Adaptation Research Alliance

Transitions Research

Critical Assessment of ARA's Co-Creation Spaces

Advancing Collaborative Climate Adaptation Solutions

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Introduction

The Adaptation Research Alliance (ARA) has emerged as a global coalition dedicated to advancing action-oriented adaptation research that informs solutions, reduces climate-risks, and drives impact by pioneering co-creation spaces that bridge the gap between academic research and actionable solutions. Through its four primary co-creation spaces—focused on Least Developed Countries (LDCs) and National Adaptation Plans, Urban Resilience, Smallholder Agriculture, and Nature-Based Solutions—the ARA has demonstrated a commitment to inclusivity, southern leadership, and context-specific innovation[1].

This systematic evidence review explores the effectiveness of co-creation spaces by reviewing proposals, Terms of Reference (TORs), reports, event agendas, and deliverables to evaluate their alignment with ARA's broader Theory of Change framework. Key findings reveal that co-creation spaces have successfully mobilised over 190 members, with 71% members from the Global South, facilitated 30 grassroots projects across 23 countries, and influenced global climate policy frameworks like the Global Stocktake[2].

Despite these successes, challenges persist in harmonising quantitative and qualitative impact metrics, ensuring long-term sustainability of interventions, and navigating power dynamics within multi-stakeholder partnerships[3]. The review synthesises these insights to propose scalable strategies for enhancing the equity, transparency, and replicability of co-created adaptation solutions.

[1] https://clareprogramme.org/project/adaptation-research-alliance-ara/)
[2] https://clareprogramme.org/project/adaptation-research-alliance-ara/; https://www.preventionweb.net/news/ara-launches-innovative-approach-funding-adaptation
[3] https://www.adaptationresearchalliance.org/resources/ara-co-creation/ https://transitionsresearch.org/wp-content/uploads/2024/10/ARA-TLS-Learning-Journey-Adaptation-and-Resilience-Assessment.pdf

Review Approach

Theoretical and Methodological Foundations of ARA's Co-Creation Model

ARA's co-creation philosophy is rooted in its six Adaptation Research for Impact Principles that prioritise user-driven research, equitable partnerships across all sectors of society, and contextual relevant knowledge production. ARA's co-creation spaces serve as incubators for adaptation innovation, combining seed funding and structured collaboration protocols to drive locally led adaptation solutions[4].

These principles have emerged from an extensive collaborative process involving nine working groups and six dedicated workstreams between 2020-2021, bringing together researchers, policymakers, and community leaders from over 50 countries. This collaboration has led to the development of the Theory of Change framework which is essentially a theory that prioritises action-oriented, user driven research that bridges the gap between scientific knowledge and its practical implementation to address the urgent adaptation needs of vulnerable communities in the Global South[5]. This theory is 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[6].

