunger. Urgent interventions, including climate-smart agriculture, resilient seed varieties, efficient water management, and robust policy frameworks, are crucial to safeguarding Africa's food security in the face of a changing climate.

Adopting Climate-Smart Agriculture for Sustainable Food Security: The Case of Gairo, Tanzania – by *Leonard Kitindi*

In Gairo, Tanzania, smallholder farmers have embraced climate-smart agriculture (CSA) to counter the adverse effects of unpredictable rainfall and declining soil fertility. Led by CONASU and PELUM Tanzania, the project has successfully promoted regenerative ecological agriculture, emphasizing organic farming and sustainable land-use practices. Women and youth have been at the forefront of these efforts, playing a vital role in revitalizing degraded land and improving agricultural resilience.

Despite facing challenges such as financial constraints, limited infrastructure, and inadequate knowledge of CSA practices, the project has yielded significant benefits. Farmers have been trained through Farmer Field Schools, enhancing their skills in soil and water conservation, intercropping, and the use of organic fertilizers. Market access has been improved through cooperatives, allowing farmers to secure fair prices for their produce. Investment in irrigation systems and agricultural infrastructure has further boosted productivity, with crop yields increasing by 30-50%.



The symposium underscored the importance of climate-resilient seeds, improved soil health, low-cost irrigation, and access to timely weather information**.** Various projects have been undertaken to address these issues by implementing climate-smart agricultural practices, promoting sustainable land management, and leveraging indigenous knowledge. The following sections provide an overview of selected projects focused on the nexus of climate change, agriculture, water, and food security, highlighting their key interventions and impacts.

2.2.3 Climate Change, Agriculture, Water, and Food Nexus

Africa's agricultural sector is highly vulnerable to climate change due to its dependence on rainfall and the prevalence of small-holder farming systems. Participatory Rural Assessments (PRA) conducted between 2017 and 2020 revealed several challenges, including erratic weather patterns, limited access to modern agricultural inputs, and socio-economic constraints such as gender inequality and health issues. Environmental degradation further compounds these problems, leading to declining productivity and food shortages.

To address these challenges, several initiatives have been introduced. Climate-smart agricultural practices, including the use of organic fertilizers, improved irrigation techniques, and participatory learning, have shown promise in increasing resilience. Additionally, integrating gender-sensitive approaches and addressing land ownership disparities can help enhance agricultural productivity. Policy support and institutional strengthening are essential to ensure the sustainability of these interventions. A holistic approach that includes indigenous knowledge, agro-ecological diversification, and renewable energy in agriculture is crucial for long-term resilience.

2.2.4 Climate-Resilient Food Systems

The link between climate, water, and food security has significant implications for African nations, particularly in regions prone to resource conflicts and environmental degradation. Countries such as Chad, the Democratic Republic of Congo, Egypt, and Ethiopia have experienced disputes over water access, leading to displacement, food crises, and socio-economic instability.

Key interventions in this space include sustainable agricultural practices such as agroecology, climate-smart irrigation, and integrated water resource management. Policy development and capacity-building efforts have been instrumental in training farmers and policymakers on climate adaptation strategies. Technological advancements, including Geographic Information Systems (GIS) and remote sensing, are being used to track water availability and optimize agricultural productivity. Strengthening interdisciplinary collaboration among stakeholders and fostering partnerships with governments, NGOs, and local communities have been critical in driving these efforts forward.

Empowering Farmers through Indigenous Knowledge: A Case Study from Zambia

The case of Mama Mary Dimba in Kafue's Lukolongo ward demonstrates the power of indigenous knowledge in enhancing climate resilience. Through the Farmer-Managed Seed Systems (FMSS) program, she has played a pivotal role in reviving indigenous seed varieties that are well adapted to climate shocks. By managing a community seed bank and mobilizing farmers, she has strengthened local food security while advocating for policies that support seed sovereignty.

However, several barriers continue to hinder the widespread adoption of climate-resilient agriculture. Limited access to climate-resilient seeds, unpredictable weather patterns, financial constraints, and gender inequalities pose significant challenges. The growing reliance on commercial seed varieties threatens local self-sufficiency, making it imperative to prioritize seed sovereignty. Farmers are responding by adopting drought-resistant indigenous seeds, diversifying their cropping systems, and integrating traditional agricultural knowledge with modern techniques.

Key Highlights

1. Climate change exacerbates food insecurity, water scarcity, and agricultural vulnerabilities in Africa.
2. Sustainable agricultural practices, such as agroecology and climate-smart irrigation, enhance resilience.
3. Farmer-led initiatives and participatory learning improve the adoption of climate adaptation strategies.
4. Market access, financial support, and policy engagement are crucial for long-term sustainability.
5. Indigenous knowledge and traditional farming practices play a vital role in climate adaptation.

