BRIDGING ADAPTATION ACTION AND RESEARCH

Key Insights from Peer-to-Peer Learning Across the Adaptation Research Alliance

Adaptation Research Alliance

UKaid
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Key Insights from Peer-to-Peer Learning

1 INTRODUCTION

Launched at CoP26, the Adaptation Research Alliance (ARA) is a global collaborative effort that seeks to mobilise increased investment and capacity for action-oriented research for effective adaptation to climate change. The Alliance wishes to engage effectively for the delivery of innovative, user driven solutions for adaptation and resilience at all levels, from global to local. The ARA will deliver on its mission by conducting activities spanning three strategic functions.

First, it will advocate globally for greater emphasis and investment for supporting action-oriented research that informs adaptation and resilience from local to global scales. Second, the ARA will provide a forum for better research-planning and cooperation, acting as a connector and an enabler for a variety of actors seeking to promote action-oriented research. Third, the ARA will create, operate and facilitate processes to deliver resources for action-oriented research in developing countries.

As such, cutting across these three functions of the ARA and its broader Theory of Change, is an emphasis on bridging action and research on climate adaptation and the 190 entities that constitute the ARA are working towards bringing a research enterprise to life that is action-oriented.

While there is little dispute as to the value of this thrust on bringing researchers and practitioners closer, there is a lack of evidence on the benefits of this, the conditions that enable this change and the challenges that those attempting this are likely to face. These questions have formed the core of a peer-to-peer learning programme initiated as part of the ARA.

This programme aims at facilitating a knowledge exchange between ARA members. This is to catalyse processes for actively learning about what works and what does not when designing, conducting, and using action-oriented research on climate change adaptation to share learning with each other and other stakeholders in the adaptation ecosystem. Participation in the learning programme is entirely voluntary.

Four workshops were held between June and December 2022 in which ARA members came together to co-create and execute a learning initiative on bridging adaptation research and action. The periods between these workshops were employed for individual learning tasks undertaken by the participating organisations.

This included collating evidence to answer the learning questions identified (i.e., on the benefits, enabling factors and challenges of bridging adaptation research and action) preparing outputs, peer-reviewing the outputs of other

participants and supporting the development of this learning product. The narrative that follows synthesises the insights that emanated through this process and presents an analysis of how ARA members participating in this learning programme felt their work demonstrated benefits, challenges and approaches of bridging adaptation action and research.

More detail on the examples discussed is available in the case studies included in the Annex.

2 BENEFITS OF BRIDGING ADAPTATION ACTION AND RESEARCH

The learning programme elicited a number of rich insights on what participants perceived to be the benefits of bridging adaptation action and research.

2.1 ENHANCING ADAPTATION ACTION AND RESEARCH

Across the board, there was a recognition that this enhanced the effectiveness of both adaptation action and research. For instance, one initiative led by the All India Disaster Mitigation Institute (AIDMI) in the provinces of Gujarat, Maharashtra and Madhya Pradesh, India focussed on enhancing the uptake of more resilient farming practices through engagement, dialogues and joint review between farmers and researchers (case study 1). The organisation reported that this collaboration strengthened cross-learning and consequently led to the uptake of farming practices that included improved approaches for seed selection, better water management and more effective use of agricultural resources. This was so because this process of engagement led to the identification of solutions that were not merely technically sound but were also aligned with local contexts and therefore, practically applicable.

An improvement in the quality of activities taking place as a result of effective collaboration between researchers, 'expert' policy makers and vulnerable communities was also witnessed by the United Nations University Institute for Environment and Human Security (UNU-EHS)- in their HI-PATH initiative that focussed on co-creating climate resilient development pathways in the Hindu-Kush Himalayan region (case study 4). The institution reported that the robustness of the development pathways identified was enhanced as vulnerable communities were able to provide granular, localised perspectives on important aspects of the development pathways proposed that would enhance their applicability. To illustrate, this included the contribution of new perspectives on variegated social marginality in contexts where these pathways were to unfold which in turn had a positive impact on effectiveness.

Perhaps Co-Water International provided the most visceral example of the benefits of bridging adaptation action and research through their Agriculture Support Services project (case study 2). This project is training women and men producers, youth, and local cooperatives to implement climate smart agriculture in parts of Niger through collaboration between experts, civil society and communities. While this thrust on 'bridging' was woven through the project it was seen most clearly in a phase of diagnostic analysis that preceded project activities. Here the views of researchers and experts were considered alongside insights from local agricultural cooperatives, farmer unions, women's groups and public institutions which delivered rich, actionable insights on local livelihood activities and opportunities, capacities, access to finance, literacy, and local environmental factors. This thrust on melding perspectives has contributed to quantifiable increases in the ability of farmers to implement improved climate-smart agricultural practices, including the adoption of drought-resistant seeds, water conservation practices, agroforestry, and small-scale drip irrigation and a recorded increase in farmer incomes. In this way, participants put forth different visions of how bringing different stakeholders together to effectively bridge adaptation action and research can deliver rich dividends for the quality and effectiveness of interventions.

2.2   DEVELOPMENT OF NEW TOOLS AND APPROACHES

A number of participants outlined how another important benefit of bringing diverse stakeholders together to bridge adaptation action and research was the development of new tools and approaches that emanated from and for this process. An example of this comes from GSMA's[1] initiative focussed on strengthening community forest management in Kenya[2] (case study 3).

Given that the concept of 'bridging' different forms of knowledge and stakeholders is inimical to the concept of community forest management, GSMA developed prototypes of mobile applications that allowed communities to actively participate in, and benefit from, forest management activities. While these apps were designed to facilitate 'bridging', the processes of their development were in themselves emblematic of the processes of bridging as well. In contrast to top-down, expert-led models of technology development, GSMA employed a robust co-creation process for the design of the apps themselves through interviews, co-design workshops, surveys, and validation exercises with diverse stakeholders. In this way, not only has GSMA delivered new solutions for bridging different strands of knowledge that are available for wider use, but they have also created a process through which these tools can be developed through genuine collaboration.

A contrasting vision of a similar benefit came from the Mahila Housing Trust from their community-based initiative on supporting resilient and affordable housing for the urban poor that brought together researchers from local universities, policy makers and vulnerable urban communities (case study 5). At its core, the initiative aimed to ensure that new technologies for resilient housing being developed by innovators/researchers aligned with the priorities and needs of low-income urban residents. Faced with the challenge of melding insights from these contrasting stakeholder groups for co-creating effective solutions, MHT adopted a highly relational, socio-technical approach. This employed perspectives from different disciplines to structure an innovative co-creation process where indigenous and expert knowledge was considered alongside each other to deliver focused recommendations on design and engineering solutions that were scientifically valid and technically robust while also reflecting local needs. MHT believes that this novel approach that brought innovators and communities to engage as equals must be emulated by anyone attempting to enhance the resilience of the urban built environments, particularly in the global South.

