



# Indigenous and Local Knowledge Systems

Empowering Locally Led Adaptation through Indigenous and Local  
Knowledge Systems

ARA – TLS Learning Journey Series



## About the authors

The report is developed collectively by the ARA TLS team, including Prerna Singh, Abhipsha Ghosh, and Diksha from Transitions Research.

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## About the Adaptation Research Alliance

The Adaptation Research Alliance (ARA) is a global coalition responding to the urgent challenges faced by vulnerable communities from climate change. Their membership is made up of researchers, funders, policymakers, development bodies and community-based organisations committed to action-oriented research for adaptation that supports climate resilient futures.

## About Transitions Research

Transitions Research is a social science research collective. We examine radical transformations shaping our future, including both urbanisation and the emergence of a climate-resilient society. Our research on urban resilience foregrounds social vulnerability, the differential impact on marginal social groups and communities. Our expertise is focused on driving climate action that's inclusive and participatory by engaging with diverse stakeholders to co-create and test resilience solutions that address challenges of the most vulnerable.

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# Overview

**“The earth has music for those who listen”.** This is a saying that would resonate with the world’s indigenous communities.

Indigenous people’s traditional knowledge and cultural heritage are increasingly recognised as vital components in the design and implementation of ecosystem solutions, where they can help improve environmental assessments and inform sustainable management practices. Local knowledge encompasses insights, perceptions, and intuitions about the local culture and the environment, drawing from centuries of collective experience. It's dynamic, complex that includes knowledge about processes, not just uses and products. Ironically, **indigenous and local communities bear the brunt of climate change, suffering its most severe consequences despite having contributed least to its causes.**

To begin with, we need to have a nuanced understanding of the terms ‘Indigenous’ and ‘Local’. The umbrella term Indigenous Peoples and Local Communities (IPLC) refers to individuals and groups who self-identify as indigenous or as part of distinct local communities. It is widely used by international organisations to acknowledge their unique identities and contexts. Indigenous Peoples (IPs) are often descendants of the original inhabitants of a place. They tend to maintain traditional cultures and their ties to what they regard as their ancestral territories, often enjoying specific rights protected by international law. Local Communities (LCs) are self-identified groups sharing a common life environment, history, and culture, with frequent interactions and a shared territory, but without necessarily being the original inhabitants .

Indigenous people are **severely impacted by environmental degradation and biodiversity loss due to their deep spiritual connection to their lands and reliance on natural resources for survival.** Their well-being, development, and way of life are threatened by industrial activities, pollution, conflicts, and forced displacement, as well as climate change. Similarly, local communities, especially those in vulnerable areas like low-lying islands and those dependent on natural resources for livelihoods, face comparable challenges that are intensified by climate change.

Therefore, this TLS learning journey has identified as its theme the nuanced challenges faced by indigenous people and local communities, and the efforts made by ARA community members to improve their circumstances.

## Broad insights from ARA community

To effectively adapt to climate change, it is crucial to empower and collaborate with local communities. **Tailor-made solutions that address specific community challenges need to combine indigenous wisdom with scientific expertise.**

The ARA community members have actively empowered communities to develop sustainable, effective, and community-driven solutions on the ground. Their initiatives range from climate-smart agriculture to empowering women in cotton fields.

Secondary research helped identify numerous organisations focused on locally-led adaptation efforts, while primary research provided in-depth insights into community-led projects, case studies, and the challenges faced. It is essential to empower communities by engaging locals and making them key stakeholders, but the bottom-up approach does have its limitations. The collective solution lies in maintaining inclusivity with equity, as advocated by the ARA member community.



## Effective Strategies for Financing LLA Projects

### Published Perspectives:

- In developing regions, agriculture is vital for livelihoods. ARA Community members in these regions have been found to empower communities to develop climate-resilient strategies, ensuring food security.
- Organisations are researching health impacts of extreme heat on vulnerable groups and exploring adaptation strategies.
- Locally-led initiatives that focus on circular economy, clean energy, housing, and gender empowerment, help move communities towards sustainability and zero waste.

### Voices from the Ground (Interviews & FGDs):

- Strategies like community-driven solutions, alignment with objectives, and capacity building, all help empower local communities.
- Strengthened collaboration, leadership, and decision-making are key, supported by training, sensitisation, and stakeholder engagement.
- Flexibility, cultural integration, participatory workshops, and empathy ensure context-specific and inclusive solutions, leading to successful outcomes.

