

# CRITICAL ASSESSMENT OF ARA'S CO-CREATION SPACES

Advancing collaborative climate adaptation  
solutions

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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. Its membership is made up of researchers, funders, policymakers, development bodies and community-based organizations committed to action-oriented research for adaptation to support a climate-resilient future.

**About Transitions Research**

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

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# 1. Introduction

The Adaptation Research Alliance (ARA) is a global coalition focused on accelerating and scaling investments in action-oriented research that addresses pressing knowledge needs for adaptation and resilience of the most vulnerable. To this end, it supports capacity building at all stages, from research to action, and works to strengthen research–implementation linkages and to promote greater global learning.

A key initiative in the ARA's first years was the launch of four knowledge co-creation spaces that engaged a large share of the Alliance membership, focusing on building the capacities of universities in Least Developed Countries (LDCs) to support national adaptation action; nature-based solutions to support equitable climate solutions; accelerating the adaptation of smallholder farmers; and urban resilience solutions.

This systematic evidence review assesses the effectiveness of these co-creation spaces through the lens of the ARA's six Adaptation Research for Impact Principles,<sup>1</sup> which underpin all ARA programs, plans and activities. A team at Transitions Research reviewed project documents, event agendas and deliverables from the four co-creation spaces to determine how well they align with the six principles, with the ARA's broader theory of change, and with its core values of openness and transparency, southern leadership, thinking big and long term, and gender equality and social inclusion. The review identified both successes and challenges and highlighted effective strategies for enhancing the equity, transparency and replicability of co-created adaptation solutions.

## The foundations of the ARA model of co-creation

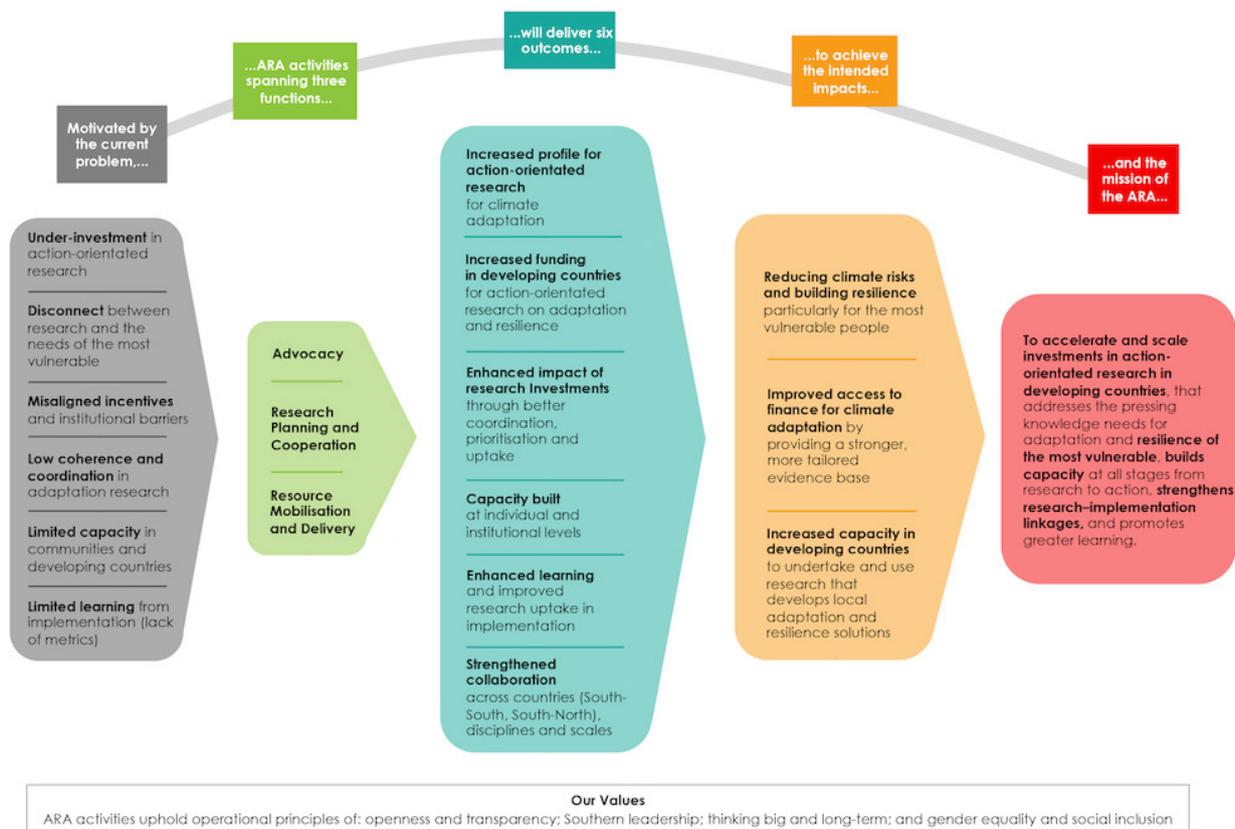
The ARA co-creation spaces were designed to serve as incubators for adaptation innovation, combining seed funding and structured collaboration protocols to drive locally led adaptation solutions. They deliberately seek to embody the six Adaptation Research for Impact Principles:

