CARIAA
Collaborative Adaptation Research Initiative in Africa and Asia

Climate Change Adaptation Research for Impact

CARIAA Working Paper #23

Anjal Prakash
Georgina Cundill
Lucia Scodanibbio
Katharine Vincent
Nathalie Nathe

with
Daniel Morchain
Jesse DeMaria-Kinney
Lancelot Soumelong Ehode
Debabrat Sukla
Arabinda Mishra
Aneel Piryani

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About CARIAA Working Papers

This series is based on work funded by Canada's International Development Research Centre (IDRC) and the UK's Department for International Development (DFID) through the **Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA)**. CARIAA aims to build the resilience of vulnerable populations and their livelihoods in three climate change hot spots in Africa and Asia. The program supports collaborative research to inform adaptation policy and practice.

Titles in this series are intended to share initial findings and lessons from research and background studies commissioned by the program. Papers are intended to foster exchange and dialogue within science and policy circles concerned with climate change adaptation in vulnerability hotspots. As an interim output of the CARIAA program, they have not undergone an external review process. Opinions stated are those of the author(s) and do not necessarily reflect the policies or opinions of IDRC, DFID, or partners. Feedback is welcomed as a means to strengthen these works: some may later be revised for peer-reviewed publication.

Contact

Collaborative Adaptation Research Initiative in Africa and Asia
c/o International Development Research Centre
PO Box 8500, Ottawa, ON
Canada K1G 3H9
Telephone: (+1) 613-236-6163; Email: cariaa@idrc.ca

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Abstract

This paper shares lessons from the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), a seven-year transdisciplinary and cross-regional research programme that supported four consortia spanning Africa and Asia. CARIAA was committed to research on climate change adaptation that supported learning, the co-production of knowledge and solutions, and that informed policy and practice. This intention was referred to as Research-for-Impact (R4I), defined as the uptake of adaptation research by stakeholders in policy, practice and research by ensuring access to, and facilitated opportunities to engage with, a new body of quality evidence. With more than five years of dedicated experimentation with R4I, and with scores of successful examples of contribution to local and national policy, in addition to global policy discourses associated with the UNFCCC and the IPCC, among others, as well as failures, CARIAA offers rich lessons on how to pursue R4I in similarly large research programmes.

In this working paper we tease out these lessons by sharing a diverse set of experiences across four consortia. Each consortium developed different approaches to R4I during its projects, based primarily on the contexts in which each was working. The consortia did however also have a number of overlaps in their approaches, and developed a shared lexicon around R4I in order to share their learning during the lifespan the CARIAA programme. This shared lexicon, and common ambition for impact, provide the opportunity for this working paper to develop a coherent set of lessons for future programmes.

The working paper shares seven key lessons, identified as common across the consortia, and provides examples from concrete experience to support these lessons: 1) sustained relationships with stakeholders are essential; 2) pair a clear desired outcome with a flexible and iterative approach; 3) monitoring, reflecting and learning are essential; 4) novel multi-media communication and branding are important for the uptake of research findings; 5) do not assume researcher buy-in or capacity for R4I; and 6) R4I requires dedicated and trained personnel.

There are no easy steps to achieve impact. This working paper does not offer ‘solutions’ to the challenge of how to pursue research for impact as there is no “one size fits all approach”. However, by sharing the varied experiences across the programme, this working paper does provide pointers about the activities involved, and examples of how to implement those activities in ways that our experience suggests can work.

The CARIAA experience has been an unfolding journey of shared learning about each other’s priorities, aspirations, understanding of the nature of research, and about the nature of impact itself. We learned that it is important to make room for all the variety of standpoints involved, and to bring as many people along for the learning journey as possible. This working paper is invitation to join this journey.

Résumé

La recherche pour l'impact sur l'adaptation aux changements climatiques

Ce document expose certaines leçons de l'Initiative de recherche concertée sur l'adaptation en Afrique et en Asie (IRCAAA), un important programme de recherche transdisciplinaire et interrégional de sept ans ayant appuyé quatre consortiums en Afrique et en Asie. L'IRCAAA s'employait à faire de la recherche sur l'adaptation aux changements climatiques qui soutenait l'apprentissage, produisait des connaissances et des solutions, et guidait les politiques et les pratiques. Cette intention portait le nom de « Recherche en action » ou « recherche pour l'impact » (R4I, selon son acronyme en anglais) et visait à promouvoir la mise en application de la recherche sur l'adaptation par des intervenants dans les domaines des politiques, des pratiques et de la recherche, en garantissant l'accès et en facilitant la participation à un nouveau corpus de données probantes de qualité. Au terme de plus de cinq ans d'expérimentation dévouée avec la méthode R4I, et avec de nombreux exemples de contributions réussies aux politiques locales et nationales, en plus notamment des discussions sur les politiques mondiales associées à la Convention-cadre des Nations unies sur les changements climatiques (CCNUCC) et au Groupe d'experts intergouvernemental OMM/PNUE sur l'évolution du climat (GIEC), ainsi que des échecs, l'IRCAAA offre de riches leçons sur la façon de mettre en œuvre l'approche R4I dans des programmes de recherche d'aussi grande envergure.