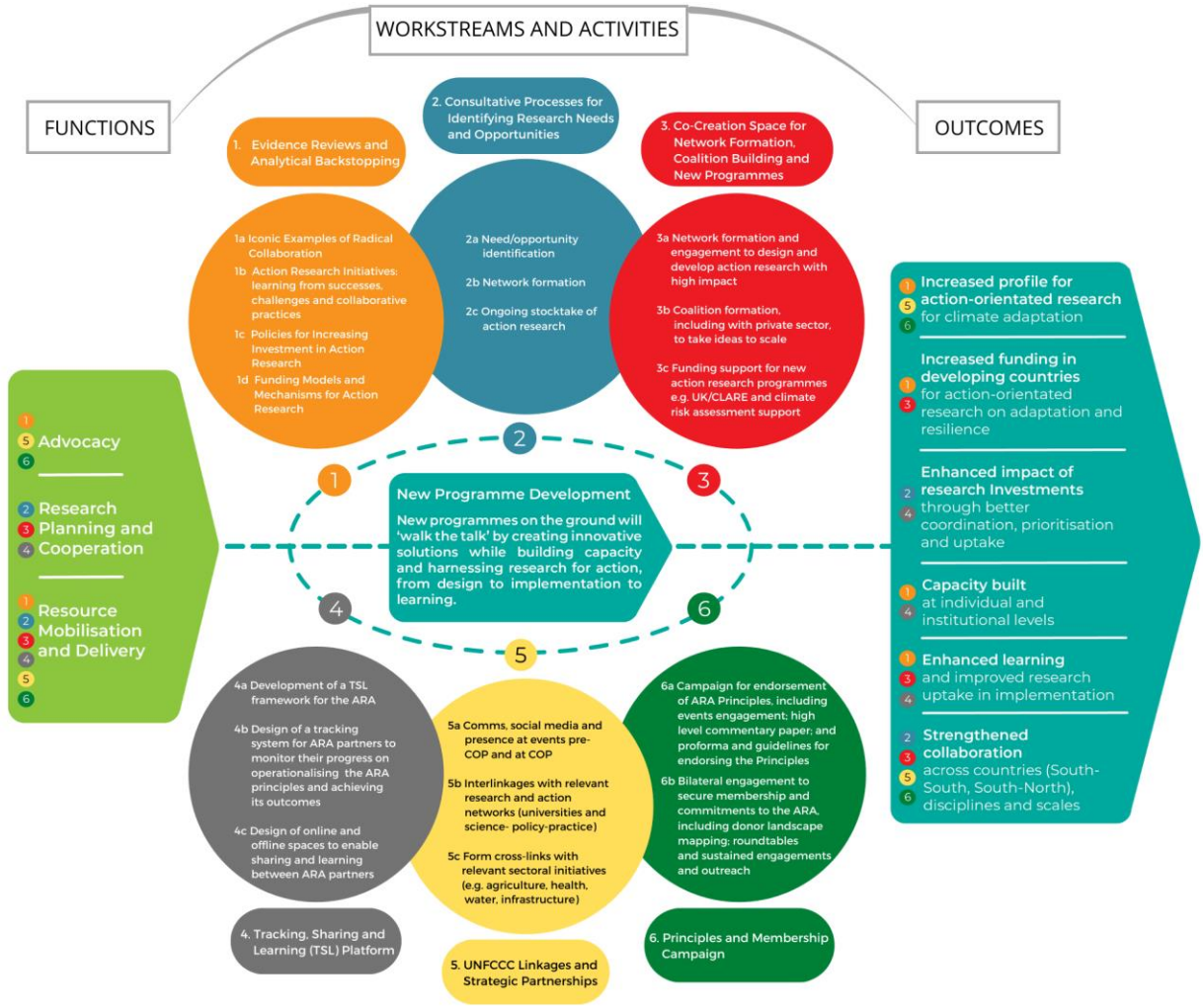
By aligning these functions with the Adaptation Research for Impact Principles, ARA proposes a paradigm shift in climate adaptation. The Theory of Change identifies six key outcomes, including, increased funding in developing countries for action-oriented research on adaptation and resilience, strengthened collaboration, capacity building at individual and institutional levels, enhanced impact of research investments through better coordination, prioritisation and uptake, increased profile for action-oriented research for climate adaptation, and a global multi stakeholder coalition co-developed by stakeholders[7].

This framework is to challenge traditional North-South, siloed research paradigms by embedding mechanisms that prioritise the integration of transdisciplinary methodologies involving policymakers, practitioners, local stakeholders and marginalised communities in adaptation solutions. This represents a departure from traditional extractive models, which often position Global South communities as passive recipients, by acknowledging them as

[4] https://www.adaptationresearchalliance.org/resources/ara-co-creation/
[5] (https://southsouthnorth.org/wp-content/uploads/2021/07/ARA-Concept-Note-July2021.pdf
[6] https://southsouthnorth.org/wp-content/uploads/2021/07/ARA-Concept-Note-July2021.pdf
https://www.adaptationresearchalliance.org/resources/ara-mission-foundation/

[7] https://southsouthnorth.org/wp-content/uploads/2021/09/Evidence-Review-and-Analysis.pdf

a[8]ctive- co-designers in the research process.