1. Research is needs-driven, solutions-oriented and leads to a positive impact on the lives of those at risk from climate change.
2. Research is transdisciplinary and co-produced with users.
3. Research emphasizes societal impact.
4. Research builds capacity and empowers actors for the long term.
5. Research processes address structural inequities that lead to increased vulnerability and reduced adaptive capacity of those at risk.
6. Learning while doing enables adaptation action to be evidence-based and increasingly effective.

Building on these principles, which emerged from an extensive collaborative process in 2020–2021, the ARA developed a theory of change underpinned by three operational principles: advocacy for increased funding and policy support for adaptation research; facilitation of collaborative research planning among diverse stakeholders; and resource mobilization to ensure equitable distribution of financial and technical support. Figure 1 provides an overview of the ARA theory of change.

<sup>1</sup> See <https://www.adaptationresearchalliance.org/resources/adaptation-research-for-impact-principles/>.

Figure 1. The ARA theory of change<sup>2</sup>



The ARA's approach deliberately challenges the prevailing dynamics in research, where leadership usually comes from the Global North and projects often extract information from Global South communities without actively engaging them, treating them instead as passive recipients of knowledge. In contrast, the ARA sees communities as co-producers of knowledge, beginning with the design of research projects. It also promotes the integration of transdisciplinary methodologies and engagement with policymakers, adaptation practitioners, local stakeholders and marginalized communities to jointly develop and implement adaptation solutions.

## Review methodology

The evidence base for this review comprises key program documents associated with each co-creation space, including project proposals and concept notes; terms of reference (ToRs); event agendas and workshop materials; reports; monitoring, evaluation and learning (MEL) documentation; and final deliverables submitted by the leaders of each co-creation space. These materials were analysed through the lens of the Adaptation Research for Impact Principles, with a brief descriptive text summarizing the extent to which each principle was reflected in the design and execution of the space. The findings are presented in a table in Section 3 and also inform the descriptions of the four co-creation spaces presented in Section 2.

It is important to note that the review process encountered several limitations. There was significant variation in the availability and quality of documentation across the co-creation spaces: some of them had detailed,

<sup>2</sup> For more information, see <https://www.adaptationresearchalliance.org/resources/ara-theory-of-change/>.

structured and well-archived records, while others provided only partial data. Time constraints limited the amount of follow-up research that could be conducted to try to fill information gaps. Still, the ARA principles proved to be a robust framework for drawing meaningful insights, highlighting areas of innovation and success, and identifying opportunities for strengthening co-creation as a strategy for impactful adaptation research.

## 2. The ARA's co-creation spaces

This section provides an overview of the four co-creation spaces, drawing on the evidence base described above.