Dans ce document de travail, nous faisons ressortir ces leçons en exposant un ensemble d'expériences dans les quatre consortiums. Chaque consortium a élaboré des approches différentes de la méthode R4I pendant ses projets, en fonction principalement des contextes dans lesquels il évoluait. Les approches des consortiums se sont par contre aussi chevauchées par moments, et un lexique partagé a été élaboré autour de la R4I de manière à favoriser le transfert des connaissances pendant la durée du programme de l'IRCAAA. Ce lexique partagé et le désir commun que la recherche ait un impact donnent l'occasion au présent document de travail d'élaborer un ensemble cohérent de leçons pour de futurs programmes.

Ce document de travail fournit six leçons clés, communes à l'ensemble des consortiums, et donne des exemples tirés d'expériences concrètes qui appuient ces leçons : 1) Les relations durables avec les parties prenantes sont essentielles; 2) Il faut jumeler des résultats souhaités clairs à une approche souple et itérative; 3) La surveillance, la réflexion et l'apprentissage sont essentiels; 4) Des communications multimédia et une image de marque novatrices sont importantes pour la mise en application des conclusions de la recherche; 5) Il ne faut pas tenir pour acquis que les chercheurs vont appuyer l'approche R4I ou peuvent la mettre en pratique; 6) La R4I exige la présence d'un personnel formé et dévoué.

Il n'y a pas de mesure permettant de générer facilement des retombées. Le présent document de travail ne propose pas de « solutions » au défi que pose la manière de faire de

la recherche pour qu'elle produise des retombées, puisqu'une seule approche ne convient pas à toutes les situations. Cela dit, en exposant les diverses expériences dans l'ensemble du programme, le présent document de travail fournit des indications sur les activités en cause, ainsi que des exemples sur la façon de les mettre en œuvre d'une manière qui peut fonctionner, selon notre expérience.

L'expérience de l'IRCAAA a été un processus de partage d'apprentissages sur les priorités, les aspirations, la compréhension de la nature de la recherche, et de la nature des retombées pour chacun. Nous avons appris qu'il est important de faire de la place à toutes les variétés de points de vue, et de permettre au plus grand nombre possible de gens de se joindre à l'exercice d'apprentissage. Ce document de travail constitue une invitation à se joindre à cet exercice.

Acronyms

ASSAR	Adaptation at Scale in Semi-Arid Regions
CARIAA	Collaborative Adaptation Research Initiative in Africa and Asia
DECCMA	Deltas, Vulnerability & Climate Change: Migration and Adaptation
HI-AWARE	Himalayan Adaptation, Water and Resilience Research
IDRC	International Development Research Centre (Canada)
IPCC	Intergovernmental Panel on Climate Change
KMC	Knowledge management and communication
M&E	Monitoring and evaluation
MEL	Monitoring, evaluation and learning
MP	Minister of Parliament
NAP	National Adaptation Plan
PRISE	Pathways to Resilience in Semi-arid Economies
R4I	Research-for-Impact
UNFCCC	United Nations Framework Convention on Climate Change
VRA	Vulnerability and risk assessment

About the authors

Anjal Prakash is an Associate Professor at The Energy and Resources Institute School of Advanced Studies in Hyderabad, India.

Georgina Cundill is a Senior Program Officer at the International Development Research Centre in Ottawa, Canada.

Lucia Scodanibbio is ASSAR Project Manager with the African Climate and Development Initiative at the University of Cape Town in Cape Town, South Africa.

Katharine Vincent is the Director of Kulima Integrated Development Solutions in Pietermaritzburg, South Africa.

Nathalie Nathe is PRISE Project Manager at the Overseas Development Institute in London, United Kingdom.

Daniel Morchain is Senior Advisor for Resilience and Climate Change Adaptation at Oxfam in Oxford, United Kingdom.

Jesse DeMaria-Kinney is a Programme Coordinator at Oxfam in Oxford, United Kingdom.

Lancelot Soumelong Ehode is a Communication and Stakeholder Engagement Officer for Innovation Environnement Développement en Afrique in Dakar, Senegal.

Debabrat Sukla is a Knowledge Management Officer for the International Centre for Integrated Mountain Development in Kathmandu, Nepal.

Aneel Piryani is a Programme Officer at the International Centre for Integrated Mountain Development in Kathmandu, Nepal.

Arabinda Mishra is the Theme Leader for Livelihoods at the International Centre for Integrated Mountain Development in Kathmandu, Nepal.

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Contents

1. Introduction

The scale of environmental and social challenges confronting society has become increasingly apparent over the past four decades. With the growing awareness of the need to confront these challenges has come an acceptance that the role of researchers needs to change. Increasingly, researchers in the emerging field of sustainability science have broadly come to understand that traditional research roles, for example researchers as disinterested documenters of change, are no longer sufficient. Instead, researchers have become increasingly committed to conducting research through partnerships with various types of societal actors, and to pursuing research that can actively inform policy and practice in relation to human and environmental interdependencies. Over the past decade or more, greater attention has been paid to participatory approaches (Reed 2008; Reed et al. 2018; Cvitanovic et al. 2019), the co-production of knowledge (Pohl et al. 2010; Harvey et al. 2019), how to more effectively work with multiple knowledge systems (Tengo et al. 2014, 2017), and the communication of research findings particularly in the field of climate change (CDKN 2018).