## Key Challenges

### Published Perspectives:

- Downscaling national/state action plans to There is a significant imbalance in focus, with some regions receiving more attention while areas like clean energy and health are neglected.
- Indigenous knowledge remains underrepresented, and involvement in Locally Led Adaptation (LLA) initiatives is limited, thereby preventing organisations from taking a comprehensive approach to addressing climate change

### Voices from the Ground (Interviews & FGDs):

- Community empowerment is often hindered by exclusion, gender inequality, and top-down approaches, resulting in frustration and marginalisation.
- Limited resources, complex processes, and short-term planning slow progress, while political instability and insufficient funding worsen the disconnect with communities, perpetuating exclusion

## Way Forward

A potential way forward involves **embracing flexibility, inclusivity, and collective participation**, while leveraging technology and preserving local history.

This requires capacity building, advocacy, collaboration, and bottom-up approaches, as well as building climate resilience and recognising community knowledge. These areas need to be addressed effectively to develop practical responses to climate change which also empower local communities.

## Method & Insights

This chapter presents the details of the data collection, analysis, synthesis, and emerging results for this specific learning journey. To better understand the ARA community's work we undertook three different approaches: Literature Review, One-on-One Interviews, and Focus Group Discussions (FGDs).



## Literature Review

A comprehensive review of literature published by the ARA community (234 members as of March 2024) was undertaken to acquire a deeper understanding of the published perspectives of members on indigenous knowledge and community empowerment in locally led adaptation (LLA) initiatives.

### Insights from Literature Review:

Approximately 35% of ARA members, representing 82 out of 234 members, are actively involved in Locally Led Adaptation (LLA). Notably, 17% of Global North members are engaged in LLA, compared to 18% of their counterparts in the Global South.

It was found that NGOs have made a significant impact, with 16% of them contributing to LLA projects in lower-income countries. To empower local communities to address climate change, organisations needed a broad focus on indigenous practices and a bottom-up approach, or a specific focus on targeted issues like climate-smart agriculture and women's health.

Food security was the key theme of published resources around indigenous and local knowledge systems.

## In-depth Interviews

For a more in-depth understanding of individual actions being taken by ARA members, semi-structured interviews were conducted. A preliminary survey was shared with the ARA member community to gauge interest in members to interview for in-depth conversation on the topic of indigenous and local knowledge systems.

From survey responses, nine member organizations were identified for in-depth interviews on this topic. Semi-structured interviews identified limitations and empowerment strategies for integrating local knowledge into projects. The interviews aimed to:

- Understand stakeholder experiences
- Identify challenges and obstacles
- Document best practices and strategies

## Results from interviews and individual reflections:

Interviews with ARA community members enabled a better understanding of the integration of local knowledge systems into resilience and adaptation efforts. Discussions revealed the primary challenges hindering this integration and the most effective ways to empower local actors. The respondents provided invaluable insights into their experiences and challenges, while outlining successful strategies for overcoming these barriers.

### 1. Experiences in Empowering Local Voices in Adaptation

- **Local Engagement and Capacity Building:** Initiatives must start by understanding local perceptions and impacts of climate change, using this knowledge to tailor interventions such as smart agriculture and mentorship programmes that are directly beneficial to the communities.
- **Collaborative and Community-Centred Approaches:** Effective adaptation requires collaboration with local government agencies and must respect community priorities.
- **Challenges of Colonial Legacies and Political Instability:** Adaptation efforts are often complicated by the historical context of colonial legacies and ongoing political instability, which can hinder the integration of indigenous voices and informal practices. Persistent engagement and policy stability are crucial for facilitating meaningful change.
- **Cultural and Ecological Insights:** There is a need for a deeper appreciation of how indigenous communities manage and adapt to ecological changes. Conventional conservation efforts often overlook the complex interrelations between politics, culture, and ecology that indigenous peoples have with their environment.
- **Bridging Academic and Local Knowledge:** Reconciling academic research with local realities is a significant challenge. There is a push towards adopting more creative and experiential research methodologies that genuinely reflect and respect local voices and realities, ensuring that findings resonate both locally and globally.

### 2. Challenges Encountered in Project Implementation

- **Funding Constraints:** Climate change adaptation projects often lack sufficient funding compared to sectors like public health, which limits the scope of research and interventions.
- **Policy Gaps:** The absence of specific policy frameworks and guidelines makes it harder to align community actions with broader national or subnational policies.
- **Community Disconnect:** National policies frequently fail to capture the realities and knowledge of local communities, leading to ineffective and irrelevant strategies at the local level.
- **Donor Influence and Misalignment:** Donor-driven funding can impose conditions that are not aligned with local needs and potentially disrupt local cultures and practices.

- **Security and Governance Issues:** In areas with governance and security problems, climate adaptation efforts are severely challenged by external disruptions like insurgencies.
- **Sectoral and Educational Limitations:** Viewing climate change solely as an environmental issue ignores its broader societal impacts. The lack of educational initiatives that incorporate indigenous knowledge limits their involvement in decision-making.
- **Mismatch of Expectations with Funders:** There is often a disconnect between funders' goals and community needs, though this has been partially overcome by co-developing projects to align these interests.