### **Enabling LDC universities to support national adaptation action**

This co-creation space focused on developing a new adaptation research program for LDCs to support national adaptation efforts, enhance national scientific and technical capacities, and integrate locally led, community-based adaptation approaches into national plans and systems. The ARA members leading the initiative were the Least Developed Countries Universities Consortium on Climate Change (LUCCC) and the United Nations Development Programme (UNDP).

Universities can play a critical role in advancing knowledge and providing solutions to the challenges posed by climate change, offering crucial expertise to governments and vulnerable communities. However, much of the climate-related research that has been conducted in LDCs to date has been led by experts from the Global North.

This co-creation space sought to enhance the capacities of university researchers in LDCs to lead adaptation research and help close a persistent science–policy gap, thereby enabling more evidence-based decision-making. It also aimed to create more opportunities for local stakeholders to define adaptation priorities; foster partnerships between universities, governments and civil society; and develop action-oriented research programs with direct links to National Adaptation Plans (NAPs) and nationally determined contributions (NDCs) under the Paris Agreement.

The work began in April 2023 with 20 conversations with individuals affiliated with universities in 12 different LDCs in Africa, Asia and the Caribbean. These conversations explored the barriers and enablers to gaining government recognition of local research in policy and practice, as well as the knowledge and information gaps that needed to be addressed to inform adaptation efforts.

The process also included one-on-one engagements with university representatives; participation in conferences such as CBA17 and the Resilience Evidence Forum; in-country engagements in Bangladesh, Liberia, Ethiopia, Haiti and Mozambique; and online workshops and contributions at the Adaptation Futures conference.

### **Nature-based solutions to support equitable climate resilience**

This co-creation space focused on designing a locally informed and equitable research program on nature-based solutions (NbS) for sub-Saharan Africa. The goal was to strengthen climate resilience through effective, scalable NbS; influence future research agendas by embedding lived realities; and foster cross-sectoral partnerships between local, national and international actors.

For this co-creation space, the ARA partnered with UK Research and Innovation's Natural Environment Research Council (UKRI-NERC), the Foreign, Commonwealth and Development Office (FCDO), the Water Engineering and

Development Centre (WEDC) at Loughborough University, and the Climate System Analysis Group (CSAG) at the University of Cape Town.

The work was conducted from November 2022 to March 2023 and involved several interconnected phases, each building on earlier insights to help shape locally informed and equitable NbS. It began with a desk-based review of academic and grey literature. This helped map existing NbS research and identify knowledge gaps and emerging trends in sub-Saharan Africa. Concurrently, the ARA and UKRI collaborated to design and develop a participatory program, refining thematic focus areas for stakeholder validation. They organized multi-actor workshops over three days, with four online sessions engaging more than 50 participants from sub-Saharan Africa and beyond. The stakeholders included community representatives, NGOs, government agencies, universities and private sector actors, along with international experts and funders.

The stakeholders emphasized the need for equitable and scalable NbS interventions that consider existing local governance structures, financial sustainability and community empowerment. They also stressed the importance of measuring NbS impacts through evidence-based assessments and addressing potential trade-offs in NbS implementation.

To gather additional insights from stakeholders, the ARA conducted six community consultations in Durban and Cape Town, South Africa, and in Nairobi, Kenya. These sessions involved direct engagement with local communities, engineers and intermediary organizations. Through face-to-face meetings, online discussions and surveys, participants shared their perspectives on NbS challenges, opportunities and needs.

Building on an initial synthesis of key themes, the team distilled the themes and questions into four core research themes and two cross-cutting threads, ensuring that the final scope reflected both local priorities and scientific rigour.

While the co-creation process was ongoing, UKRI, in collaboration with the ARA and other partners, also began developing a funding call for proposals.

## **Accelerating smallholder agriculture adaptation**

Smallholder farmers are critical to global food security, supporting more than 2 billion people and growing food for over 50% of the population in low- and middle-income countries. In sub-Saharan Africa, smallholder farmers are disproportionately vulnerable to climate change, which exacerbates existing challenges such as poverty, inequality and environmental degradation. Instead of top-down approaches that fail to consider farmers' perspectives, there is a need for knowledge co-production and the co-design of solutions with smallholders and other stakeholders.