2.3   BUILDING CAPACITY

Organisations participating in this learning process indicated that the process of researchers and practitioners coming together led to improved mutual capacity building either through the explicit transfer of knowledge/skills or through more subtle processes of reflection and conscientization. A good example of this came from the Danish Institute for International Studies (DIIS) in the context of their Climate Change and Rural Institutions project in Zambia (case study 9). The initiative aimed to bring researchers and practitioners from local and national governments together to unearth and overcome impediments in the execution of local adaptation policies and programmes. Through the application of a range of reflective approaches spanning ethnographic interviews, group exercises and interactive discussions, practitioners started to become aware of critical roadblocks that were impeding adaptation action. For example, agricultural extension officers started to articulate how national policies on Conservation Agriculture were at times dissonant with local realities and identify how certain conditions

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[1] 'GSMA's Mobile for Development team is placed at the intersection of the mobile ecosystem and the development sector. The ClimateTech programme looks at unlocking the power of digital technology to create a low-carbon and climate-resilient future.'
[2] 'Mobile Technology for Participatory Forest Management: Co-designing and testing prototypes in Kenya' GSMA, 2021. https://www.gsma.com/mobilefordevelopment/resources/mobile-technology-for-participatory-forest-management-co-designing-and-testing-prototypes-in-kenya/

attached to adaptation finance prevented the delivery of effective solutions. This then led to the co-creation of remedial measures that have been put in place. Essentially, the convening of 'safe spaces' of reflection and co-creation by researchers for practitioners, catalysed an improved understanding of challenges and their solutions. Other organisations also reported similar insights.

In line with this, Transitions Research talked about how the multi-stakeholder platforms (transect walks and site-based trainings) that were set up as part of an urban resilience initiative led to an improved understanding of local ecological assets (as no one person or group could be aware of the place and quality of all assets in an area) (case study 7). Similarly, Co-Water International demonstrated how active engagement between experts and local communities has led to the enhanced systemic capacity to implement climate-smart agriculture through their Agriculture Support Services project (described earlier) (case study 2).

In addition, IDRC and FCDO noted how their Climate Adaptation and Resilience research framework programme (CLARE) -- that accelerates the delivery of cutting-edge science, knowledge, data and tools focused on tackling natural hazard, climate change adaptation and resilience problems -- also helped enhance capacity (case study 8). In one instance, collaboration between researchers and policy makers in the context of a particular activity in Madagascar led to the former being invited to review and update key policies that had a bearing on the vulnerability of marginalised populations. In this way, researchers were able to enhance their capacity by engaging in an influential policy revision process which also enhanced the government's ability to build resilience of a particular community.

3   ENABLING FACTORS

Along with the benefits, participating organisations also identified particular factors that enabled this bridging to take place.

3.1   USE OF INNOVATIVE APPROACHES AND METHODS

AIDMI, in their initiative to strengthen climate-resilient agriculture brought farmers and researchers face to face to identify innovative field practices (case study 1). To ensure that this 'bridging' was effective, the organisation employed the Appreciative Inquiry (AI) tool. This approach aims to support change processes by focusing on what is working, and then using this to build future directions of change. In contrast to traditional methods that begin by focusing on challenges and problems, AI explores strengths and successes that already exist, to then explore how these can be amplified. This supports more effective communication between stakeholder groups as it reduces the inherent inclination of people to be defensive and incentivizes active participation (as the focus is on their strengths).

AIDMI not only employed this for engagements between researchers and farmers but also to enable dialogue between farmers themselves, thus permitting the transmission of effective approaches for enabling climate-smart agriculture. The organisation believes that AI can be one effective tool for bridging adaptation action and research.

Similarly, UNU-EHS reported that the 'Pathways Process' that they employed was particularly helpful for engendering multi-stakeholder engagement in their HI-PATH initiative (case study 4). This is a specific approach to scenario planning that permitted the team to map multiple desired futures and development aspirations of different groups of stakeholders. This in turn allowed stakeholders to uncover ways in which climate change would disrupt these futures and catalysed a discussion on potential actions to reduce the impact of climate change. IDRC and FCDO outlined how they are establishing 'collaborative spaces' as a tool for creating new opportunities for collaboration for different sets of stakeholders working across individual projects as part of the CLARE initiative (case study 8). This draws on a similar, structured approach to 'bridging' and collaboration that they developed for an earlier programme.

While these are examples of 'process-oriented' tools, as described in section 2.2, GSMA employed digital solutions where mobile applications permitted different groups of stakeholders to engage effectively for improved community forest management (case study 3).

3.2   BUILDING TRUST

Along with an emphasis on innovative tools and technologies, participants converged on the importance of engendering trust between stakeholders to ensure that processes of bridging adaptation action and research were effective.

Co-Water International argued that this was critical to the success of their initiative on training communities to implement climate smart agriculture (case study 2). The institution employed different approaches to build trust

amongst diverse groups of stakeholders that were engaging with each other through this process, including the adoption of highly participatory techniques to run workshops, joint problem definition (to avoid any impression of agenda setting). Critically, they fore fronted the role of local leaders at the outset. This in turn enhanced community ownership, trust and buy-in.

AIDMI voiced a similar opinion. Their project undertook a structured and highly relational approach to catalysing conversations between farmers and researchers (case study 1). However, unlike traditional donor-driven initiatives that would default to employing external consultants and experts, AIDMI consciously invested time and resources in identifying and sourcing local facilitators and trainers. This not only had practical benefits such as more effective communication but also ensured that the project was rightly perceived as being bottom-up and owned by the communities that it was aiming to benefit.

DIIS also underlined the critical importance of ensuring a high level of trust between stakeholders in any process of 'bridging' (case study 9). However, in contrast to the AIDMI and Co-Water that emphasised the role of local individuals for building trust, DIIS emphasised the importance of 'process' in their initiative that aimed to uncover and resolve adaptation implementation challenges (as described earlier). They argued that a discussion on sensitive matters (e.g., policy failures or informal practices) was crucial for the achievement of their objectives but this is not possible without trust among stakeholders. Therefore, DIIS ensured that ample time was set aside to conduct initial introductory meetings, clarify research aims and methods, and discuss issues of confidentiality and research ethics. Continuous return to field areas to re-interview key informants and group exercises/workshops throughout the process was also key to engendering mutual trust.

Similarly, the Institute for Global Environmental Strategies (IGES), in the context of their initiative that aimed to mainstream climate risk in flood management plans across Myanmar and Lao outlined how hand-holding exercises with key stakeholders in conducting risk assessments by forming inter-disciplinary and multi-level administrative and technical teams led to a positive working relationship and a high level of trust (case study 6).