### 3. Lessons Learned: Strategies for Success

- **Local Engagement Platforms:** Tailor-made platforms were found to help bridge gaps between national policies and community practices, ensuring local stakeholders were actively involved and informed.
- **Flexible Funding Models:** Funding models that adapt to local realities allow for responsive and relevant investments in community capacities, in contrast to rigid predetermined plans.
- **Educational Programmes and Capacity Building:** Training programmes for local officials and awareness campaigns for citizens help create a deeper understanding of environmental changes and improve local governance in climate resilience.
- **Incorporating Diverse Perspectives in Research:** Research that accommodates various perspectives, like political and environmental knowledge, helps understand local dynamics and address inequalities influenced by local authorities.

### Case study: Integrating Agricultural Practices between Northern and Southern Nigeria, Julius Uchechukwu, Elohim Foundation, Africa

#### Background:

Agricultural practices vary significantly between the northern and southern regions of Nigeria which are distinct ecological zones. The north has arid conditions suitable for continuous cropping, while the south, being a rainforest zone, is more conducive to shifting cultivation due to abundant rainfall. These differences in agricultural methods present unique challenges and opportunities for adaptation in the face of climate change.



## Objective:

The objective was to integrate the agricultural practices of both regions to enhance resilience and productivity among local farmers, without altering the cultural and traditional practices that define each region's identity.

## Methodology:

The project involved a cross-regional study to understand and compare farming techniques in the north and south. This was followed by initiatives to adopt and adapt beneficial practices from each region:

- **Knowledge Exchange:** Farmers in the north were introduced to crop diversification practices prevalent in the south, such as the cultivation of root crops like cassava, which, despite the lesser rainfall, performed well due to their suitability to local conditions.
- **Cultural Sensitivity:** Efforts were made to respect and preserve local traditions and belief systems. For example, while animal husbandry practices like pig and snail rearing were common in the south, they were culturally inappropriate in the north and thus not promoted there.
- **Sustainable Practices:** The project introduced farmers to the usage of sustainable by-products from agricultural processes. In the south, oil palm seeds are processed into palm oil, and the by-products are used as fuel for cooking, reducing the need for deforestation. This practice was then introduced to the north, helping to reduce deforestation activities associated with the traditional use of firewood.

## Outcomes:

The project involved a cross-regional study to understand and compare farming techniques in the north and south. This was followed by initiatives to adopt and adapt beneficial practices from each region:

- **Adoption of New Practices:** Northern farmers began incorporating methods observed in the south, such as using agricultural by-products for energy. This was also found to serve as a pest deterrent, thus integrating a circular economy approach into farming.
- **Cultural Adaptation:** The introduction of new practices did not impact the cultural norms of the communities. Instead, it enriched the existing farming practices by introducing sustainable and productive methods that were culturally acceptable.
- **Environmental Impact:** The adoption of sustainable by-products as an alternative to firewood significantly reduced deforestation activities in the north, contributing to environmental conservation and enhanced agricultural resilience against climate change.

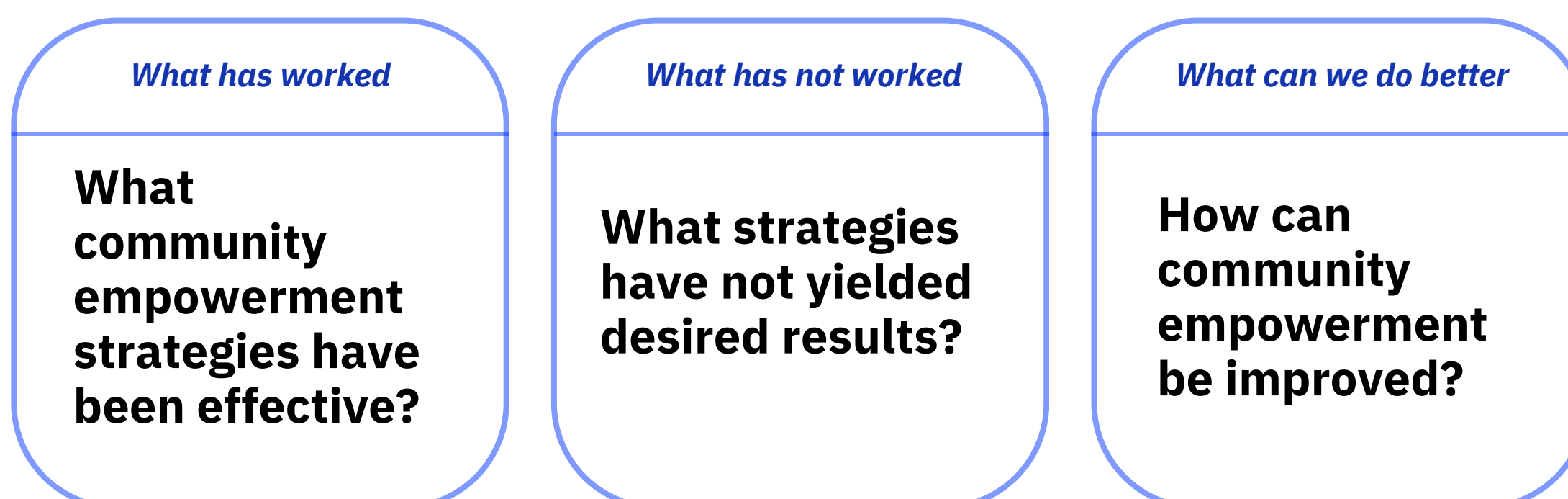
The integration of agricultural practices between northern and southern Nigeria demonstrates a successful model of adaptation that respects cultural boundaries while promoting environmental sustainability and resilience.