Recommendations

1. **Strengthen Policy and Institutional Support** – Governments should develop and enforce policies that promote climate adaptation, including land tenure reforms and incentives for sustainable farming practices.
2. **Integrate Indigenous Knowledge with Modern Innovations** – Combining traditional farming techniques with scientific advancements can enhance climate resilience and food security.
3. **Promote Agroecological Diversification** – Encouraging mixed farming systems that integrate crops, livestock, forestry, and aquaculture can improve sustainability.
4. **Invest in Renewable Energy for Agriculture** – Expanding clean energy solutions for irrigation and storage can reduce environmental impacts and enhance productivity.
5. **Provide Financial Incentives and Market Access** – Establishing credit facilities, training programs, and cooperative networks can support smallholder farmers in transitioning to climate-smart agriculture.
6. **Enhance Climate Data Collection and Early Warning Systems** – Strengthening monitoring frameworks and climate risk assessments can help farmers make informed decisions.

Conclusion

Building resilient food systems in Africa requires a multifaceted approach that addresses climate change impacts, strengthens agricultural sustainability, and promotes equitable access to resources. The projects highlighted in this summary demonstrate the effectiveness of climate-smart agriculture, farmer-led innovations, and indigenous knowledge in tackling food insecurity. By fostering collaboration among stakeholders, investing in sustainable technologies, and advocating for supportive policies, Africa can transition towards a future where food security and climate resilience go hand in hand.

2.2.5 Human Health & Well-being

Prathana, from Transition Research, set the context on Climate and Health, emphasizing its significance as a key learning priority for the Adaptation Research Alliance (ARA) community. She highlighted that 3.6 billion people live in areas highly susceptible to climate change, with projections indicating an additional 250,000 deaths annually between 2030 and 2050 due to poor nutrition, malaria, diarrhea, and heat stress.

She outlined the immediate physical, long-term, and mental health impacts of climate change, particularly on vulnerable groups such as children, women, the elderly, low-income communities, indigenous peoples, and occupationally exposed individuals. The discussion also identified key challenges, including gaps in climate-health monitoring, insufficient funding, a lack of contextual research, and siloed sectoral policies. Identified barriers such as institutional awareness gaps and limited information capture and access on susceptibility and vulnerabilities, were found to hinder effective response and policy development. To address these challenges, she underscored the need for capacity building, policy integration, community engagement, and financial strategies that ensure a

more inclusive and effective response to climate-related health risks. Rising temperatures and shifting rainfall patterns are increasing disease outbreaks like malaria and cholera. The symposium stressed the need for stronger health systems that integrate climate adaptation into public health planning, ensuring communities are protected from climate-induced health risks. A learning question was asked: How can we develop participatory, ground-up approaches to better understand the impact of climate change on human health?

Project presentations were done as shown regarding the theme;

Climate Change and Health FGD: All Hands-on Deck – Designing Participatory Approaches

A key discussion in the climate change and health FGD focused on identifying the key stakeholders necessary to fully understand the impacts of climate-related health challenges. Participants emphasized that a multi-sectoral approach is crucial in addressing climate-health intersections, ensuring that policies and interventions are both scientifically sound and contextually relevant.

Key Stakeholders in Climate Change and Health:

1. **Government Agencies** – Ministries of Health, Environment, and Planning responsible for integrating climate-health policies.
2. **Local and International NGOs** – Organizations like WHO, Red Cross, and Amref Health Africa, which work on public health and climate resilience.
3. **Community-Based Organizations (CBOs)** – Grassroots groups that understand localized health challenges and vulnerabilities.
4. **Academia and Research Institutions** – Universities and think tanks conducting studies on climate-health intersections.
5. **Healthcare Providers** – Hospitals, clinics, and health professionals offering firsthand insights into climate-related illnesses.
6. **Climate Scientists and Meteorological Departments** – Experts analyzing climate trends and their impact on human health.
7. **Private Sector and Philanthropic Organizations** – Businesses involved in health innovation, insurance, and climate-smart investments.
8. **Indigenous and Vulnerable Communities** – Those directly affected by climate change, providing lived experiences and insights.
9. **Development Partners and Multilateral Institutions** – Entities like the World Bank, UNDP, and GCF supporting climate-health funding and programs.
10. **Media and Science Communicators** – Raising awareness and advocating for evidence-based responses to climate-health issues.

Financing Climate and Health Resilience - by David Rabuor (Program Director - CAHED Kenya)

David Rabuor's presentation focused on the intersection of climate change and health, highlighting the urgent need for sustainable financing mechanisms. Climate change intensifies health risks through rising temperatures, increased disease outbreaks, extreme weather events, air pollution, and water

scarcity. These factors strain healthcare systems, which already face funding challenges. In Kenya, healthcare financing remains inadequate, with funds disproportionately allocated to infrastructure while services struggle due to weak structures, low health personnel remuneration, and reduced donor funding.

Key challenges include disparities in resource allocation between national and county governments, weak health infrastructure, and a lack of climate-smart investments. He provided a case study from Homa Bay, where flooding led to a surge in malaria cases, a trend observed in Northeastern Kenya and Athi River. To address these gaps, he proposed innovative financing solutions such as tapping into the Green Climate Fund, developing climate insurance schemes, leveraging Public-Private Partnerships (PPPs), and fostering community-based adaptation approaches. The role of technology and data-driven solutions in improving health resilience was also emphasized.

Cadre Scientifique Health Climate Prospect – by *Roseline Bayili*

Delivered in French for inclusivity, this presentation focused on building scientific capacity in climate and health resilience. The presentation examined how climate change is worsening health challenges in Sub-Saharan Africa, increasing disease burdens and straining fragile healthcare systems. Rising temperatures, extreme weather events, and environmental degradation contribute to the spread of vector-borne diseases (malaria, dengue fever), waterborne illnesses (cholera), and respiratory conditions linked to air pollution.