3.3   UNDERSTANDING LOCAL CONTEXTS AND PARTNERS

It is no surprise that a number of participating organisations identified a deep understanding of the contexts in which initiatives are taking place as well as partnerships with key local organisations as an important factor that enabled the bridging of adaptation action and research. Transitions Research argued that this was immensely important for the success of the Urban Living Lab initiative that they run in Panaji, India in implementing new approaches aimed at enhancing urban sustainability in collaboration with residents, policymakers, public bodies, businesses, and academia (case study 7).

The organisation talked about how they made a conscious decision to limit the project to only one city because they were aware that they needed to spend time understanding the local context and site-specific challenges as a precursor to genuine co-creation with diverse stakeholders that lies at the heart of their initiative. Co-water International also outlined how the activities of their initiative on climate-smart agriculture were grounded in a strong understanding of the local context, existing community structures and social capital. To achieve this, they identified and engaged with religious leaders, producer organisations, and women's cooperatives.

GSMA expanded this discussion and underlined the importance of forging partnerships with locally rooted organisations that can contribute contextual insights to collaborative processes of deliberation between different groups of stakeholders (case study 3). The same point was also raised by IGES who underlined the critical

importance of engaging local institutions (case study 6). In the context of their initiative to mainstream climate risk in flood management plans in Myanmar and Lao, this entailed a close collaboration with relevant departments from local universities. MHT contributed insights that aligned with this but underlined the importance of investing time and effort on creating a 'common language' around aspects of climate change relevant to the project (case study 5).

Given the technical nature of the adaptation challenge and the gulf between the worldviews of stakeholders engaging in processes of bridging adaptation action and research, overlooking the need for a shared idiom can lead to miscommunication and loss of trust which in turn can derail progress.

UNU-EHS highlighted the need for strong networks of cooperation with partner organisations in any process of bridging - especially with 'boundary partners' that tend to get ignored (case study 4).

IDRC and FCDO indicated the importance of this in the context of the CLARE initiative, particularly highlighting ways in which they encouraged leadership from individuals and organisations located in the global South in such processes (case study 8).

4 CHALLENGES

Finally, participants in the learning programme also shared a few important challenges with processes of bridging adaptation action and research.

4.1 RESOURCE INTENSIVE

Given the complexity of structuring relational and collaborative processes that effectively bring different stakeholders together (spanning researchers and practitioners), these processes tend to take more time and money in comparison to more linear, top-down processes that may not entail a similar approach to co-creation.

The reasons for this include investments needed for mapping key stakeholders, selecting or devising tools and approaches for ensuring effective engagement, building trust through intermediaries or through the adoption of certain processes and understanding local contexts and fostering deep partnerships- all critical success factors for effective processes of 'bridging'.

For these reasons, DIIS underlined that in their view initiatives with small or medium budgets may have to try harder to find innovative and more efficient means to bridge action and research (case study 9). AIDMI felt that as a relatively small organisation, they lacked the resources to adequately reflect on the process of bridging as it was taking place (essential for making course corrections) (case study 1).

4.2 SUSTAINABILITY

Closely linked to the point above is one on challenges around the sustainability of bridging processes, after project funding expires. Given the complexity and expense of initiatives to bring stakeholders with diverse skill sets and viewpoints together in meaningful ways, participants felt that these were difficult to sustain without direct/centralised financial and logistical support from a 'project'. The fact that much of this 'bridging', across the examples analysed, was convened within carefully constructed spaces meant that it was unlikely that they would unfold autonomously. This point was elicited most clearly by Transitions Research, who in their Urban Living Lab Project had built a few such spaces which may not continue after project financing finishes (case study 7).

To overcome this, the initiative was attempting to crowd in the private sector to support ongoing activities after funding finished. Additionally, they were attempting to embed the models and processes developed as part of this Lab within local government in an attempt to mainstream this within its core functioning. The organisation noted that both processes were challenging.

4.3 POWER AND POLITICS

Processes of bridging are, at their core, relational processes of collaboration where different stakeholders with diverse worldviews come together to co-create more effective action for adaptation. It is vital to ensure that such processes are not viewed as mere technical exercises aimed at generating solutions but are correctly perceived

as enterprises that are political. More specifically, participants noted that processes of bridging adaptation action and research are prone to being influenced by contextual social hierarchies, existing coalitions between actors and institutions and by their potentially parochial interests and incentives.

This point was elicited by the DIIS who, in the context of their CCRI initiative noted that in undertaking any approach that engages policy actors in dialogue and reflection there is a risk that the research findings become biased or too entangled with the perceptions of those who hold authority and power (case study 9). CCRI hedged against this by conducting interviews with civil society organisations, community members and traditional authorities and bringing insights from these to spaces for co-creation to ensure that the knowledge of the 'less powerful' can be considered alongside the views of more powerful actors.

Another facet of the same challenge is around intersectionality and participants outlined how the perspectives of women and other marginalised groups can sometimes be sidelined. To reduce this risk, organisations such as MHT have adopted a 'women led' approach to processes of bridging (case study 5). IDRC and FCDO too indicated the importance of this and emphasised the importance of fore fronting gender equality and inclusion in processes of bridging (case study 8).

5 CONCLUSION

Members of the Adaptation Research Alliance engaged in an active and effective programme of peer-to-peer learning on bridging adaptation and research employing both 'synchronous' (i.e., face to face workshops) and 'asynchronous' (i.e., individual work between workshops) approaches over a six-month period.

Reflecting on this learning programme it is evident that active facilitation by a core team is key to catalysing the effective transmission of insights between member organisations. This entails a range of activities spanning the collaborative yet cogent preparation of agendas for meetings and workshops circulated well in advance, the circulation of rapid follow-up communication with clear actions and next steps. Additionally, given the voluntary nature of this initiative, creating active buy-in from participants through joint selection of learning questions and modes is key. Finally, structuring 'safe spaces' through rules on confidentiality and ethics is key for people to feel comfortable in discussing not only their successes but crucially, challenges and failure.

While the first phase of this learning programme that was led by the Secretariat of the ARA is now complete, planning for how this learning and sharing will continue is already underway and will be shared with the ARA membership for discussion in the coming months.

ANNEX OF CASE STUDIES

CASE STUDY 1: APPRECIATIVE INQUIRY: PROMOTING AND STRENGTHENING ADAPTATION IN AGRICULTURE WITH WOMEN FARMERS

Uma Swaminathan and Vishal Pathak

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

Women farmers make up a substantial proportion of farmers globally, which makes them crucial to any form of locally led adaptation. Yet, they are often excluded from adaptation planning.

