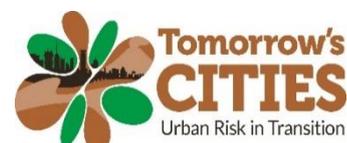


# Adaptation Research and Policy in Southern and Western Africa

Insights from COP26, Southern and Western Africa-Led Dialogue, 2021



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## Contributors

Joanes Atela (ARIN), Charles Tonui (ARIN), Sarah Blackburn (UKRI), Sara Webb (UKRI), Henry  
Gandhi (ARIN)

## About ARIN

The ARIN is a network of over 200 researchers and policy makers across 36 African countries aimed at promoting research excellence and dialogue on best research and impact practices. The ARIN provides one of the unique convening platforms for science policy interface in Africa building on evidence. It recognises that Africa is home to multiple researchers, innovation, and best policy practices but these remain poorly shared, learnt from to inform impactful Research and Development Agenda. The ARIN therefore provides a peer review platform where best research and impact practices from different African contexts are shared, profiled, and leveraged to inform transformative policy actions.

[www.arin-africa.org](http://www.arin-africa.org)

ARIN Secretariat: P.O. Box 53358-00200, Nairobi – Kenya;

Phone: + +254 020 7126895; Email: [info@arin-africa.org](mailto:info@arin-africa.org)

Tweeter: [@arin\\_africa](https://twitter.com/arin_africa)

LinkedIn: The Africa Research and Impact Network

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## Key Highlights

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- There is an increasing push for contextualized adaptation research planning, actions, and finance in addressing the impacts of climate change in Southern and Western Africa.
- Transformative adaptation research involves shifting the power relations, knowledge structures, and learning systems to accelerate impact for the most vulnerable communities.
- Multilevel partnerships for transformative adaptation research are needed to steer forward adaptation as the highest priority for Southern and Western and Africa.
- The generation of robust evidence on best adaptation practices for the Southern and Western Africa regions is the prerogative responsibility of all stakeholders in the regions.

*“It is time to embrace a new paradigm of action-oriented research as envisioned by the Adaptation Research Alliance.”*

Professor Fekadu Beyene, UNFCC Focal Point for Ethiopia, Ministry of Environment

## Background

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Over recent years, the impacts of climate variability and change have been far and wide, with such impacts occurring at different scales. Climate change adaptation plays a central role in minimizing such impacts, especially in regions where mitigation proves inconsequential or difficult. The debate around adaptation is strongly gaining articulation from both the world and Africa's leading think-tanks such as the Africa Research and Impact Network (ARIN). However, addressing issues of ambitions as well as loss and damage is still falling below the cut. The Intergovernmental Panel on Climate Change (IPCCC) in its outline of the sixth assessment report indicates that adaptation still holds a lot of promises in reducing the vulnerability of both human and ecological systems. However, adaptation research gaps that exist particularly at the local levels, may impede the effective generation of evidence for policy and practice. Climate variability and change as a crisis of modernism requires robust evidence that can only be generated by thought leadership around issues of adaptation planning, actions, and finance. The 26<sup>th</sup> Conference of Parties (COP26) under the presidency of the UK has identified these pillars as critical in climate action.

Adaptation is a priority for Africa and most of the African governments are increasingly taking up the evidence generated through adaptation research. In the region of Southern and Western Africa, adaptation research gaps need to be identified in order to help support the policy-making process and ensure development plans are cognizant of varying regional climate regimes. Against this background, the ARIN in collaboration with UK Research and Innovation (UKRI) and wider partners co-convened the UKRI COP26 Adaptation and Resilience preparatory dialogues for the Southern and Western Africa region to mark the UK's presidency of the COP26 in Glasgow in November 2021. This regionally-focused virtual convening galvanized a range of different stakeholders in order to showcase some of the ongoing best adaptation and resilience research practices based in Southern and Western Africa and also gain insights on opportunities for upscaling them.