Additionally, disruptions to agriculture and water supply impact food security, leading to malnutrition and starvation. A science-driven approach is needed to enhance healthcare system resilience. The HealthClimProspect framework was introduced as a structured method for assessing and improving healthcare resilience. It comprises four key components:

- **ClimImpacts** – Mapping the effects of climate change on health systems.
- **ClimVulnerability** – Identifying socioeconomic and environmental vulnerabilities.
- **ClimSolutions** – Developing evidence-based adaptation strategies.
- **ClimIndex** – Establishing indicators to track healthcare system resilience.

The presentation underscored the importance of scientific research, training programs, and interdisciplinary collaboration in fostering climate resilience in healthcare systems.

Political Instability, Malnutrition, Education, and Environmental Degradation as Determinants of Life Expectancy: A Multi-Dimensional Analysis of 84 Developing Countries – by *Abdikafdi Haasan Abdi*

This study examined life expectancy as a key global health indicator, highlighting disparities across nations. While some countries enjoy an average life expectancy of 80 years, others, particularly in developing regions, report life expectancy as low as 45 years. The study analyzed 84 developing countries, with a focus on Somalia and East Africa, to understand key determinants influencing longevity:

- **Political Stability** – Conflict and governance failures disrupt healthcare access and exacerbate food insecurity.
- **Environmental Degradation** – Climate shocks such as droughts and floods displace populations and reduce agricultural productivity.
- **Nutrition** – Malnutrition affects about 30% of populations in some regions, increasing disease burdens and mortality rates, particularly among children.

The research emphasized how conflict and climate shocks create difficult policy trade-offs, such as balancing food security with mortality reduction efforts. Empirical findings revealed correlations between life expectancy and factors such as economic growth, environmental protection, CO_2 emissions, undernourishment, and regional conflict dynamics.

Key Highlights:

1. Climate change is worsening health risks, affecting disease patterns, nutrition, and healthcare infrastructure.
2. Financing for climate and health resilience is inadequate, with limited investments in climate-smart healthcare solutions.
3. Political instability, malnutrition, and environmental degradation are critical determinants of life expectancy in developing countries.
4. There is an urgent need for scientific frameworks, such as HealthClimProspect, to enhance resilience in healthcare systems.
5. Case studies from Kenya (Homa Bay, Northeastern Kenya, and Athi River) illustrate the real-world impacts of climate-driven health crises.

Recommendations:

- **Climate and Health Financing**: Increase investments in climate-resilient health infrastructure through Green Climate Fund initiatives, PPPs, and climate insurance schemes.
- **Policy Integration**: Governments should integrate conflict resolution with climate adaptation strategies to stabilize health services.
- **Data-Driven Decision-Making**: Utilize climate vulnerability mapping and Clim Index indicators to improve resource allocation and healthcare planning.
- **Strengthening Healthcare Infrastructure**: Build climate-adaptive hospitals and integrate renewable energy solutions in healthcare facilities.
- **Scientific Research & Capacity Building**: Expand training programs for healthcare professionals on climate resilience and health adaptation.
- **Community-Based Interventions**: Promote local participation in climate adaptation strategies and increase public awareness about climate-health linkages.
- **Enhancing Food Security**: Adopt policies to reduce dependence on food imports and strengthen local agricultural production to combat malnutrition.
- **Environmental Protection**: Implement measures to mitigate climate-related health impacts through reforestation, pollution control, and sustainable agriculture.

Conclusion:

The intersection of climate change and health presents complex challenges, particularly in developing countries where vulnerabilities are highest. Addressing these issues requires a multi-pronged approach combining financing solutions, policy reforms, scientific research, and grassroots interventions. By investing in climate-resilient healthcare systems and fostering collaborative approaches across sectors, nations can build sustainable, future-proof health services that withstand climate shocks and enhance population well-being.

2.2.6 Livelihoods & Economic Resilience

Climate disasters have led to significant economic losses, particularly for rural communities. Participants advocated for financial inclusion, micro insurance for farmers, and diversified income streams to enhance economic resilience. A project presented under this theme is as discussed;

People-Centered Adaptation for Climate-Resilient Human Settlements – by *Maxwell Odonkor*

This presentation focused on the risks posed byclimate change to human settlements, ecosystems, and economies, emphasizing the need for immediate action. It highlighted how participatory planning can enhance climate adaptation strategies. Climate change presents severe threats to human settlements, particularly in vulnerable regions of Africa. Extreme weather events such as increased flooding, rising sea levels, and coastal erosion continue to endanger both urban and rural communities. The economic consequences of inaction are dire, with the World Bank warning that climate change could push over 100 million people into extreme poverty by 2030. In Ghana, the 2015 Accra floods, which resulted in over 150 deaths, were exacerbated by poor drainage and unplanned urban settlements. Climate-induced displacement is on the rise, with over 26,000 people displaced due to flooding in Ghana in 2023.