With the objective of fostering locally led adaptation by women farm leaders, AIDMI (All India Disaster Mitigation Institute) and RUDI (Rural Distribution Network for Small and Marginal Farmers) deployed an *'Appreciative Inquiry'*, a co-production process bridging adaptation action and research which is explained in detail below. The process engaged some 5,000 women farmers in Gujarat, Maharashtra and Madhya Pradesh states of Western India. All sites engaged in this process are prone to climate extremes, including droughts, floods and heat waves.

An *Appreciative Inquiry* is an approach that aims to facilitate the engagement of participants and stakeholders through dialogues and joint review of every day agricultural practices. This reflective process helped women farmers and local organisations to identify opportunities for locally led adaptation. The enquiry also involved co-creating tools to plan interventions, to track adaptation progress, and to capture and disseminate learning. Through this, in Gujarat and Maharashtra a range of adaptation measures were identified such as suitable seeds, innovative water management approaches, or making and using natural fertilizers.

BRIDGING ADAPTATION ACTION AND RESEARCH

An *Appreciative Enquiry* helps identify adaptation opportunities, supports their implementation and promotes their replication. Thus, this type of enquiry facilitates learning across different geographical sites and its translation into action. An *Appreciative Enquiry* entailed connecting consecutive cycles of farming action to cycles of farming research. As cycles of action-oriented research progressed over time, they increasingly localised and contextualised learning from other geographical areas, making it relevant to the agro-climatic context at hand.

To this end, the programme deployed innovative capacity-building approaches on planning and microfinance, agricultural practices and habits, and low-cost technology. This approach has shown to raise awareness regarding existing adaptation measures. A heightened awareness has then contributed to better and more efficient investment of local resources into adaptation efforts by women farmers.

ENABLING FACTORS AND CHALLENGES

AIDMI identified the following enablers and challenges to bridge action and research:

- **Enablers:** self-confidence and trust among women farmers have been identified as an enabler that facilitates the promotion and replication of good practices. The co-productive orientation of the *Appreciative Enquiry* allowed for trust in oneself and others to emerge. This is because of the relational and embodied nature of knowledge production underpinning an *Appreciative Enquiry*. At a larger geographical scale, (farmer) organisations were found to be helpful for replication and learning. Trust was also facilitated through the deployment of a cadre of local trainers.

- **Challenges:** the frequency and lag between the cycles of reflection and action shape the extent to which research is bridged into action. When the action cycle is too short, a lack of reflection limits the ability of farmers to translate learning produced elsewhere and contextualise it. Moreover, when the lag between action and reflection is too long, as it was during this case study (i.e., 6 to 8 weeks) the reflection is limited. It is recommended to design and pilot a real-time reflection and action cycle to overcome this challenge.
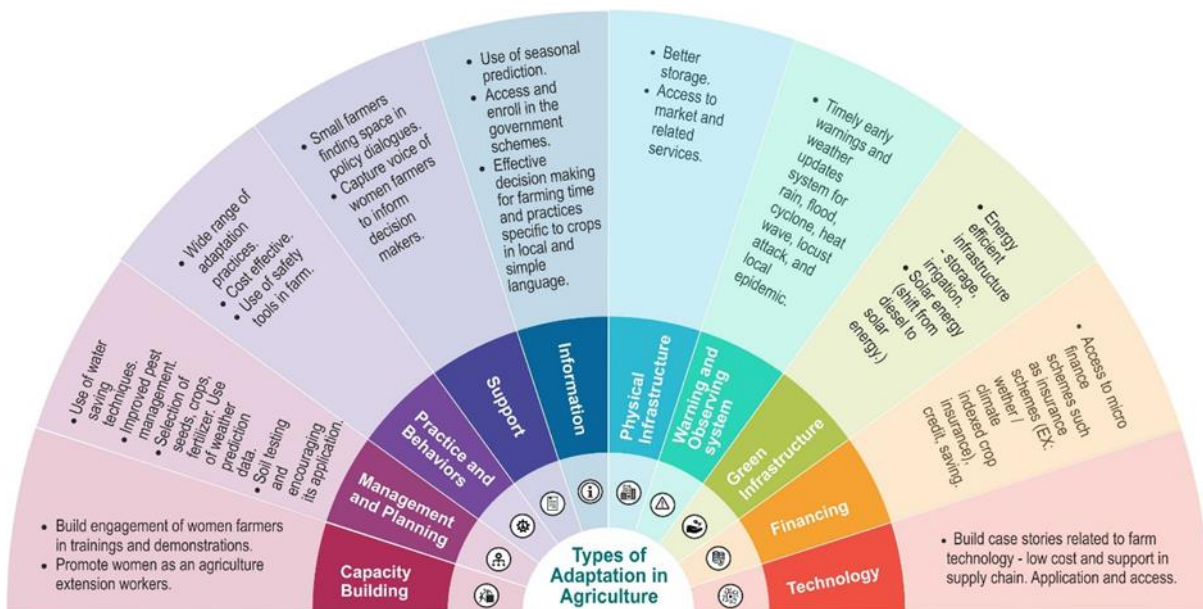
Types of Adaptation in Agriculture and relevant measures coming out from the appreciative inquiry.
Credit: Based on Biagini et al (2014).

CASE STUDY 2: BRIDGING ACTION AND RESEARCH THROUGH AGRICULTURE SUPPORT SERVICES

Taylor Martin, Laure Tankpinou and Alice Kone icon

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

In Niger more than 80 per cent of the population is dependent on agriculture and livestock. These livelihoods are seriously affected by drought and soil degradation. With support from the Millennium Challenge Corporation (MCC), Cowater International, through the Agriculture Support Services project, is building the capacities of women and men producers, youth, and local cooperatives to implement climate-smart agriculture in Konni (2,452 ha) and Gaya (640 ha). Project activities include:

- Capacity building for climate-smart and improved agricultural practices, adoption of low-cost technologies and the promotion of diversified and high-value agriculture.

- Improving integrated management of natural resources at the community and farm levels.

- Facilitating access to finance for producers and farmers' organisations through grant funding and women's savings groups.

A diagnostic study was implemented to ensure that the project was designed to respond to local needs and capacities. The study was co-designed with local leaders and beneficiaries and accompanied by a sensitisation campaign to introduce project aims and build trust amongst beneficiaries. The results orient a wide-range of support activities for cooperatives, women's organisations, savings groups, and local government, including piloting and roll-out of farmer field schools and selection of seeds adapted to local environmental conditions.

BRIDGING ADAPTATION ACTION AND RESEARCH

This case study demonstrates the benefits of bridging adaptation action and research by way of the direct impact of project activities on local communities, cooperatives, and women's groups.

A co-production approach during project design has allowed the project to better facilitate the dissemination of learning and its translation into action. Specifically, the adoption of climate-smart agriculture practices, water conservation practices and agro-forestry resulted in producer groups increasing yields by 41% and incomes by 75%.