This co-creation space focused on collaboratively developing a funding program targeting smallholders in Kenya and Nigeria. The African Group of Negotiators Expert Group (AGNES) designed and implemented a locally led co-creation process. AGNES established steering committees in both Kenya and Nigeria to guide the agenda, select participants and mobilize engagement from diverse regions and sectors.

The methodology for the co-creation space was based on participatory, transdisciplinary engagement and knowledge co-production. The process began with a detailed scoping study that examined the state of smallholder agriculture in the region, reviewing existing academic and grey literature and identifying key research and implementation gaps. This review informed the design of stakeholder engagement activities and helped outline the main challenges and opportunities for strengthening local agriculture systems.

ARA and its partners then convened a series of workshops in each country:

- **Kenya:** Six co-creation workshops were held, involving 175 participants (41% women, 59% men). Two workshops were conducted at the national level, with four sub-national workshops in Isiolo, Nyeri, Kitale and Mombasa. These locations were selected to represent diverse geographical and agroecological contexts. A majority of attendees were end users, including 119 farmers, members of farmer associations or extension workers.
- **Nigeria:** Five co-creation workshops were conducted, with 301 participants (41% women, 59% men). Following two national-level workshops, sub-national sessions were held in Kano (covering the Northwest and Northeast), Ibadan (covering the Southwest) and Owerri (covering the Southeast and South). A total of 87 participants were end users, including farmers, representatives from farmer associations or cooperatives, and extension workers.

This extensive engagement generated detailed country reports for both Kenya and Nigeria, identifying a wide range of opportunities for local adaptation research across crops, livestock and fisheries or aquaculture. Insights from the workshops were synthesized into key research challenges and action areas. These outputs fed into the design of a research funding call, which sought to catalyse projects that align with the ARA's principles of user-driven, equitable and impact-oriented research. This co-creation space was therefore an important step towards identifying a broad set of opportunities for locally led adaptation research in the smallholder agriculture sector.

## Urban resilience solutions

This co-creation space, led by the International Institute for Environment and Development (IIED), focused on developing a locally grounded, action-oriented research program that supports inclusive and effective urban resilience in the Global South. It was designed to address power dynamics within urban governance and to consider climate risk through the perspectives of marginalized urban communities.

More than 100 researchers, policymakers and practitioners across Africa, Latin America and South Asia participated in the co-creation space. An expert advisory board guided the process, ensuring that the program remained grounded in lived realities and policy relevance.

The outcome was the Strengthening and Enhancing Contextual Urban Resilience (SECURE) framework, which was co-created by participants and later published by IIED.<sup>3</sup> SECURE emphasizes the need to understand urban areas as complex socio-political and environmental systems, highlighting the roles of local context, institutional dynamics and equity in urban resilience planning. Its focus on participatory co-production, inclusive governance and context-specific entry points for change helped embed justice and local relevance into the research design process.

The work of this co-creation space began with a review of relevant literature that was mapped against existing co-production approaches in urban resilience, sustainability and ecosystem governance. This review served as the foundation for stakeholder consultations and highlighted key gaps in current urban adaptation research.

Three regional consultative workshops were held virtually, bringing together diverse stakeholders from Latin America, sub-Saharan Africa and South Asia. The workshops were designed to elicit context-specific knowledge and reflections from local government representatives, urban planners, community organizations, researchers and development partners, among others. There was also a global call for case studies from urban practitioners

<sup>3</sup> See Steeves, J., N. Schoonman, A. Karol, S. Priya, R. Raj, and A. Barcena. 2025. "Strengthening and Enhancing Contextual Urban Resilience (SECURE) Toolkit." London: International Institute for Environment and Development. <https://www.iied.org/22615iied>.

and policymakers to ground the research in lived realities. The resulting case studies showcased innovative approaches to inclusive adaptation and co-production initiatives already underway in urban areas.