Key challenges in climate adaptation include fragmented government structures, where multiple ministries and departments operate in silos, limiting effective collaboration. Community engagement remains weak, with those most affected by climate change often excluded from adaptation planning. Social inequalities further compound the issue, as marginalized communities bear the brunt of climate impacts. Insufficient funding restricts the implementation of sustainable interventions, while weak policy enforcement leads to continued environmental degradation and poor urban planning.

Key Highlights:

- Climate change poses serious risks to human settlements, increasing extreme weather events, economic vulnerabilities, and displacement.
- Fragmented government structures, social inequalities, and weak policy enforcement hinder climate adaptation efforts.
- The 2015 Accra floods and the displacement of 26,000 people in Ghana in 2023 illustrate the urgent need for better planning and response mechanisms.

Recommendations:

- **Participatory Planning and Community Engagement** – Actively involve communities in identifying climate risks and designing adaptation strategies. Inclusive planning with local leaders, vulnerable populations, and community representatives fosters ownership of projects.
- **Community-Based Early Warning Systems** – Establish mechanisms for disaster preparedness and response at the local level.
- **Strengthening Policies and Governance** – Integrate climate adaptation into national and local policies while ensuring effective implementation.
- **Innovative and Inclusive Solutions** – Adopt multi-sectoral approaches that combine community participation, supportive policies, and technological innovations.

Conclusion:
Addressing the challenges of climate-resilient human settlements requires a people-centered approach that prioritizes community participation, effective governance, and sustainable policies. By fostering inclusive planning and investing in climate adaptation strategies, vulnerable regions can build resilience against climate-related disasters and economic shocks.

2.2.7. Infrastructure & Settlements

Rising sea levels and extreme weather events are threatening coastal and urban infrastructure. The symposium called for climate-proofing infrastructure**,** improving urban planning, and integrating locally-led solutions into national adaptation policies. Here is a group discussion that took place under this theme.

Mapping Power Dynamics – Climate Change and Human Settlements FGD Outcome: Identifying Barriers and Bridging Gaps for Low-Influence Stakeholders

This session explored the exclusion of low-influence stakeholders in climate adaptation efforts and proposed strategies to bridge existing gaps. Participants identified several groups, including farmers, fishers, indigenous communities, people with disabilities, the elderly, urban poor, informal settlers, local government members, and children, as having limited influence in climate resilience planning. Various barriers contribute to this exclusion, such as socio-cultural norms that limit participation, geographical challenges that hinder accessibility, and age discrimination and ableism. Additionally, a reliance on traditional farming methods, language barriers, commercialization of agriculture that marginalizes small-scale farmers, and limited formal knowledge of climate adaptation further deepen these challenges. Widespread poverty restricts access to resources, while a lack of formal education prevents meaningful engagement in policy discussions.

To address these barriers, several strategies were proposed. Aligning indigenous knowledge with formal climate adaptation strategies can ensure that local expertise is integrated into resilience planning. Youth inclusion in climate resilience efforts is essential to fostering long-term sustainability, while improving accessibility through infrastructure development in remote areas can enhance participation. Decentralizing development initiatives would empower local communities, allowing them to play an active role in climate adaptation. Promoting innovative and climate-smart farming methods,

introducing farm-level value in addition to increasing profitability for smallholder farmers, and implementing inclusive communication strategies tailored to diverse stakeholders were also recommended. Additionally, regulating imports to support local production and market stability, establishing farmer cooperatives to harmonize prices and enhance bargaining power, and fostering political goodwill to drive inclusive climate adaptation policies were highlighted as crucial steps toward strengthening resilience.

Cooperative Housing as an Alternative for Climate-Induced Migrants – by *Dr. Francis Dakyaga*

Climate-induced migrants in urban areas, particularly in Accra, face challenges securing permanent housing due to financial limitations and exclusion from formal housing policies. Many are forced into makeshift shelters that expose them to risks such as recurrent displacement due to floods and extreme weather events. Traditional housing markets and government interventions fail to provide sustainable solutions for these migrants. Cooperative housing emerges as a viable alternative, offering a collective and community-driven approach where displaced individuals pool resources to develop stable, affordable, and climate-resilient housing. This model enhances economic empowerment, promotes sustainable construction practices, and fosters strong social networks. Future research and policy development should focus on governance, affordable housing models, and policy integration to institutionalize cooperative housing as a climate adaptation strategy.

Key Considerations in Climate Adaptation and Displacement

- **Political Stability**: Often measured using the "Absence of Violence and Conflict" indicator from the World Bank, but this may not capture underlying governance failures that contribute to instability and increase the risk of future crises.
- **Systemic Injustices and Displacement**: Marginalized communities are disproportionately affected due to flawed legislative frameworks that fail to protect them. In Kenya, informal settlements in wetlands make residents highly vulnerable to climate-induced displacement.
- **IDP Challenges Across East Africa**: Many internally displaced persons (IDPs) across East Africa—particularly in Sudan, Somalia, and Ethiopia—face similar challenges due to their heavy reliance on agriculture. Climate shocks, such as prolonged droughts and devastating floods, disrupt livelihoods, exacerbate food insecurity, and drive mass displacement.
- **Regional Policy Interventions**: To address these issues, regional policies should focus on equipping displaced communities with alternative skills beyond agriculture, reducing their dependency on climate-sensitive sectors, and fostering long-term resilience.