These results cannot be explained without considering the co-production approach of the project to bridge action and research. The project established 300 farmer field schools, each of which was led by local leaders from within the community, including 30 women leaders. This facilitated the production of local knowledge and its dissemination. Moreover, the inclusion of government representatives during co-production activities and training helped to integrate learning into government planning (e.g. soil fertility and crop fertilisation; rainwater collection and conservation; agroforestry; and budgeting).

Lastly, ownership and trust in the process has facilitated the replication and scale up of the project approach.

Specifically, MCA-Niger has outlined plans to scale irrigation schemes and farmer field schools to 0.5-1 hectare.

ENABLING FACTORS AND CHALLENGES

COWATER identified the following factors that contributed to bridge action and research.

First, project activities were grounded in a strong understanding of the local context and existing community structures (religious leaders, producer organisations, women's cooperatives). The project focused on fostering the existing capacity of local actors, while devising innovative ways to overcome constraints to agricultural productivity and food security. Second, inclusive participatory processes during research design and project activities were essential for the project's success and uptake of adaptation action. For example, the engagement of local leaders and beneficiaries at the outset established trust, buy-in and community ownership, fundamental conditions for the sustainability and scaling of adaptation initiatives.

Last, this case study demonstrates the role of multi-pronged approaches to enabling the conditions for local-level adaptation. The combination of 'soft' and 'hard' interventions that respond to the opportunities and constraints as well as capacities of local communities was an important factor in enabling the conditions for adaptation action. For instance, farmer field school activities were accompanied by investments in small-scale irrigation systems, drought-resistant seeds, the establishment of saving groups, as well as a host of capacity-building interventions ranging from climate-smart agriculture, through to basic literacy and numeracy training.

CASE STUDY 3: MOBILE TECHNOLOGY FOR PARTICIPATORY FOREST MANAGEMENT: CO-DESIGNING AND TESTING PROTOTYPES IN KENYA

Anna Colquhoun

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

In 2021, GSMA conducted a piece of action-oriented research that sought to understand how mobile and digital technologies could leverage existing Participatory Forest Management (PFM) activities in Kenya. Using a mixed-methods research approach, the study sought to gain a better understanding of incentives, benefits and barriers to PFM, and how digital solutions could address them.

The project included the following activities:

1. **Landscape framing** – Desk research and key informant interviews were used to explore the current approach to PFM in Kenya, including the identification of challenges, supporting policies and the existing role of digital solutions.

2. **In-depth interviews with Community Forest Associations (CFA)** – In-depth interviews and photo journals were conducted to document management practices, motivations and barriers to PFM.

3. **Co-design workshop** – Workshops were used to co-create three different low-fidelity digital prototypes addressing key issues identified by CFA members. These aimed to support: 1) data collection and monitoring; 2) payment for ecosystem services; and 3) information sharing.

4. **Prototype testing** – The three prototypes were tested among CFA members and areas for improvement gathered.

5. **Quantitative validation** – Phone surveys were conducted with over 400 individuals from 21 CFAs across Kenya to collect further feedback to refine prototypes.

BRIDGING ADAPTATION ACTION AND RESEARCH

Bridging action and research offered key benefits. First, a close collaboration with Community Forest Associations (CFA) offered a deep understanding of specific challenges and incentives to each context. This was essential to orient the design of technical solutions that spoke to CFA's needs. Second, using a participatory approach with community members involved in forest management helped demonstrate the practical implications of introducing new tools and what would work in practice. By combining participatory research and action through an emphasis on co-creation, the GSMA project identified how digital solutions can help navigate, and respond to, the complexities associated with community forest management – offering a blueprint for others designing and implementing new PFM tools.

ENABLING FACTORS AND CHALLENGES

The GSMA identified the following enablers and challenges to bridge action and research:

- **Enablers:** (1) Designing solutions that directly address the **needs identified by end users**. (2) **Extensive prototyping** to test and refine solutions. (3) **Partnering for impact.** At every stage, close collaboration between a multitude of organisations, including CFAs, community-based organisations, government stakeholders, MNOs and other technology organisations, is critical.

- **Challenges:** (1) It will take time for smartphone use and digital literacy to improve, particularly in rural areas where PFM approaches are typically implemented. As such, **tools should first be designed with basic phone users in mind**, before considering alternative devices. (2) **Capacity building** is important to ensure end users fully understand and can avail the range of benefits a technology can offer to them. Appropriate incentives are needed to drive uptake of the tools among CFA members. (3) It is also important to **develop business models that provide private landowners with the tools** and incentives they need to support forest conservation and regeneration.

Edward Sparkes

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

The objective of HI-PATH was to facilitate the co-creation of climate-resilient development pathways, reducing vulnerability and enhancing resilience among poor women, men and children in the Hindu Kush Himalaya. The project builds on four 'livelihood innovations' piloted and tested in Bangladesh, India, Nepal and Pakistan, which involved a range of activities such as springshed restoration, climate-resilient housing, climate-smart agriculture and solar water pumping. The co-creation process, guided by a framework called 'outcome mapping', rested on qualitative data collection methods and quantitative modelling. A wide range of stakeholders at different scales were engaged with, including local entrepreneurs and businesses, NGOs, municipal, state and national government representatives and academic experts.

In this way, this approach ensured the integration of local and expert knowledge and examined how innovations contributed to changing values, behaviours and relations, rather than focusing on their effect over development indicators. The outcome of this reflective and co-productive process was a set of climate-resilient development pathways towards envisioned climate-resilient futures. Additionally, the work identified barriers and opportunities to up-scale and out-scale the approach nationally and regionally and drew out lessons learnt for bridging adaptation action and research.

BRIDGING ADAPTATION ACTION AND RESEARCH

HI-PATH has been helpful to illustrate the way in which adaptation action and research can be bridged. Three different areas stand out:

- **Tools and methodologies**: two methodologies stand out for their ability to bridge research and action. First, the pathway approach is helpful to map multiple futures and development aspirations among different groups. This is useful to identify trade-offs between visions and associated actions. Second, the outcome mapping framework was useful to monitor how incremental behavioural changes shape adaptive capacity and resilience. Going beyond a traditional monitoring approach, which inspects changes in development indicators, and focusing on behaviour changes, this approach is able to highlight how and when co-production research translates into action.

- **Integrating climate policy with development policy**: adaptation to climate change can come at the expense of poverty alleviation. Similarly, economic development may come at the cost of an increase in climate vulnerability of marginalized and at-risk groups. By focusing the research on how these tensions can be overcome, HI-PATH has showed how reflexive research can be deployed to balance contradictory policy demands stemming from development and adaptation goals.

- **Creating an enabling environment:** Through participatory methods embedded in project tools like the outcome mapping framework and co-design workshops, HI-PATH has opened decision-making spaces

to a range of stakeholders, including vulnerable groups. Facilitating the inclusion of marginalised communities, the project has better-illuminated policy outcomes for a wider set of individuals, who often lack representation in public arenas.