ARA activities organised under six interlinked work streams will support the ARA's functions and contribute to its outcomes under the ARA Theory of Change. Together, these activities will yield new programmes on the ground.

Source: https://southsouthnorth.org/what-we-do-ara/

Assessing the Effectiveness of Co-Creation Frameworks

Review Methodology

Building on these foundations, the systematic evidence review aims to evaluate the role and effectiveness of ARA's co-creation spaces in advancing inclusive, impactful and scalable climate adaptation solutions in the Global South. The review focuses on four co-creation spaces and assesses how effectively each space has operationalised A4RI principles through its implementation.

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The evidence base for this review comprises key program documents associated with each co-creation space. These include 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 co-creation leads. These documents were systematically compiled and reviewed for each co-creation space.
The core analytical framework for the review is structured around the Adaptation for Research Impact Principles. Each co-creation space was assessed against the full set of A4RI principles using a three-tiered scale—Low, Medium, or High—to indicate the extent to which each principle was reflected in the design and execution of the space. A “Low” score indicates limited or no evidence of the principle, “Medium” indicates partial or moderate integration, and “High” indicates strong and consistent evidence. A coding matrix was developed to support this assessment, capturing evidence from the document set, justification for scoring, illustrative examples, and observations on challenges or gaps.

Limitations

The review process encountered several limitations. Time constraint for this review limited the depth of analysis and the ability to supplement the document review with additional consultations. Additionally, there was considerable variation in the availability and quality of documentation across the co-creation spaces. While some of them had detailed, structured and well-archived records, others provided only partial and inconsistent data. This lack of standardised documentation and archiving protocols made it difficult to synthesize finding uniformly.

Despite these challenges, the structured application of ARA’s principles provided 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.

Analysis Insights

Summary of co-creation spaces

LDC University capacity co-creation space

The goal of the ‘Enabling Least Developed Country (LDC) Universities to Support National Adaptation Action’ co-creation space focused on developing a new adaptation research program for LDCs in order to support national adaptation efforts, enhance national scientific and technical capacities, and integrate locally-led community-based adaptation approaches into

national plans and systems. Key stakeholders involved in this initiative were the Least Developed Countries Universities Consortium on Climate Change (LUCCC), the United Nations Development Programme (UNDP) and the Adaptation Research Alliance (ARA).

Universities in LDCs play a critical role in advancing knowledge and providing solutions to the challenges posed by climate change through integrated action oriented research programs that align with government efforts to advance Sustainable Development Goals (SDGs) and build climate resilience. The co-creation process for this working group aimed to address several challenges, including the lack of locally-led research in LDCs, the dominance of Global North researchers in climate change research, the persistent science-policy gap, and limited evidence-based decision-making for communities in LDCs.

The methodology involved a multi-stage approach, beginning in April 2023 with 20 conversations with individuals affiliated with universities across 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 needed to inform adaptation efforts. Further, the process included one-on-one engagements with university representatives, participation in conferences such as CBA17 and the Resilience Evidence Forum and in-country engagements in Bangladesh, Liberia, Ethiopia, Haiti and Mozambique, online workshops and contributions at Adaptation Futures.

The outcome of the LDC university capacity co-creation space aimed at strengthening the capacity of LDC universities to generate and use adaptation research, promoting locally-led adaptation by involving local stakeholders in defining adaptation priorities, fostering partnerships between universities, governments, and civil society actors so as to bridge the science-policy-practice ga, and to develop action-oriented research programs with direct link to NAPs and NDCs, keeping adaptation research at the center of policy and practice.