This discussion reinforced the need for inclusive approaches that ensure marginalized groups are actively involved in climate adaptation strategies. By addressing existing barriers and systemic inequalities, more sustainable solutions can be developed to enhance climate resilience and reduce climate-induced displacement.

2.2.8. Disaster Risk Reduction

Climate change is increasingly shaping the patterns of human settlements, exacerbating vulnerabilities in both rural and urban areas. Rising temperatures, extreme weather events, and sea-level rise are displacing communities, particularly those in flood-prone regions, coastal cities, and arid lands. Rapid urbanization, driven by climate-induced migration, is straining existing housing infrastructure, leading to the expansion of informal settlements with inadequate access to basic services. In many cases, displaced populations lack secure land tenure, making them more susceptible to recurrent displacement and socioeconomic instability. Sustainable, climate-resilient housing solutions—such as cooperative housing models, nature-based infrastructure, and integrated urban planning—are critical to ensuring that human settlements can withstand climate shocks while fostering social and economic stability. As climate change continues to reshape migration and urban growth patterns, embedding climate adaptation into housing and land policies is essential for building resilient, inclusive communities.

Extreme weather events, such as floods and cyclones, have devastating impacts on African communities. Discussions underscored the need for early warning systems, localized disaster preparedness, and better response mechanisms to mitigate losses.

Disaster Risk Reduction and Climate Change Adaptation in Burkina Faso - by *Nanema Ouinpoire Elvice*

Burkina Faso faces significant security and humanitarian challenges, with over two million internally displaced persons (IDPs) by March 2023. The commune of Kongoussi hosts a large population of displaced individuals, with women and children being the most affected. The region also experiences frequent natural disasters, including floods, violent winds, and droughts, exacerbating vulnerabilities. Climate change threatens traditional agriculture, while artisanal gold mining further depletes arable land, contributing to food insecurity and economic hardships. The initiative focuses on disaster risk reduction (DRR) and climate change adaptation through community resilience building, capacity enhancement, and sustainable agricultural training. The project also aims to mitigate land degradation caused by deforestation and mining activities while fostering economic empowerment among women and IDPs.

Key Highlights

- **Vulnerability of Women and Children**: Women and children remain the most affected by climate-related disasters and displacement in Burkina Faso and urban areas like Accra.
- **Community Resilience**: Strengthening community resilience through education, sustainable agriculture, and cooperative housing is essential.
- **Environmental Degradation**: Deforestation and gold mining contribute to land degradation, worsening food insecurity and economic instability.
- **Innovative Housing Solutions**: Cooperative housing provides a community-driven solution for climate-induced migrants, reducing economic barriers and fostering social stability.
- **Policy Integration**: Embedding climate adaptation measures into national and local policies is critical for long-term resilience.

Recommendations

1. **Promote Climate-Resilient Agriculture in Burkina Faso**: Train farmers, especially women and IDPs, in sustainable agricultural practices to combat food insecurity and climate variability.
2. **Enhance Disaster Preparedness in Vulnerable Communities**: Strengthen education on DRR strategies, particularly in flood- and drought-prone regions.
3. **Mitigate Land Degradation in Burkina Faso**: Implement reforestation programs and regulate artisanal mining to restore cultivable land.
4. **Expand Cooperative Housing for Climate Migrants in Accra**: Encourage investment in cooperative housing as an affordable and climate-resilient alternative for displaced populations.
5. **Integrate Housing Solutions into Climate Policies**: Advocate for the inclusion of cooperative housing models in urban planning and national climate adaptation strategies.
6. **Strengthen Women's Leadership in Climate Resilience**: Empower women through training in natural resource management and community-driven adaptation projects.
7. **Foster Economic Sustainability for Climate-Affected Communities**: Promote green entrepreneurship and sustainable livelihood initiatives to enhance self-reliance.

Conclusion

The climate crisis continues to exacerbate vulnerabilities in disaster-prone regions, particularly among women, children, and displaced populations. Addressing these challenges requires a multi-faceted approach that integrates disaster risk reduction, sustainable agriculture, cooperative housing, and policy advocacy. By strengthening community resilience, promoting sustainable livelihoods, and embedding climate adaptation into national policies, affected populations can transition from crisis-driven responses to long-term sustainable development.

2.2.9. Social Inclusion & Equity

The symposium emphasized the importance of just and equitable climate action. It called for greater participation of women, youth, and indigenous communities in adaptation planning, ensuring that solutions reflect local realities. Funding mechanisms should prioritize grassroots initiatives rather than relying on top-down approaches.
As Africa Climate Finance Advocacy gears towards COP 30, strategic thoughts were put into consideration. The discussions tied into the broader climate finance agenda, particularly **NCQG (New Collective Quantified Goal)** and **GGA (Global Goal on Adaptation)**, emphasizing:

- The need for direct, predictable, and accessible funding for locally-led adaptation.
- Strengthening Africa's unified voice in international climate negotiations.
- Ensuring that COP 30 discussions focus on equitable climate finance distribution**,** prioritizing the most vulnerable communities.

2.2.10. Climate Finance

The modalities of handling this very sensitive topic of climate finance was a few presentations and focused group discussions.