## Key Questions for Discussions

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The discussions centered on four key questions namely:

**Q1:** *What are the major adaptation research gaps in Southern and Western Africa, and what research is needed to respond to the adaptation gap in Southern and Western Africa?*

**Q2:** *What examples are there of transformative adaptation research enabling action through addressing social justice, capacity building, and governance? And why are these considered transformative i.e. what is considered transformative in a Southern and Western African context?*

**Q3:** *What forms of partnerships are required to achieve these transformations? How best should the UK engage Southern and Western African researchers and policy-makers in pursuing these transformative opportunities?*

*How has COVID-19 and the resultant shifts in UK funding affected adaptation research in Southern and Western Africa?*

**Q4:** *Evidence shows that South and West Africa is registering relatively low presence at the global UNFCCC climate action platforms such as the Global Climate Action Portal (see here: <https://climateaction.unfccc.int/>). How can we best profile adaptation research and actions taking place in various South and West African countries to a global scale? And what support is required to achieve this?*

*“...Almost all current research on climate change adaptation focuses on moderating or minimizing harm. The UNFCCC talks about Adaptation as referring to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts through changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. The opportunities are not being explored through research.”*

Benjamin A Gyampoh, Ghana

## Adaptation Research Gaps and Research Priorities Needed in Response to the Adaptation Gaps in South and West Africa

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Over the recent years, adaptation research has been ongoing in South and West Africa, with the continent increasingly calling for contextualized adaptation options. The debate on what works and where impact is supposed to occur is the concern of many researchers in the region. At the tele convening, the following were identified by the stakeholders as missing links to the successful adaptation and resilience in South and West Africa:

- ***Few impacts case studies that are key in building evidence for successful adaptation:*** Assessing the state of knowledge on adaptation and resilience in South and West Africa requires strong evidence built around multiple case studies. The implications are far-reaching especially for policy that is evidence-informed. A lot of adaptation research focus therefore ought to be on generating robust evidence from the region-specific case studies.
- ***Contextualizing the Sustainable Development Goals (SDGs) to reflect adaptation on the regional development blueprints:*** Although a global phenomenon, climate change has very localized impacts and does therefore need context-specific adaptation research. This research should also consider the potential co-benefits to the people, planet, and ecosystem.
- ***The potential role of Nature-Based Solutions (NbS) in the Green Recovery:*** The tele convening placed emphasis on the potential implications of NbS, including what it means for the long-term ecology of the South and West Africa region, to the region's deliberate COVID-19 recovery pathways. The benefits, burdens, costs, and how these affect the overall regional socioecological stability, are critical gaps for further research.
- ***Evidence that supports adaptation uptake at different scalar levels:*** The issue of scale has been identified as fundamental, even for the East Africa region. This is important for impact generation and potential replication. It is therefore urgent for research on adaptation in South/West Africa to prioritize initiatives across scales, particularly those that can potentially be taken up to the global scales. Cross-regional learning on best practices requires more focus. There has been a misunderstanding on

maladaptation, its impacts, and the possible ways of ensuring adaptation research is impact-focused.

- ***The interplay of cities, adaptation, and resilience:*** Adaptation research on the shifting dynamics of cities in the South and West Africa region, and how achieving resilience using best adaptation practices is key. Specifically, how adaptation can rejuvenate the already fragile and breaking municipalities should be the focus of the research in these regions.
- ***The alternative mechanisms of managing transboundary and transnational resources in a warming world:*** Previous research in Africa and around the world has linked climate variability and change to conflict over resource scarcity. Some of the conventional strategies that have been adopted, until now, have yielded minimal desired positive outcomes, if not accelerated conflict and migration. Adaptation research on the best alternative ways of managing resource-mediated conflicts including the potential role of indigenous and local mechanisms is needed. For example, there is a need for greater transdisciplinary research on how to better manage the transboundary groundwater resources.
- ***Adaptation research opportunities by climate change and linking adaptation spin-offs with research capacities:*** The potential role of best adaptation practices in delivering co-benefits to research capacity remains less emphasized. There is an emerging thought leadership from the continent on exploring the opportunities from adaptation practices in the region in building and developing the capacity of research persons and institutions. Adaptation research should move from the moderation of impact to exploring benefits of output from research on adaptation.

The other areas considered as areas of research priorities include the following:

- ***Insufficiency of context-based climate modeling studies in Africa, absence of proper documentation of research areas in the region, and adaptation governance,*** especially in the areas where vulnerabilities and impacts are most felt. On information to support adaptation in the South/West Africa region, not much research has been taken up by policy-makers and practitioners for early warning of climate risks.