Nature Based Solutions to Support Equitable Climate Resilience Co-creation Space

The goal of the ‘Nature Based Solutions (NbS) to Support Equitable Climate Resilience’ co-creation space focused on designing a locally informed and equitable NbS research programme for Sub-Saharan Africa (SSA). This co-creation space aimed to strengthen resilience to climate risks in SSA through effective, scalable NbS, influence future research agendas by embedding lived realities to address practical challenges, and foster cross-sectoral partnerships between local national, and international actors, driving inclusive and impactful adaptation. ARA partnered with UK Research and Innovation’s natural Environment Research Council (UKRI-NERC), the Foreign Commonwealth and Development Office (FCOD), the Water Engineering and Development Centre (WEDC) at Loughborough University, and the Climate System Analysis Group (CSAG) at the University of Cape Town (UCT) to design this co-creation process.

The methodology involved a multi-stage approach that ran from November 2022 to March 2023 involving several interconnected phases, each building on insights to help shape locally informed and equitable NbS. The process began with a desk based review of academic and grey literature. This helped map existing NbS research, identify knowledge gaps and emerging trends in SSA and basically to provide an evidence base foundation. Concurrently, the ARA and UKRI collaborated to design and developed a detailed workshop programme using participatory methodologies, which included planning multi-actor workshops (MAWs) and refining thematic focus areas for stakeholder validation. The MAWs ran over three days with four online sessions engaging over 50 participants from SSA and other parts. The stakeholders included community representatives, NGOs, government agencies, universities, and private sector stakeholders—alongside international experts and funders.

The workshops resulted in stakeholders across the board emphasising the need for equitable and scalable NbS interventions that consider existing local governance structures, financial sustainability, and community empowerment. Stakeholders also highlighted measuring NbS impacts through evidence-based assessments and addressing potential trade-offs linked to their implementation. Thus, to capture stakeholder perspectives, ARA conducted six community consultations in Durban and Cape Town and Nairobi These sessions involved direct engagement with local communities, engineers, and intermediary organisations. Through face-to-face meetings, online discussions, and surveys, participants shared their perspectives on NbS challenges, opportunities, and needs.

Following the workshops and consultations, the insights were synthesised in two stages:

Synthesis Stage 1: The first phase focused on identifying key themes, refining the research challenges, and updating the questions based on participant feedback. An inductive approach was used, allowing new themes to emerge organically from stakeholder insights.

Synthesis Stage 2: In the second phase, the refined themes and questions were distilled 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, began developing a funding call for proposals.

Accelerating Smallholder Agriculture Adaptation Co-Creation Space

Smallholder farmers are critical in global food security, supporting over 2 billion people and growing food for more than 50% of the population in low- and-middle income countries. In Sub-Saharan Africa (SSA), smallholder farmers are disproportionately vulnerable to climate change, which exacerbates existing problems like poverty, inequality, and environmental degradation. While existing interventions often adopt top-down approaches that fail to consider farmer perspectives, there is a need for collaborative co-design and co-production to address this gap.

The goal of the ‘Accelerating Smallholder Agriculture Adaptation’ co-creation space was to collaboratively identify and shape an action-oriented research agenda to enhance the resilience of smallholder farmers in SSA to climate change. This co-creation space aimed to respond to these challenges by fostering inclusive, demand-driven research grounded in the lived experiences of farmers, with a strong emphasis on scaling locally led adaptation (LLA) solutions. ARA collaborated with key partners including African and international research institutes, development organisations, and innovation hubs to co-design this process.

The methodology for this co-creation space was built around participatory, transdisciplinary engagement and knowledge co-production. The process began with a detailed scoping study that examined the state of smallholder agriculture in SSA, 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 key challenges and opportunities that the co-creation space would aim to address.