While the co-creation process was ongoing, the ARA began to lay the groundwork for a collaborative funding proposal and implementation framework, and the interim findings were presented at a session at COP29 to facilitate dialogue and strengthen partnerships. The co-creation space fostered a robust, interdisciplinary network committed to transforming urban resilience research into practice that is centred on equity and scalability.

### 3. Assessing the co-creation spaces against the ARA Adaptation Research for Impact Principles

As noted in the introduction, the four co-creation spaces were evaluated against the Adaptation Research for Impact Principles. Table 1 summarizes the findings, providing both a diagnostic snapshot of performance across the principles and insights into strengths, gaps and emerging patterns.

**Table 1. Assessing the four ARA co-creation spaces against the Adaptation Research for Impact Principles**

Principle	LDCs and national capacity	Nature-based solutions to support equitable climate resilience	Accelerating smallholder agriculture adaptation	Urban resilience solutions
1. Research is needs-driven and solutions-oriented and leads to a positive impact on the lives of those at risk from climate change	A focus on generating evidence for National Adaptation Plans (NAPs) and the implementation of the Sustainable Development Goals (SDGs), along with in-country engagements that addressed adaptation priorities, aligns with a needs-driven and solutions-oriented approach.	The focus on creating an open, accessible evidence base aligns with the research being practical and solution-oriented by providing stakeholders with data to improve NbS. The focus on scalability and landscape-level impacts ensures that the research has a significant impact on those at risk.	The focus on addressing the vulnerabilities of smallholders in sub-Saharan Africa who are significantly impacted by climate change shows the research is needs-driven. The focus on identifying practical solutions is evident, as the process generated detailed reports for each country, identifying a wide range of opportunities for local adaptation research. The commitment to being solutions-oriented is further demonstrated by the fact that a USD 5 million action research program is being planned to respond to these priority topics, ensuring that adaptation strategies are developed to enhance resilience and reduce risks for smallholder farmers.	The focus on vulnerable urban populations by integrating community priorities into resilience planning shows that the research is needs-driven and solutions-oriented. The use of co-production to reframe risks through local perspectives highlights a positive impact on the lives of those at risk.

Principle	LDCs and national capacity	Nature-based solutions to support equitable climate resilience	Accelerating smallholder agriculture adaptation	Urban resilience solutions
2. Research is transdisciplinary and co-produced with users	Involving local universities, governments, NGOs and multilateral organizations through advisory committees and workshops and also developing case studies that integrate community voices and academic research indicate that the research is transdisciplinary and was co-produced.	While there is a mention of multiple disciplines through the inclusion of multiple value systems and non-academic knowledge, there is no explicit mention of diverse contexts or co-production with local actors in the community.	The study emphasizes high participation from farmers and extension workers, but the workshops functioned more as a needs assessment. The wide range of topics made it difficult to co-design detailed research activities during this phase. A subsequent design that involves direct engagement with farmers in shaping the final research priorities will be useful.	Engaging communities, policymakers, NGOs and academics in knowledge-sharing, as well as using participatory workshops and iterative feedback loops to dissolve power dynamics, aligns with this principle.
3. Research emphasizes societal impact	While there is a mention of bridging science–policy gaps through institutional management systems and embedding research into NAPs, there is no explicit mention of enhancing societal impact.	The accessibility of the evidence base ensures a wider dissemination of knowledge in the community by considering interactions between local policies and environments and also promoting community ownership and policy influence, therefore enhancing the societal impact.	The aim was to transform livelihoods by addressing critical issues such as poverty reduction (by leveraging untapped arable land) in SSA, food security (by supporting smallholder farmers to meet food requirements) and climate resilience. The initiative’s design, which focused on Kenya and Nigeria, and the subsequent plan to invest USD 5 million in an action research program directly connected the research process to a tangible, long-term societal impact.	The aim to bridge science–policy gaps and influence governance structures emphasizes a positive societal impact. However, structural barriers and power imbalances limit measurable impacts in the early stages.