## How does a Transformative Adaptation Research in South and West Africa look like?

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- **The landscape of transformative adaptation research in Africa and case examples linked to social justice, capacity building, and governance.**

The discussion on what is considered transformative in South and West Africa remains fluid in content and context. In the perspectives of the stakeholders at the tele-convening, transformative actions and processes, in broader yet related considerations, imply means-transforming power relations, structures (often very difficult), and learning systems through recognition of multiple knowledge systems, as well as building accelerative agencies. Specifically, the stakeholders regarded a transformative process as one that makes sure the most vulnerable and voiceless people are heard and are able to adapt to climate variability and change. The following phrases as used by the stakeholders describe best the philosophical and practical underpinnings of transformative adaptation research in this report: *“Moving from products to processes,” “Changing the status quo”*.

Transformative research, as viewed by the stakeholders, may not be practically possible in view of the short lifetime (2-3-year period) of most research; it takes a long time (5-10 years). The tragedy is that the research agenda of what is regarded as transformative is mostly driven by funding agencies, further questioning the basis upon which their locus of index-determination is premised. The decision to profile an adaptation initiative as *best* also attracts many contestations. Therefore, linking the best adaptation practices that are considered transformative to social justice, capacity building, and functional governance remains the core focus of this synthesis report.

- ***Participatory Integrated Climate Services for Agriculture (PICSA):***

The PICSA has been used in several countries in Southern and Western Africa including Mozambique, Malawi, Lesotho, Zimbabwe, Ghana, Burkina Faso, Senegal, and Mali.

On capacity building, this case works very closely with the national and regional meteorological services to build their capacity. Some of the focus areas include rescuing, cleaning, and analyzing historical data for easy communication of useful and useable products with farmers and their support systems such as extension workers and field staff.

It builds and develops the capacity of farmers in the rural areas with a combination of climate and weather information historical, seasonal, and short-term forecasts, as well as participatory decision-support tools. This case is considered transformative in many lenses since it is practically enabling farmers to adopt various practices fit for different crops, livestock, and other livelihood enterprises.

- ***The FRACTAL Project:*** The Future Resilience for African Cities and Lands (FRACTAL)

Project is a case that aims to address the adaptation challenge of information inaccessibility faced by decision-makers in the city or region space across the southern parts of Africa. Its impact stories include the co-de-exploration of the decision-making process, nurturing relationships and networks through transdisciplinarity, and co-production. It has been applied in the City of Windhoek (CoW) where the emphasis has been on the transformation of city spaces for livability and socio-ecological justice.

- **Research approaches that support transformative change**

In the run-up to COP26, it is critical for Africa's research space to rethink its traditional approaches and to consider innovative frameworks that enable transformative change rather than impede it. The South and Western Africa-led pre-COP26 tele-convening identified the following fundamental approaches:

- ***Impact-focused recognition, valuation, and transfer of epistemology and skills across multiple systems.*** The current research approaches do not conceptually and practically consider the spin-off lifespan of adaptation research initiatives. There was a consensus around the urgency of research trajectory to ensure all knowledge systems are captured in order to guarantee or accelerate transformative adaptation and resilience. Included were multi-level approaches that recognize Africa's ingenuity and capabilities, challenge underlying adaptation-inhibiting power and knowledge hierarchies, value knowledge potentials and opportunities, and transfer the knowledge and skills.
- ***Engagement and communication platforms or processes that support social and symbiotic learning through transformative thought-leadership and capacity development.*** The research community in South and Western Africa prioritized

techniques that allow objective communication ways that respond to the differentiated stakeholders' needs. The issues of language and context were identified as crucial, especially in favour of the local communities. Furthermore, approaches that engage more with system-disenfranchised groups such as the youth, disabled, and women among others, were highlighted. For example, accelerated engagement with groups that have previously been missing in the STEM research as is the case of the science mentorship programme to inspire young women and girls in Malawi.