ARA and its partners then convened a multi-day workshop in Kenya that brought together a wide range of actors from across the agricultural adaptation landscape. The workshop followed participatory design principles and focused on collaboratively identifying priorities for research investment, barriers to adoption of climate-smart solutions, and opportunities to strengthen the voice and agency of smallholder farmers in adaptation planning. Workshop discussions highlighted several priority themes, including the need to improve access to climate information and digital agro-advisory services; promote context-appropriate Climate Smart Agriculture (CSA) practices; strengthen institutional coordination and financing mechanisms; and address underlying structural inequalities such as land tenure insecurity, gender disparities, and market exclusion.

Insights from the workshop were synthesised and structured 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 ARA’s principles of user-driven, equitable, and impact-oriented research. This co-creation space was an important step towards transforming how adaptation research is conducted in the smallholder agriculture sector.

Urban Resilience Solutions Co-Creation Space

The ‘Urban Resilience Solutions’ Co-creation space, led by the International Institute for Environment and Development (IIED), was created to develop a new program for addressing climate change impacts in Global South cities. The goal of the ‘Urban Resilience Solutions’ Co-creation space was to collaboratively design a locally grounded, action-oriented research programme that supports inclusive and effective urban resilience in the Global South by addressing the intersection of power dynamics urban governance, and climate risk through the experiences of marginalised communities in urban areas. ARA worked with a range of international partners including over 100 researchers, policymakers, and practitioners across Africa, Latin America, and South Asia. An expert Advisory Board guided the process, ensuring that the programme remained grounded in lived realities and policy relevance.

The outcome of this co-creation space was the Strengthening and Enhancing Contextual Urban Resilience (SECURe) framework, developed by IIED. The SECURe framework provided the methodological backbone for the co-creation space, guiding its emphasis on understanding urban areas as complex socio-political and environmental systems. It framed how local context, institutional dynamics, and equity considerations should shape 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 methodology for this co-creation space was multi-phased and participatory, beginning 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. Further, three regional consultative workshops were held virtually, bringing together diverse stakeholders from Latin America, Sub-Saharan Africa, and South Asia, these multi actor workshops (MAWs) were designed to elicit context-specific knowledge and reflections from various stakeholders, including local government representatives, urban planners, community organizations, researchers, and development partners. There was also a global call for case studies from urban practitioners and policymakers, in order to ground this research in lived realities. These case studies showcased innovative approaches to inclusive adaptation and co-production initiatives that were already underway in urban areas.

While the co-creation process was ongoing, ARA began to lay the groundwork for a collaborative funding proposal and implementation framework, and the interim findings were presented 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 cantered around equity and scalability.

Comparative Assessment of Co-Creation Spaces Against ARA's Adaptation Research for Impact Principles

In assessing the effectiveness of the abovementioned co-creation spaces, they will be evaluated against ARA's Adaptation for Research Impact (A4RI) Principles (Table 1). This will help identify both the strengths and gaps within the space providing insights into how well co-creation spaces are driving meaningful, practice-oriented adaptation initiatives. It provides both a diagnostic snapshot of performance across the principles and insights into strengths, gaps, and patterns in implementation.

	Co-Creation Spaces	**LDCs and National Capacity**	**Nature Based Solutions to Support Equitable Climate Resilience Co-creation Space**	**Accelerating Smallholder Agriculture Adaptation**	**Urban Resilience Solutions**
A4RI principles	**Principle 1: Research is needs-driven, solutions-oriented and leads to a positive impact on the lives of those at risk from climate change**	*High* - The focus on generating evidence for National Adaptation Plans (NAPs) and SDG implementation, along with in-country engagements that addressed adaptation priorities, aligns with a needs-driven and solutions oriented approach.	*High* - The focus on creating open, accessible evidence base aligns with the research being practical, solution-oriented by providing stakeholders with data to improve Nbs. The focus on scalability and landscape-scape impacts ensures that the research has a large scale impact on those at risk.	*High*- The focus on addressing the vulnerabilities of smallholder farmers in Sub-Saharan Africa (SSA) significantly impacted by climate change, shows that the research is needs driven. The focus on identifying practical solutions, such as Climate Smart Agriculture (CSA), digital technologies like agro-meteorological platforms, and the importance of locally-led adaptation strategies to enhance resilience and reduce risks also aligns with this principle.	*High*- The focus on vulnerable urban populations by integrating community priorities into resilience planning shoes that the research is needs-driven, 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 2: Research is transdisciplinary	*High*- Involving local universities, governments, NGOs and multilateral organisation through Advisory committees	*Medium* - While there is a mention of multiple disciplines through the inclusion of multiple value systems and non-academic knowledge,	*Medium* - While the study emphasizes stakeholder mapping and consultations with key organisations leaning towards expert-driven frameworks rather	*High*- Engaging communities, policymakers,NGOs, and academics in knowledge sharing, as well as using