Setting the stage: African adaptation landscape – by *Eric Magale*

Erick Magale's presentation on the African adaptation landscape provided critical insights into the continent's vulnerability to climate change despite being the least responsible for global emissions. He highlighted that adaptation in Africa is not a choice but a necessity for survival, referencing a recent study (Kotz et al., 2024) that projects global climate-related damages to reach $38 trillion annually by 2050, with Africa facing the most severe economic losses some countries experiencing up to a 30% reduction in income.

He outlined progress under the Global Goal on Adaptation (GGA), including the Glasgow-Sharm el-Sheikh work program, the adoption of the UAE Framework for Global Climate Resilience, and the launch of the UAE-Belém work programme to develop adaptation indicators. However, he noted that political shifts and climate finance remain major challenges, with multilateral cooperation under strain and financial commitments often seen as tokenistic rather than essential.

Erick further underscored the urgency of domestic action, citing significant climate disasters in 2023, from floods in Botswana and South Africa to extreme heatwaves in South Sudan, as well as conflicts in Sudan, Eastern DRC, and West Africa, which further hinder adaptation efforts. Despite these challenges, he stressed that conflict has yet to be fully integrated into the global climate agenda, calling for more holistic and urgent action to strengthen Africa's resilience.

Climate Finance Priorities and challenges in Africa -Focus group Discussion.

The participants were required to identify the climate finance challenges in Africa, propose solutions and rank the concerns to establish priority areas.

FGD Query 1. Identify the Climate Finance Challenges in Africa

Data and Information

The accessibility and reliability of climate finance (CF) data remain a significant challenge across states. Many regions struggle with unreliable or incomplete data, making it difficult to plan and allocate resources effectively. Moreover, the complex and bureaucratic processes involved in accessing climate finance hinder many actors from securing much-needed funds. These hurdles are further exacerbated by the use of highly technical jargon, which often excludes local actors from critical decision-making processes, limiting their ability to engage meaningfully in climate finance initiatives.

Governance & Policy

A major governance gap in climate finance is the absence of a dedicated national budget line for climate-related expenditures. Many states lack clear policies or frameworks to guide climate finance

mechanisms, resulting in weak regulatory structures that fail to incentivize private sector participation. Corruption and the misallocation of funds further undermine transparency, making resource distribution inefficient. Additionally, political reluctance to prioritize climate finance initiatives has led to inadequate action and slow policy development, further complicating efforts to mobilize and utilize financial resources effectively.

Funding & Financial Barriers

Climate finance in many regions remains heavily dependent on foreign aid and Western donors. However, the financial architecture is often funder-driven rather than aligned with local needs, creating a mismatch between available resources and on-the-ground realities. Stringent application processes and complex eligibility criteria limit access to funding, particularly for grassroots organizations and local communities. Additionally, existing debt burdens reduce the fiscal space available for climate-related investments, making it even more difficult for developing nations to finance climate adaptation and mitigation projects. A further challenge is the limited direct disbursement of funds to affected communities, preventing resources from reaching those who need them most.

Capacity & Awareness Challenges

Technical capacity constraints present another major obstacle to effective climate finance utilization. Many regions lack skilled personnel capable of designing, implementing, and managing climate finance projects. Additionally, there is a general lack of awareness among decision-makers and communities regarding climate finance opportunities and strategies. The absence of a unified African voice in global climate finance discussions further weakens the continent's negotiating power, limiting its ability to advocate for fairer funding mechanisms. Weak collaboration and networking among stakeholders, combined with climate change denial or the downplaying of its impacts by some policymakers, further hinder progress in mobilizing and deploying climate finance effectively.

FGD Query 2: What are your proposed solutions?

Governance & Policy

To ensure a more structured and effective approach to climate finance, governments should establish a dedicated national budget line, allocating at least 5% to climate-related expenditures. Developing comprehensive national policies and legal frameworks will provide clear guidelines on climate finance management, ensuring better coordination and efficiency. Transparency and accountability mechanisms must be strengthened to curb embezzlement and misuse of funds. Additionally, implementing the Polluter Pays Principle will hold major emitters accountable, ensuring that those responsible for environmental degradation contribute to climate finance solutions. Strengthening regional collaboration and asserting a more unified stance in global climate finance negotiations will also enhance Africa's ability to advocate for fair and equitable funding mechanisms.

Funding & Investment Strategies

Reducing reliance on foreign aid is essential for long-term climate finance sustainability. Investing in home-based solutions and local financing mechanisms will enhance financial independence and resilience. Innovative financing models, such as blended finance and green bonds, should be explored to diversify funding sources and attract more investment into climate initiatives. Strengthening private sector involvement is equally crucial, as businesses can play a significant role in financing climate adaptation and mitigation efforts. Moreover, ensuring that funds reach the grassroots level will enhance localized impact, empowering communities to implement context-specific climate solutions effectively.

Capacity Building & Awareness

Building technical capacity among policymakers and local actors is fundamental to improving climate finance management. Investing in targeted training programs will equip stakeholders with the skills needed to design, implement, and monitor climate finance initiatives. Climate finance literacy should also be enhanced through awareness campaigns, ensuring that both decision-makers and communities understand available financing opportunities and how to access them. Establishing regional climate finance education programs, such as a Master's program in Green Growth and Finance, can create a pipeline of experts dedicated to driving climate finance solutions. Additionally, fostering global partnerships will support locally led initiatives, ensuring that indigenous knowledge and grassroots efforts receive the recognition and funding they deserve.