## Member Engagement

To build on the knowledge captured through desk reviews and individual interviews, and to leverage the collective strength of the community, various FGDs were conducted across the Global South regions. Here, we brought ARA members and broader adaptation community together to start the conversation on how to empower local and indigenous voices to bring their knowledge systems in the forefront of adaptation research and action.

Focus Group Discussions (FGDs) involving 31 members across two regional engagements helped to validate findings and offered new perspectives on community empowerment and knowledge integration. It focused upon how member organisations can empower local communities further.

The FGD revolved around three key questions:



### Insights from Member Engagement sessions (workshops and plenaries):

The literature review and interviews highlighted how organisations empower local communities, with focus groups adding context through discussions of challenges, solutions, and best practices. The workshop identified common hurdles and innovative strategies, emphasising the importance of community-driven initiatives in strengthening climate resilience.

Key insights include:

#### 1. Understanding Nuances of Indigenous and Local Wisdom:

Indigenous knowledge, rooted in a profound understanding of local ecosystems, plays a critical role in crafting effective, site-specific climate resilience strategies. Recognising the distinction between local and indigenous knowledge too is essential.

## **2. Strengthening Rural Resilience:**

Effective public management and participatory governance is the key to long-term sustainability, and crucial for resilience strategies in rural areas impacted by climate disasters.

## **3. Integrating Gender in Climate Solutions:**

The presentations highlighted the need to mainstream gender in climate policies. This was particularly important to address the vulnerabilities of women in rural settings, and thereby enhance their role in climate responses.

## **4. Preserving Cultural Heritage amidst Climate Challenges:**

Member organisations discussed the threats to cultural identity in vulnerable regions, underscoring the need for climate adaptation efforts to incorporate strategies to minimise cultural losses.

## **5. Empowering Community Leadership:**

To make climate adaptation efforts both relevant and sustainable, it was necessary to put local communities in charge. This also ensures that adaptation strategies are more deeply embedded in the local socio-cultural context.

## **6. Promoting Inclusivity and Equity:**

It is crucial to prioritise inclusivity and equity in adaptation efforts. This involves actively involving marginalised groups, both local and indigenous, in decision-making and also tailoring interventions to meet their specific needs.

## **7. Implementing Adaptive and Dynamic Frameworks:**

Employing flexible, community-driven frameworks that adapt in real-time based on ongoing learning and feedback is key to building long-term, sustainable resilience.

## **8. Enhancing Community Voice and Overcoming Barriers:**

The member organisations recognise the need for strengthening legal frameworks and community dialogues, especially when it comes to addressing challenges like exclusion of indigenous voices and gender inequality.



## Concluding Remarks and Next Steps

**“Those who sow the least wind, reap the most whirlwind.”** As we go forward, it is evident that indigenous and local communities are disproportionately impacted by climate change, calling for urgent and tailor-made empowerment strategies, such as:

### **Enhance Technical Skills and Decision-Making Inclusivity**

Implement a bottom-up approach that not only involves local communities in decision-making but also equips them with the necessary technical skills. Such empowerment will help reduce their long-term dependency on external authorities, foster clear communication, and ensure their voices are heard and valued in decision-making processes.

### **Tailored Solutions for Diverse Community Needs**

Differentiate between the indigenous and the local – as distinguished earlier in this document – and their respective needs, so as to provide tailor-made solutions. Increase engagement to understand and address the unique challenges of each community effectively.

### **Foster Community Collaboration and Learning**

Actively engage with other ARA community members to share both best practices and lessons learned from past mistakes. A collaborative learning environment will enhance the effectiveness of community-driven solutions and prevent ineffective strategies from being repeated.

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