and co-produced with users	and workshops and also developing case studies that integrate community voices and academic research indicates that the research is transdisciplinary and was co-produced	there is no explicit mention of diverse contexts and co-production with local actors of the community.	than a full participatory approach i.e., there is limited evidence of the direct involvement of smallholder farmers producing knowledge or shaping research priorities.	participatory workshops and iterative feedback loops to dissolve power dynamics, aligns with this principle.
Principle 3: Research emphasizes societal impact	*Medium*- 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	*High* - 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.	*High* - The aim to transform livelihoods by addressing critical issues like poverty reduction by leveraging untapped arable land in SSA, food security by supporting smallholder farmers to meet food requirements and household nutrition and climate resilience across SSA by promoting sustainable practices like scaling CSA that mitigate climate risk, emphasises a high societal impact.	*Medium*- The aim to bridge science-policy gaps and influence governance structures emphasises a positive societal impact. However, structural barriers and power imbalances limit measurable impacts in the early stages.
Principle 4: Research builds capacity and empowers actors for the long-term	*High*- Given the established LUCCC network for sustained South-South collaboration and proposed institutionalising research capacity through university systems beyond project cycles, there is a clear emphasis on capacity building and empowering actors for the long-term	*Low - Medium* - While there is a mention of data accessibility to the public, there is no direct mention of practice based capacity building through trainings and workshops	*Medium*- While there is a robust mention of building institutional capacity through partnering with organisations like RUFORUM, Bayer Africa and YARA, there is less emphasis on directly empowering individual smallholder farmers, interventions are systemic rather than grassroot bottom-up oriented	*High*- Embedding knowledge sharing norms in governance and strengthening networks for sustained South-South collaboration, aligns with this principle.

Principle 5: Research processes address structural inequities that lead to increased vulnerability and reduced adaptive capacity of those at risk	*Medium*- There is an acknowledgment of aiming to reform funding flows to support LDC and institutional grants, which speaks to addressing structural inequalities. However, the mention of targeted Global North research dominance through local leadership of LDC universities does not address structural inequalities	*Low* - There is no explicit mention of addressing structural inequalities or prioritising marginalised voices. However, there is some mention of capturing stakeholder perspectives about NbS.	*Medium*- There is an acknowledgement of structural barriers such as limited access to credit, insurance and mechanisation and markets, and gender disparities in agricultural participation and decision-making. Also, gender parity is considered in evaluation frameworks, a majority of initiatives remain largely systemic.	*Medium*- While the co-creation space facilitates targeting systemic issues by empowering marginalised voices, there remain significant risks if power dynamics are not strategically navigated
Principle 6: Learning-while-doing enables adaptation action to be evidence-based and increasingly effective	*High*- Using iterative design with numerous stakeholders. Five in-country engagements, feedback loops at conferences, and adapting programme concepts based on emerging insights highlights a learning-while- doing approach	*High*- 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	*High*- The evidence base supports an iterative learning-by-doing approach by integrating knowledge from past initiatives and also emphasising stakeholder feedback loops to refine adaptation initiatives	*High*- Using adaptive methods like iterative design, feedback loops from conferences and context-specific reforms to governance frameworks, aligns with this principle