- ***Transformative Transdisciplinary Knowledge and Evidence Frameworks***

The use of the word '*transdisciplinarity*' has been floating in the research space for a long time now, with little or no attention on its transformative knowledge and evidence pathways. Beyond the push for co-generation of evidence in the transdisciplinary space, research across multiple sites in Africa ought to consider approaches with a focus on longevity property that is co-designed with sufficient co-generated evidence for transformation. Transdisciplinary evidence creation frameworks in South and Western Africa hold the potentials to build or develop the research capacity and networks. This approach offers adequate grounding for building transformative long-term climate resilience.

## What Forms of Partnerships are required to Achieve Transformative Research within South and West Africa?

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Across all the Africa-led tele-convenings, meaningful partnerships have been identified to offer greater potentials for accelerating transformative adaptation research in the continent. These may take various forms depending on the thematization and scale of the adaptation challenge. In the case of the United Kingdom and South and West Africa, the forms of partnerships that the two entities ought to pursue in transformative research are manifold.

### i. **The Multilevel Partnership on Transformative Adaptation Research and Opportunities: The Case of the UK and South and West Africa**

- The Southern Africa and Western Africa cooperation and ***partnerships around innovating, uptake, and scaling up low-cost and practical technologies*** are necessary. The serious push for strengthened critical sectoral resilience, particularly vulnerable sectors of agriculture and food security, cuts across many countries in the South and West Africa region. On the part of the UK, accelerating the resource obligation for South and West Africa regional initiatives is imperative in the partnership mix.
- ***Partnerships on impact longevity, resilience, and continuity*** components were identified as critical in the adaptation-focused partnership arrangement between the UK and South and West Africa. Innovative capacity building and development through creating climate change adaptation-support mechanisms were included.
- Establishing long-term ***partnerships that allow for reflexive learning to adapt research to context and allow for transdisciplinary research*** is a process that takes time to build trust on. Partnerships are founded on trust (multi/inter-disciplinary and institutional), and the inclusion of non-researcher partners. Transparency in data and open-data sharing of adaptation and resilience best practices is therefore key.
- ***Partnerships around collectivity of actions and resilience building***. Supporting intra-Africa cross-regional exchange of best practices on adaptation and resilience was established as urgent. Additionally, the tele-convening identified issues of trust between the UK researchers/agencies and their partners in the South and West Africa region. The principle of mutuality among the two entities has been identified as key in

steering climate change adaptation rather than wearing a singularity lens. There are calls to ensure that West African research institutions acquire active lead in the consortia adaptation and resilience impact initiatives rather than these being frequently led by EU/UK researchers.

**ii. Implications of COVID-19 Pandemic and the Resultant Shifts in UK Funding on Adaptation Research in South Africa and West Africa**

In the last two years and even forward-looking, the adaptation and resilience research in the South and West Africa have experienced both a hit and an opportunity for remodeling climate funding flows for adaptation and resilience in the region. Funding priorities during the COVID-19 pandemic have shifted sharply, both in the UK and here in Africa.

Prior to the COVID-19 pandemic, the tele convening established an over-reliance on the UK for financing adaptation and resilience in the South and West Africa region. This, according to the participants, has been a serious gap, as unveiled by the COVID-19. There have been serious scrambles for local and bilateral funding attention by the COVID-19 response, national/regional priorities, and adaptation and resilience financing.

On consequences for funding collaboration between the UK researchers and their counterparts in the South and West Africa region, reluctance to initiate adaptation and resilience projects in the regions has been conspicuously noted. The reduction or complete slash in the Official Development Assistance (ODA) funding, attributed to the pandemic, was identified both as a setback and an opportunity for enhanced alternative funding mechanisms.

The funding 'cuts' have had substantial but necessary effects, 'undermining' the region's attempts to ensure the long-term sustainability of platforms established with GCRF funding. The adaptation initiatives that depended on the UK funding have stalled or become maladaptive as a result of less attention by the host communities.

## Global Profiling of Best Adaptation Research and Resilience Actions in various South and West African Countries to the Global Scale

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A comparative evidence outlook at the global scale shows that Africa is registering a relatively low presence at the UNFCCC climate action platforms such as the Global Climate Action Portal. The South and West Africa regions have registered a relatively higher number of adaptation actions than their East, Central, and parts of North Africa counterparts. The proportion of adaptation actors and their related actions is, however, lower than the global mark.