Adaptation & Resilience Initiatives

To build long-term resilience, climate finance should be directed towards evidence-based solutions that guide strategic investment decisions. Adaptation strategies must be developed in ways that incorporate co-benefits with mitigation, ensuring holistic climate action. Encouraging research and innovation will further enhance climate resilience, fostering the development of locally relevant solutions that address both current and future climate challenges.

Question 3. Ranked Priority Areas for Climate Finance Investment

1. **Food Security** – Ensuring sustainable agricultural practices and resilience to climate impacts.
2. **Water, Sanitation, and Hygiene (WASH)** – Strengthening infrastructure for clean water and sanitation.
3. **Health**– Addressing climate-related health risks and strengthening healthcare systems.
4. **Research & Innovation** – Developing homegrown solutions for climate adaptation and mitigation.
5. **Loss and Damage** – Establishing compensation mechanisms for communities affected by climate disasters.
6. **Innovation in Finance & Adaptation Finance** – Creating diverse funding streams for climate resilience.
7. **Human Settlement & Urban Resilience**– Strengthening infrastructure and sustainable urban planning.

8. **Context-Specific Approaches**– Tailoring strategies to address gender and socio economic differences.

Identifying Gaps in Climate Finance Advocacy.- Focus Group discussion
Strengthening Africa's climate finance policy landscape for Adaptation By *Erick Magale*

This session provided a deep dive into the current state of climate finance in Africa, highlighting the significant funding gaps, challenges in accessing multilateral funds, and the urgent need for adaptation finance. The speaker, Erick Magale, presented hard facts about the global and African climate finance landscape, emphasizing the disparities in funding distribution and the bureaucratic hurdles that hinder access to funds.

Key Points from the Session:

1. **Global Climate Finance Needs:**

   a. According to the Intergovernmental Panel on Climate Change (IPCC), the annual global climate finance needs range between $5 trillion and $12 trillion until 2050.

   b. For emerging markets and developing economies (excluding China), the annual climate and nature-related investment needs are estimated at $2.4 trillion by 2030, with an additional $3 trillion required to fund the Sustainable Development Goals (SDGs).

   c. In Africa, the estimated climate finance needs are $200 billion annually between 2020 and 2030 to implement Nationally Determined Contributions (NDCs). However, current estimates are grossly insufficient due to capacity constraints and uncertainties in global mitigation efforts.

2. **Underfunding in Africa:**

   a. Africa receives only 2-4% of global climate finance, despite being one of the most vulnerable continents to climate change.

   b. In 2022, Africa mobilized an average of $29.5 billion in climate finance, which is far below the required amount. This figure is further complicated by double- counting and varying definitions of climate finance.

   c. The New Collective Quantified Goal (NCQG) for climate finance, which was set at $300 billion annually until 2025 is insufficient for Africa's adaptation and mitigation needs. This amount was agreed upon after intense lobbying by African negotiators, but it falls short of the $1.3 trillion initially proposed by the African Group of Negotiators.

3. **Disparities in Climate Finance Distribution:**

   a. Climate finance flows in Africa are heavily concentrated in a few countries, with the top 10 countries receiving 46% of the total funding. In contrast, the 10 most vulnerable countries receive only 11% of the funds.

b. Private investments are even more skewed, with 76% of private climate finance in Africa going to just six countries, while the remaining countries receive only 16%.

c. Regional and multi-country funds are significantly underfunded, with the largest funding gaps observed in Central Africa and the Sahel region.

4. Challenges in Accessing Climate Finance:

a. **Bureaucratic hurdles:** The process of accrediting entities to access multilateral funds like the Green Climate Fund (GCF) is cumbersome and time-consuming. Many African institutions face challenges in meeting the accreditation requirements.

b. **Geopolitical influence:** There is a heavy geopolitical influence in the distribution of climate finance, with funds often directed towards countries with stronger political ties rather than those most in need.

c. **Predictability and allocation:** The lack of predictable funding streams and per-country allocations makes it difficult for African nations to plan and budget for climate adaptation projects.

5. Multilateral Funds and Access Modalities:

a. **Green Climate Fund (GCF):** The GCF has introduced new modalities for accessing funds, including a Country Readiness Program (2024-2027) that offers up to $7 million per country for multi-year programs. However, the accreditation process remains a significant barrier.

b. **Adaptation Fund:** This fund provides financing through multilateral, national, and regional implementing agencies. However, only 13 national implementing agencies in Africa are accredited, limiting access to funds.

c. **Loss and Damage Fund:** Launched in 2020, this fund has received $700 million in commitments, which is only 0.2% of the estimated need to address irreversible climate impacts.