Table 1: *The following table summarizes the alignment of four co-creation spaces - LDCs and National Capacity, Nature Based Solutions to Support Equitable Climate Resilience Co-creation Space, Accelerating Smallholder Agriculture Adaptation and, Urban Resilience Solutions - with the six A4RI Principles. Each principle is scored as High, Medium, or Low based on the systematic review of project documentation, with justifications illustrating the degree to which each principle was integrated in practice.*

Reflections and Recommendations for Strengthening ARA's Co-Creation Spaces

The ARA has been the forerunner of action-oriented adaptation research through its co-creation spaces, aiming to bridge the gap between academic findings and actionable climate solutions. Since ARA pioneered this approach, co-creation spaces have evolved significantly, transitioning from a loosely defined concept to a structured methodology that emphasises equity, local leadership, and context-specificity. More recently, co-creation spaces have evolved by integrating technologies like generative AI, extended reality and crowdsourcing platforms have helped expand participation across geographies, reduced costs, and enhanced real-time knowledge sharing, fostering inclusivity, building long-term capacity, adopting hybrid collaboration models, and serving as innovation hubs. Modern co-creation now focuses on empowering local institutions to sustain efforts beyond project cycles.

Despite their evolution, there remain opportunities to enhance the effectiveness of co-creation spaces in adaptation research. Here are some ways that can help improve ARA's co-creation spaces:

1. Standardising impact metrics: While co-creation spaces have mobilised members and facilitated projects, there is a need to harmonise qualitative and quantitative impact metrics through the development of standardised frameworks, ensuring both tangible and intangible benefits are consistently evaluated across projects.
2. 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 institutionalising capacity building practices.
3. Addressing power dynamics: Navigating inequalities within multi-stakeholder collaboration is crucial for success. Hence, promoting equitable participation, building trust among stakeholders, and establishing ways to minimise conflicts or imbalances of power could strengthen co-creation spaces.
4. Standardising documentation and archiving data: Variability in the availability and quality of documentation of the co-creation process and space inhibits replicability. Implementing standardised protocols for documenting project activities, outcomes, and lessons learned would help improve transparency, accountability, and knowledge sharing.

Appendix A: Coding Matrix for A4RI Principles Assessment

1. Scoring Criteria
    a. **Low:** Limited or no evidence of principle implementation
    b. Medium: Partial integration of principle implementation
    c. High: Strong and consistent integration of principle implementation

2. Evidence Base Resource Key
    a. Project Proposals and Concept Notes
    b. Perms of Reference (ToRs)
    c. Workshops and other agendas
    d. Monitoring, Evaluating and Learning (MEL) documentation
    e. Final Deliverables

3. The following table provides a concise and systematic way that the A4RI Principles have been assessed and integrated across the four co-creation spaces while linking scores to evidence and identifying challenges or gaps

Co-Creation Space	**A4RI Principle**	**Score - Low, Medium,High**	**Justification of Evidence Resource(s)**
Specific projects or initiatives that are being assessed in terms of how they align with the A4RI principles.	Six Principles used to evaluate the effectiveness and impact of co-creation spaces: Principle 1: Research should be needs-driven, solutions-oriented, and have a positive impact on vulnerable populations. Principle 2: Research should be transdisciplinary and co-produced with users (e.g., local communities, stakeholders). Principle 3: Research should emphasize societal impact, aiming to make real-world differences.	Scoring based on how well each co-creation space reflects each of the A4RI Principles	Justification for the scoring, offering insights into the evidence and resources that support each evaluation. It also identifies any areas where the co-creation space may not fully reflect the principle

	Principle 4: Research should build capacity and empower actors for the long term. Principle 5: Research should address structural inequities that contribute to vulnerability. Principle 6: Research processes should use learning-by-doing to enable more effective and evidence-based adaptation action.		