ENABLING FACTORS AND CHALLENGES

HI-PATH has identified the following enablers and challenges:

- **Enablers:** Co-production processes, opening space for the participation of a wide range of stakeholders and knowledges, contribute to building trust and collaborative networks which are in turn enablers for action. Furthermore, trust between members of the consortium and funding agencies allows for flexibility in the project implementation, which has shown to be essential to overcome challenges such as the Covid-19 pandemic.

- **Challenges:** gender imbalances among project staff limited the project´s ability to integrate female perspectives for one of the four case studies. This highlights the need to jointly consider gender inclusion, staffing, project aims, cultural differences across the project's research area and methodological approaches when it comes to bridging action and research.

CASE STUDY 5: BRIDGING ACTION AND RESEARCH TO DEVELOP AND APPLY GRADED BUILDING CODES TO MAKE THEM RELEVANT FOR AFFORDABLE HOUSING PROGRAMS

Aprajita Singh and Bijal Brahmbhatt

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

In Indian cities, such as Delhi, Indore, Rajkot & Chennai, peak indoor housing temperatures typically vary between 36.5°C and 42°C during the summer period. While a building code was endorsed in India for energy conservation in 2017, the code was conceived for housing sizes 10 times larger than typically those of poor dwellings.

An initiative undertaken by MHT aims at reducing this temperature to 30°C - 35°C through low-cost design for affordable housing. To this end, MHT advanced evidence-based research on thermal comfort in dense settlements. This allowed MHT to test suitable design modifications and building codes for poor dwellings. Furthermore, MHT conducted live demonstrations to promote adaptation designs. Lastly, the case study informed advocacy actions at national and state levels to influence urban master plans and policy.

MHT followed a socio-technical approach in this initiative. It bridged action and research by placing at the centre of the design process marginalised urban dwellers and facilitating a conversation between them and government, academics and private innovators. The process involves a) working with slum dwellers to design affordable and efficient adaptation designs; b) facilitating a conversation with innovators and service providers to strengthen the supply side; and c) establishing a dialogue with policymakers to inform policy.

BRIDGING ADAPTATION ACTION AND RESEARCH

This piece of research identified, tested and contributed to scaling up housing solutions compliant with the Energy Conservation Building Code for Residential Buildings (ECBC-R) while being beneficial for low-income communities. Through this research, MHT pioneered an advocacy process that made housing standards inclusive of the urban poor. Research findings were presented to the Climate Change Department of Gujarat, Ministry of Housing and Poverty Alleviation, leading to the endorsement of graded codes and design modifications into Gujarat's housing policy. Knowledge materials produced by the project served as resources for other government and non-government organisations.

Furthermore, these outcomes show the effectiveness of MHT approach to bridging action and research, which rests on six principles: a) needs-driven and result-oriented research which in this case implied holding in balance the needs of at-risk groups and the budget capacity of governments; b) an emphasis on social impact by fostering the commitment of government, at-risk groups and private sector to build a number of houses in a defined period of time; c) empowering the urban poor by demystifying climate language; d) a focus on structural causes of vulnerability through women-led research; e) and learning-by-doing as a way to integrate research into practice.

ENABLING FACTORS & CHALLENGES

MHT identified the following enablers and challenges to bridge action and research:

- **Enablers:** climate change language needs to be demystified so as to open a dialogue among different groups, including at-risk groups, government and private sector innovators. Technical language limits the access and discussion of climate change and urban planning to academics and government technical staff. Demystifying this language allows for the inclusion of the urban poor during the design, innovation and testing of urban policies.

- **Challenges:** housing design needs to meet affordability while meeting the vision of at-risk groups. The aspirational horizon of the urban poor is often placed close to the middle class' consumer choices. This may shape negatively the acceptability of 'eco-friendly' building products, which while being supported by Corporate Social Responsibility initiatives and foundations, hence increasing their affordability, are seen as of inferior quality, reducing their desirability.

CASE STUDY 6: INTEGRATING CLIMATE CHANGE PROJECTIONS INTO FLOOD AND LANDSLIDE RISK ASSESSMENTS AT THE RIVER BASIN LEVEL IN LAO PDR AND MYANMAR

Prabhakar S.V.R.K

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

Southeast Asia is one of the regions highly vulnerable to environmental hazards and climate change. Some countries in Southeast Asia rank at the top of the Climate Risk Index and are subjected to numerous climate induced hazards. Responding to this challenge, the Japan-ASEAN Integration Fund (JAIF) in association with ASEAN has funded the 'Integrating climate change projections into flood and landslide risk assessments at river basin level using area-based approaches' project in Lao PDR and Myanmar.
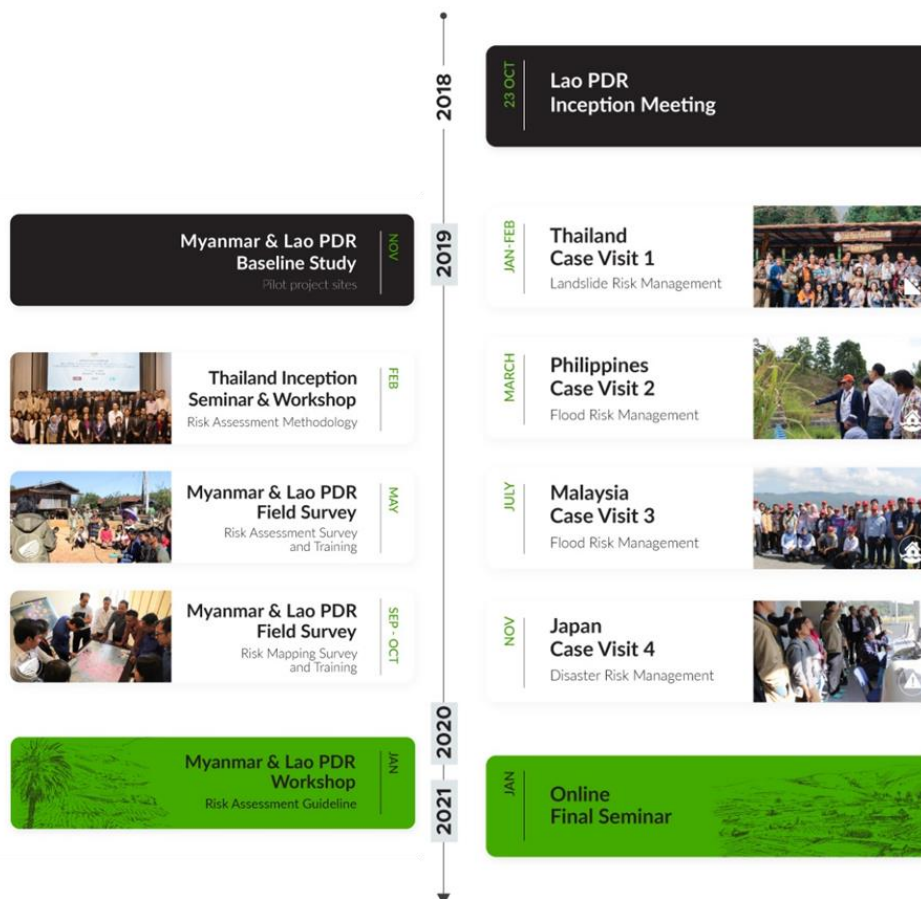
The project pursued the following objectives:

1. Demonstrate the integration of climate change projection in flood and landslide risk assessment/mapping.

2. Capacity building of government officials.

3. Facilitate a dialogue among local, national and regional stakeholders for policymaking.

4. Promote best practices and knowledge exchange among ASEAN countries.

These activities include the following:

1. Establishment of inter-disciplinary and multi-level administrative and technical teams called river basin pilot (RBP) teams to lead risk assessments.

2. Development of community-based adaptation plans incorporating river basin risk assessments using participatory rural appraisal (PRA) techniques.

Exposure visits to countries such as Japan and Malaysia where advanced risk assessment methods are institutionalised.

2018
23 OCT — **Lao PDR Inception Meeting**

2019
NOV — **Myanmar & Lao PDR Baseline Study** — Pilot project sites

JAN-FEB — **Thailand Case Visit 1** — Landslide Risk Management

FEB — **Thailand Inception Seminar & Workshop** — Risk Assessment Methodology

MARCH — **Philippines Case Visit 2** — Flood Risk Management

MAY — **Myanmar & Lao PDR Field Survey** — Risk Assessment Survey and Training

JULY — **Malaysia Case Visit 3** — Flood Risk Management

SEP - OCT — **Myanmar & Lao PDR Field Survey** — Risk Mapping Survey and Training

NOV — **Japan Case Visit 4** — Disaster Risk Management

2020
JAN — **Myanmar & Lao PDR Workshop** — Risk Assessment Guideline

2021
JAN — **Online Final Seminar**

BRIDGING ADAPTATION ACTION AND RESEARCH

Traditionally, researchers have engaged research participants either to extract data or to impart training. However, this project pursues a co-production approach engaging local partners in all phases of the project, from design to knowledge production. The close engagement of the stakeholders throughout the process helped in several ways, such as a quick uptake of knowledge and skills; institutionalisation of the processes; and increased ownership and outputs by stakeholders from local to national governments.

The project made use of real-world scenarios as a vehicle for planning and learning. In addition to being a more relatable reality for research participants, and hence facilitating research uptake, the outputs of discussions and assessments were readily usable for decision-making. This allowed the development of Community Based Disaster Risk Management planning at the village level, informing the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) work program.

ENABLING FACTORS AND CHALLENGES

ASEAN have identified the following enablers and challenges:

1. Needs-driven action-oriented research: local government staff tend to be interested in solutions to existing problems. Presenting a project as an effort to respond to a research question could be a deterrent. For this reason, the project was framed around local problems (i.e. ineffective risk assessments) and offered

feasible solutions (improved risk assessments integrating climate change projections in a river basin context).

2. Engagement of local knowledge institutions: Government staff tend to move across departments and ministries at a pace that limits the effectiveness of capacity-building efforts. To address this problem, the project engaged local teaching institutions such as university departments, enhancing their technical expertise in risk assessments. This increased the retention of knowledge and expertise locally.

3. Co-design and co-delivery of the outputs: project participants were engaged from the beginning to the end of the project, allowing them to shape the design and implementation. This resulted in greater ownership, and contextualisation and relevance of project outputs.

CASE STUDY 7: PROJECT URBAN LIVING LAB (PULL)

Ashali Bhandari

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

The Project Urban Living Lab (PULL) is India's first Urban Living Lab, based in Panaji, Goa. PULL has served as a collaborative space for co-creating socio-technological innovation for addressing complex urban challenges (i.e. water resilience, urban mobility and data driven governance). It involved residents, policymakers, businesses and academia.

PULL implemented the following activities in Panaji:

- Flood risk reduction by creating a [flood mitigation](#) strategy and [creek rejuvenation](#) plan, including experimentation with Nature-based Solutions (NbS).

- Promotion of non-motorised transportation, through cycling experiments and a cycling scale up plan with the central government.

- Pulled worked with businesses to develop a pedestrianisation plan for the business district and developed an Inclusive Streets implementation strategy to improve women's pedestrian experiences in Panaji.

For this the project followed this process:

1. Experimentation: The project iteratively designed, tested and fine-tuned socio-technical innovations (i.e., cycling experiments to understand user behaviour)

2. Co-creation: All innovations were co-created with citizen participation, taking into account user needs and local contexts (i.e., host Walks with Women on multiple days to understand barriers women faced while walking in the city)

3. Transdisciplinary learning and multistakeholder engagement: All activities adopted a multidisciplinary approach to knowledge creation and capacity development (i.e., created government inter-departmental committees on non-motorised transportation and water resilience).

BRIDGING ADAPTATION ACTION AND RESEARCH

PULL's approach and activities demonstrate a successful bridging of adaptation research with local action. First, PULL's multidisciplinary and site-specific research methods enabled informed adaptation action. For example, we conducted walks along the length of the St Inez Creek to understand challenges ranging from encroachment to pollution to siltation at various locations along the water body. Our research also included interviews with relevant government agencies such as the water resources department and local communities to understand the implications of the deteriorating condition of the creek. Through this, we were able to develop an evidence-based action plan for the city to improve the creek health and flow, improving the urban ecology and mitigating flood risk.

Second, the project's multi stakeholder engagement and research have been used for capacity building and strengthening around important adaptation actions, like Nature Based-Solutions. The project's research on the conditions and locations of ecological assets like mangroves, sand dunes, freshwater bodies and food production systems, have been used for city-specific modules and tools for training government stakeholders around their restoration and value.

ENABLING FACTORS AND CHALLENGES

PULL has identified the following enablers and challenges:

- **Enablers:** the main enabling factors include the geographical anchoring of the project and the alignment with government authorities. First, the project was established in a specific city, Panaji. By focusing on one city, the project was able to develop a context specific knowledge or urban challenges. It also helped gain trust among government officials and communities. Second, the project structure was developed in alignment with the Imagine Panaji Smart City Development Limited (IPSCDL). This institutional partnership created pathways for learning and impact. It opened doors for the project team to engage with key government stakeholders, who ordinarily wouldn't be accessible or available. It paved the way for institutional innovations like the creation of inter-departmental committees, which brought together state and city society groups.