6. Policy Recommendations & Opportunities for Adaptation Finance:

a. **Diversify climate finance sources:** Africa needs to reduce its reliance on foreign aid and explore innovative financing mechanisms, such as green bonds and sustainable capital markets.

b. **Improve access to multilateral climate funds:** Simplify accreditation processes and provide technical support to African institutions to access funds like the Green Climate Fund (GCF) and Adaptation Fund. Capacity-building programs can help countries develop bankable projects and meet funding requirements.

c. **Address power imbalances in global climate finance negotiations**: African nations should negotiate as a unified bloc to strengthen their bargaining power in

global forums and enhance regional cooperation. Equitable representation in fund governance and transparent allocation criteria are essential to ensure fair distribution of resource.

d. **Strengthen domestic financing mechanisms for climate action**: Governments should establish dedicated climate budgets and explore local financing options like green bonds and public-private partnerships. Strengthening financial institutions will also support climate-smart investments.

e. **Push for fairer distribution between adaptation and mitigation finance**: Advocate for increased funding for adaptation, which is critical for Africa's resilience. Develop adaptation indicators to track progress and prioritize projects that deliver both adaptation and mitigation co-benefits.

7. **Call to Action:**
   a. Africa must shift from a reactive to a proactive approach in climate finance negotiations, ensuring that climate finance and policy frameworks align with the continent's realities.
   b. There is a need to localize climate finance conversations and make them more accessible to communities, particularly those in vulnerable areas such as slums and informal settlements.
   c. African countries should prioritize capacity building and technical training for policymakers and local actors to improve their ability to develop and implement climate finance projects.

Call for Action Advancing Adaptation Finance towards COP30 - by *Dr. Bessy*

Africa's role in climate negotiations has historically been weakened by fragmented advocacy, inadequate financial commitments, and systemic disparities in global climate finance structures. As COP 30 approaches, there is a growing urgency to establish a unified, strategic, and actionable position to secure stronger commitments for adaptation and resilience-building.

1. **What adaptation strategies should Africa prioritize ahead of COP 30?**
   - Develop a pool of competent climate negotiators to effectively represent Africa's interests.
   - Create an Africa Adaptation Indicator Framework to measure adaptation efforts, just as mitigation is measurable.
   - Ensure climate finance is an enabler for adaptation, not just for mitigation.
   - Advocate for rule changes in climate negotiations—Africa should not always be on the agenda as a passive player.
   - Engage and empower youth in climate action and policy discussions.
   - Create a dedicated Africa Climate Fund, as well as regional climate-smart agricultural hubs.
   - Prioritize local and indigenous knowledge as the foundation for adaptation strategies and promote community-led adaptation strategies, ensuring local engagement and ownership of solutions.

- Establish country-by-country climate finance quota allocations to ensure equitable distribution of resources.
- Invest in capacity building to enhance technical expertise in adaptation planning and implementation.
- Mainstream climate finance to local levels, ensuring accessibility and direct impact on communities.
- Set up a Green Climate Revolving Fund for climate-resilient infrastructure projects.

2. **What is Africa's collective goal in climate action?**
   - Establish a financial institution for climate action, similar to a "World Bank for Climate Change."
   - Unify African countries to negotiate as one voice, strengthening bargaining power in global climate talks.
   - Redefine engagement rules Africa must take control of its climate narrative and stop being in a position of dependence.
   - Shift from a reactive to a proactive approach, ensuring climate finance and policy frameworks align with African realities.
   - Prioritize adaptation finance mechanisms for Africa, similar to the Global Environment Facility (GEF).
   - Include all stakeholders in climate negotiations to ensure broad representation and decision-making power.
   - Champion localized climate initiatives and preventive climate solutions to address climate risks before they escalate.
   - Strengthen Africa Climate Observatory systems for real-time climate data collection and decision-making.
   - Empower community-based organizations (CBOs) in Africa with the knowledge and resources to access climate financing.
   - Advocate for strict penalties and heavy fines for the biggest polluters through international bodies.
   - Ensure realistic allocation of funds and African-led problem-solving approaches.
   - Enhance disaster resilience strategies to mitigate climate-related losses and damages.

3. **What is your vision for Africa in the context of climate change?**
   - An Africa that leads its own climate agenda, rather than responding to external pressures.
   - A continent where climate resilience is backed by strong finance, policies, and governance.
   - A future where adaptation is prioritized and measured effectively, ensuring long-term sustainability.
   - A united Africa in climate negotiations, ensuring fair financing and policy decisions that align with the continent's needs.
   - An Africa that prioritizes home-based solutions for climate adaptation that leverage the continent's natural and technological resources.
   - A continent with clear Nationally Determined Contributions (NDCs) that have a strong emphasis on adaptation.

- Africa as a leader in climate adaptation, shaping global discussions with a focus on resilience and sustainability.

3.0 Conclusion

The ARA-TLS Knowledge Synthesis Symposium 2025 provided a crucial platform for dialogue, learning, and collaboration on climate adaptation and resilience. Key themes that emerged included the urgent need for innovative financing mechanisms to support climate-health resilience, the importance of inclusive and community-driven solutions for climate-resilient human settlements, and the necessity of strengthening Africa's climate finance landscape ahead of COP30. The discussions also underscored the value of integrating indigenous knowledge, enhancing policy frameworks, and fostering multi-sectoral collaboration to build adaptive capacities across the continent. The symposium concluded with a call to action for stronger regional cooperation, increased investment in community-led adaptation initiatives, and continued knowledge-sharing to drive sustainable climate solutions for the African continent.

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