The dialogue of actors and stakeholders in the South and West Africa regions generated some pertinent questions regarding this considerably low level of contextualized adaptation research. While it is important to ask the question, "why low presence?", it raises concerns over whether the push for more presence is indeed anchored on the hard question of why the situation seems to be so, cognizant of the barriers, whether deliberate or not.

At the dialogue session, participants established the need to explore the platforms that can be mined for adaptation and resilience evidence in South and West Africa. For example, [weAdapt.org](https://weadapt.org) offers organizations around the world an opportunity to showcase their best practices on adaptation and resilience. In Africa, the [Climate for Research and Development \(C4RD\)](#) is an opportune avenue for African actors to profile innovative climate science including the adaptation layer.

Some key actions proposed:

- ***Contextualize the UNFCCC agenda to ensure an effective bottom-up approach to climate change adaptation and resilience.*** The proposition to have a National Communication Framework (NCF) that is a mirror image of the UNFCCC would offer a structured vein for South and West African country research on adaptation to find its way to the global level.
- ***Accelerate the local adaptation activities for uptake by the international climate research programmes*** such as the World Climate Research Program (WCRP). Although

the domains of some of these initiatives are global, regional consultations and dialogues with the local actors are permissible for and in South and West Africa. Ultimately, a deliberate process of ensuring these local programmes find their visibilities in the global spaces becomes imperative. However, criteria on what adaptation programme is best and warrants replication ought to be defined, based on the scale of the impact these actions create in the applied areas.

### **Supporting the Evidence-Informed Adaptation Research and Resilience Actions in South and West Africa**

The responsibility of generating robust evidence on adaptation and resilience in South and West Africa is heavily vested on all the stakeholders in the regions. The research, policy, and practice on best practices on adaptation are therefore critical. The following are some of the supporting mechanisms for the adaptation research and resilience actions, with a target on South and West Africa domains:

- ***Strengthen the Citizen Science on Adaptation and Resilience.*** As the world transitions towards all-inclusive and participatory research, bringing together all the stakeholders such as farmers' unions and associations, engaging with civil societies and organizations is necessary for ensuring sufficient evidence on adaptation and resilience. The move to galvanize researchers on adaptation and resilience holds the potential to ensure that regional assessments of evidence are undertaken for impact pathways.
- ***Ensure an Evidence-Based Platform on Adaptation and Resilience in South and West Africa.*** As a precedent for regional focal points, the Africa Research and Impact Network (ARIN) has developed a platform for researchers across the entire continent and beyond to co-generate and utilize scientific evidence. It emerged from the dialogue that it is critical to provide a platform for both the scientific and indigenous evidence generation. For example, there is a need to *improve communication of best practices on adaptation through platforms such as word of mouth, online forums and sessions, and social media, among others.* This will improve the agency of the local communities to share their own experiences with adaptation research and actions.

Similarly, profiling researchers from different regions and enabling them to showcase their work on adaptation is urgent. Utilizing other fora such as the [Next Einstein Foundation](#) also holds much potential for accelerating adaptation research in South and West Africa.

- ***Fostering intra-and inter-regional research collaboration and industry linkages with the research and policy arms.*** The stakeholders from South and West Africa noted the urgency of representation and collaboration of research, policy, and practice arms in adaptation and resilience research. For example, there is little or no synergy and collaboration among the university centres and agencies in these regions. Transnational platforms such as the [African Research and University Alliance Center of Excellence in Climate and Development](#) (ARUA-CD) and the [ARIN](#) have offered pathways to steering research excellence on adaptation in Africa. Countries in South and West Africa can build on these in accelerating regional adaptation and resilience actions. In terms of global research collaboration, stakeholders identified the need to ensure greater engagement of the South and African research community in international fora, particularly within Francophone countries. The potential areas of collaboration as identified by the regional stakeholders include co-design of the green and sustainable climate projects financing, commercialization of innovations particularly on neglected yet important areas of coastal engineering, and publication of adaptation research, among others. In the latter case, concerns emerged over the massive research that has been conducted in Africa yet remains unpublished or authors receiving insufficient recognition. This culminated in the push to have for Africa, journals specializing on indigenous knowledge on adaptation and resilience.

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