- **Challenges**: the sustainability of the Lab after project finances were complete is a challenge. As discussed in Transitions Research's dialogue on Urban Living Labs, financing, either through a Sandbox model which engages the private sector or by mainstreaming the Lab into local government budgets, is extremely challenging.

Bruce Currie-Alder and Manuela Di Mauro

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

The CLimate Adaptation and REsilience research framework programme (CLARE), is a 7-year project that brings together learning from a set of legacy programmes including Future Climate for Africa (FCFA) and the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA). The programme aims to accelerate the co-production of cutting-edge science, knowledge, data and tools and their translation into action to tackle natural hazards, climate change adaptation and resilience problems faced by the poorest and most vulnerable.

The programme is a partnership between UK FCDO and Canada IDRC that includes:

- **'CLARE Research'**, commissioning new substantive action-oriented research. The first of these calls focuses on bridging three themes: a) understanding climate and natural hazard risks, b) risk-informed early action to reduce humanitarian impacts, and c) climate-resilient development.

- **'CLARE Services'**, that includes climate and weather services; support to climate policy and programmes; and a Rapid Response Mechanism to respond to unexpected and high-impact disasters.

- **'CLARE Partnerships'**, that includes FCDO support to the Adaptation Research Alliance, as well as other partnerships such as Climate Risk and Early Warning Systems (CREWS) and the Global Innovation Fund.

BRIDGING ADAPTATION ACTION AND RESEARCH

Through the deployment of action-oriented research approaches, CLARE has delivered tangible results on the ground. The following illustrate these outcomes:

- **Clare Research has supported national-level climate agenda, conservation policies and National Adaptation Plans in developing countries through action-oriented research approaches.** AgMIP project used its *Impact Explorer Tool* to facilitate the co-production of climate scenarios to inform the implementation of NAPs in Ghana, Senegal, and Zimbabwe. The [Forest4Climate&People](#) project shortened the gap between forest-edge communities and policymakers in Madagascar, through ongoing research engagements that centred the voices and lived experiences of forest-edge communities in policy discussions.

- **Clare Services has helped bridge research and action by bringing climate science into donor policies, programmes and humanitarian response.** CLARE's Climate Mainstreaming Facility has informed FCDO policies, scoping programming and provided rapid climate knowledge. This helped FCDO to respond to an increasing demand for scientific weather and climate advice to Embassies, Consulates, central policy departments and regional offices.

- **CLARE Partnerships has facilitated the take-off of the Adaptation Research Alliance, whose action-oriented research has started making a difference on the ground.** 182 organisations are now members of the Adaptation Research Alliance, all of which have endorsed the ARA Research for Impact Principles[3]. Through the deployment of these principles, ARA has triggered at least 3 tangible changes, including microfinancing a pilot fisheries and aquaculture project co-produced with communities in Sierra Leone; Slum Dwellers International Kenya input into an entire policy process; and the integration of adaptation pathways for coastal erosion in government disaster plans in East Asia.

ENABLING FACTORS AND CHALLENGES

The main enabling factor has been to set the aim of the programme to bridge adaptation research and action and ensure that its theory of change includes impacts on the ground. This also involved setting a result framework that captures these impacts. Further to this the following have also contributed to bridge action and research:

- Team integration: The CLARE team will not only approve and monitor projects but serve as critical friends that convene and facilitate collaboration and learning across the program.

- Research Theme Alignment: CLARE provides a renewed framework for bringing diverse participants to work together. Three selected research themes aspire to bridge distinct communities to work together.

- Collaborative Spaces: CLARE intends to replicate the experience from CARIAA and others by convening 'collaborative spaces' that create new opportunities for participants to work together across and beyond projects.

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[3] https://southsouthnorth.org/wp-content/uploads/2021/11/Adaptation-Research-for-Impact-Principles_28.10.21.pdf

CASE STUDY 9: THE CLIMATE CHANGE AND RURAL INSTITUTIONS PROJECT IN ZAMBIA

Mikkel Funder, Carol Mweemba and Imasiku Nyambe

INTRODUCTION: OBJECTIVES, ACTIVITIES AND PROCESSES

Action-oriented research and policy studies play a critical role in bridging research and climate action. However, a large proportion of climate research projects fall outside this type of research and are conducted as basic research without a distinct action-oriented research methodology. This raises the question of how the knowledge generated in such projects can be linked to policy and practice.

The [Climate Change and Rural Institutions (CCRI) project](#) addressed this question by conducting basic research on the perceptions, practices and agency of the government staff who shape and implement adaptation policies and projects, reflecting jointly with them along the way. The research was carried out by the University of Zambia and the Danish Institute for International Studies in two districts and at the national level over a four-year period.

Activities included:

- Qualitative ethnographic interviews with local and central government staff on their perceptions, practices, and everyday agency.

- Group exercises and discussions in subnational and national working groups, discussing challenges in their work, and reflecting on preliminary findings from the study and implications for policy and practice.

Contextualisation of adaptation actions through further interviews with local and national stakeholders including civil society organisations, traditional organisations, and community members.

BRIDGING ADAPTATION ACTION AND RESEARCH

By seeking to understand the lived experiences of those who shape and implement national and local adaptation policies it became possible for the research project to highlight and foster mutual reflection on the challenges, dilemmas and agency of local and central government staff as they implemented adaptation policies. Subsequent interviews in a later study showed that findings from the research had been applied by local government staff in planning meetings with central level staff and donors as a means to attract attention to their ideas and challenges.

Some policy implementation gaps that were highlighted concerned the local suitability of national policies on Conservation Agriculture among agricultural extension officers; how the rigidity of donor criteria tied to adaptation funding impeded holistic planning; and how struggles over institutional authority inhibited flexibility in implementation. Some opportunities were also identified, such as locally adapted organisational mechanisms through which government staff and civil society organisations successfully coordinated implementation; and informal practices through which farmers shared knowledge with agricultural extension workers on the performance of crop varieties.

ENABLING FACTORS AND CHALLENGES

A key enabling factor was the establishment of trust between researchers and policy actors, in order to allow discussions on matters that may be considered sensitive (e.g., policy failures or informal practices). Ample time was set aside to conduct initial introductory meetings, clarify research aims and methods, and discuss issues of confidentiality and research ethics. Continuous return to field areas to conduct re-interviews and group exercises/workshops throughout the process was also key to mutual trust.

A challenge was that some of the issues and ideas identified by government staff were beyond the control of those involved. For example, the project generated ideas to exploit local water harvesting opportunities, but subsequent budget proposals to address this by the district agricultural office were turned down by the parent ministry as being outside national policy. This emphasises the importance of also working at the national level. While there are limits to how much a small-scale project can do, one approach could be to team up with other more resourceful initiatives that can help leverage findings to national policy makers.

Bridging Adaptation Action and Research: Key Insights from Peer-to-Peer Learning

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