Principle	LDCs and national capacity	Nature-based solutions to support equitable climate resilience	Accelerating smallholder agriculture adaptation	Urban resilience solutions
4. Research builds capacity and empowers actors for the long term	Given the established LUCCC network for sustained South–South collaboration and proposed institutionalizing research capacity through university systems beyond project cycles, there is a clear emphasis on capacity building and empowering actors for the long term.	While there is a mention of data accessibility to the public, there is no direct mention of practice-based capacity-building through training and workshops.	There is a robust mention of building institutional capacity through partnering with organizations like RUFORUM, Bayer Africa and YARA, and a strong participation of farmers in the sub-national workshops aligns with this principle.	Embedding knowledge-sharing norms in governance and strengthening networks for sustained South–South collaboration aligns with this principle.
5. Research processes address structural inequities that lead to increased vulnerability and reduced adaptive capacity of those at risk	There is an acknowledgement of aiming to reform funding flows to support LDCs and institutional grants, which speaks to addressing structural inequalities. However, the need for addressing the dominance of the Global North in research, through local leadership of LDC universities, does not fully address structural inequalities.	There is no explicit mention of addressing structural inequalities or prioritizing marginalized voices. However, there is some mention of capturing stakeholder perspectives about NbS.	There is an acknowledgement of structural barriers such as limited access to credit, insurance and mechanization and markets, and gender disparities in agricultural participation and decision-making. In addition, gender parity is embedded in evaluation frameworks.	While the co-creation space facilitates targeting systemic issues by empowering marginalized voices, there remain significant risks if power dynamics are not strategically navigated.
6. Learning while doing enables adaptation action to be evidence-based and increasingly effective	Iterative design was used with numerous stakeholders. Five in-country engagements, feedback loops at conferences, and adapting program concepts based on emerging insights highlight a learning-while-doing approach.	The evidence base supports continuous learning by enabling iterative improvements in NbS through evidence and evaluation of lived realities and constant policy and governance refinement.	The evidence base supports an iterative learning-by-doing approach by integrating knowledge from past initiatives and also emphasizing stakeholder feedback loops to refine adaptation initiatives.	Using adaptive methods such as iterative design, feedback loops from conferences, and context-specific reforms to governance frameworks aligns with this principle.

## 4. Reflections and recommendations

The ARA has made significant contributions to action-oriented adaptation research through its co-creation spaces, showing how to bridge the gaps between research, policy and practice. Since the ARA launched its co-creation spaces, the concept has developed into structured methodologies that emphasize equity, local leadership and context specificity.

Globally, co-creation approaches continue to evolve – for instance, by integrating technologies such as generative AI, extended reality and crowdsourcing platforms. Participation has thus expanded across geographies, real-time knowledge sharing has been enhanced, and costs have been reduced. Co-creation spaces are fostering inclusivity, building long-term capacity, adopting hybrid collaboration models and serving as innovation hubs. Crucially, local institutions are also being empowered to sustain efforts beyond project cycles.

There are still opportunities to make co-creation spaces in adaptation research even more effective. Here are some potential enhancements to the ARA's co-creation spaces:

- **Standardizing impact metrics:** While co-creation spaces have mobilized members and facilitated projects, there is a need to harmonize qualitative and quantitative impact metrics through the development of standardized frameworks, to ensure that both tangible and intangible benefits are consistently evaluated across projects.
- **Ensuring long-term sustainability:** There remains a significant challenge in sustaining adaptation initiatives beyond the preliminary funding cycles, which can be mitigated by securing long-term funding streams and institutionalizing capacity-building practices.
- **Addressing power dynamics:** Navigating inequalities within multi-stakeholder collaboration is crucial for success. Promoting equitable participation, building trust among stakeholders and establishing ways to minimize conflicts or imbalances of power could strengthen co-creation spaces.
- **Standardizing documentation and archiving data:** Variability in the availability and quality of documentation on the co-creation process and space inhibits replicability. Implementing standard protocols for documenting project activities, outcomes and lessons learnt would help improve transparency, accountability and knowledge sharing.

**For more information:**

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