Research practice has therefore undergone significant changes in terms of how researchers pursue social engagement and impact through research. An early harbinger of this significant shift in how researchers understand their role in society was the Action Research agenda that began to take shape through Rapid Rural Appraisal and Participatory Rural Appraisal (Chambers 1981, 1994) in the 1980s and 1990s. From a recognition that communities have valid knowledge to share and *should* contribute to decision-making about their own development, researchers began to take more seriously the possibility that they themselves could be, and even *should be*, agents of change for the communities with whom they worked. Early action research methodologies significantly built our understanding of stakeholder engagement and have been effective in generating buy-in and empowering participants at community scales (e.g. Kindon et al. 2007).

As complex challenges such as climate change became more prominent over the past thirty years, participatory methods pioneered by action researchers have been further developed by a growing body of scholarship on learning (Schusler et al 2003; Muro and Jeffrey 2008; Newig et al. 2010). Here the intention has explicitly been to support collective action around common problems (Keen et al. 2005), to ensure that learning moves beyond the small groups originally engaged in small-scale participatory processes (Reed et al. 2010), and that it responds to the challenges of climate change (Picketts 2018) by supporting adaptive governance and decision making.

Throughout these shifts, multiple knowledge systems and ways of understanding have been forced into conversation, fundamentally challenging traditional notions of disciplinary rigour, objectivity and 'truth'. In response, transdisciplinarity has emerged as a philosophical position (Max-Neef 2005) and emerging practice (Lang et al. 2012) by encouraging problem-oriented research in service to society. Transdisciplinary approaches

involve co-production processes between researchers, practitioners and other societal actors, with the explicit intention of generating practical impact from the research or a positive change in identified challenges.

Although the imperative of research to achieve impact has been around for some time, neither action research, social learning nor transdisciplinarity offer easy recipes for how to practically pursue impact. This reality is compounded by the emergence in recent years of large-scale efforts to conduct transdisciplinary research in ways that nurture learning in diverse teams of practitioners, researchers and other societal actors in the pursuit of positive change over large scales (Cundill et al. 2018).

This paper shares lessons from the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), a seven-year transdisciplinary and cross-regional research programme that supported four consortia spanning Africa and Asia. CARIAA was committed to research on climate change adaptation that supported learning, and the co-production of knowledge and solutions, and that informed policy and practice. This intention was referred to as Research-for-Impact (R4I), defined as the uptake of adaptation research by stakeholders in policy, practice and research by ensuring access to, and facilitated opportunities to engage with, a new body of quality evidence (CARIAA 2017). With more than five years of dedicated experimentation with R4I, and with scores of successful examples of contribution to local and national policy, in addition to global policy discourses associated with the UNFCCC and the IPCC, among others, as well as failures, CARIAA offers rich lessons on how to pursue R4I in similarly large research programmes.

In this working paper we tease out these lessons by sharing a diverse set of experiences across the four consortia. Each consortium developed different approaches to R4I during the course of their projects, based primarily on the contexts in which each was working. The consortia did however also have a number of overlaps in their approaches, and developed a shared lexicon around R4I in order to share their learning during the lifespan the CARIAA programme. This shared lexicon, and common ambition for impact, provides the opportunity for this working paper to develop a coherent set of lessons for future programmes. The paper is divided into three sections. Section one introduces the CARIAA programme and the four consortia, and explains each of their approaches to R4I. Section two focuses on the major learnings of the programme, while the last section summarizes the main lessons from the CARIAA experience and considers the implications for future programming.

2. The Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA)

Over a period of five years, the CARIAA programme supported efforts toward better-informed policy and practice in climate change hotspots across Africa and Asia. A climate change hotspot is an area where a strong climate change signal coincides with a high

concentration of particularly vulnerable people (De Souza et al. 2015, Szabo et al. 2016). Hotspots covered in the CARIAA programme included glacier-fed river systems (one consortium), deltas (one consortium) and semi-arid regions (two consortia) (Table 1, Figure 1).

Table 1: The CARIAA consortia, their hotspots and countries of focus

Consortium	Hotspot	Countries
Adaptation at Scale in Semi-Arid Regions (ASSAR)	Semi-arid regions	Namibia, Botswana, Kenya, Ethiopia, Ghana, Mali, India
Deltas, Vulnerability & Climate Change: Migration and Adaptation (DECCMA)	Deltas	Ghana, India, Bangladesh
Himalayan Adaptation, Water and Resilience Research (HI-AWARE)	Glacier-fed river basins	Pakistan, India, Bangladesh, Nepal
Pathways to Resilience in Semi-arid Economies (PRISE)	Semi-arid regions	Burkina Faso, Senegal, Kenya, Pakistan, Tajikistan, Kyrgyzstan

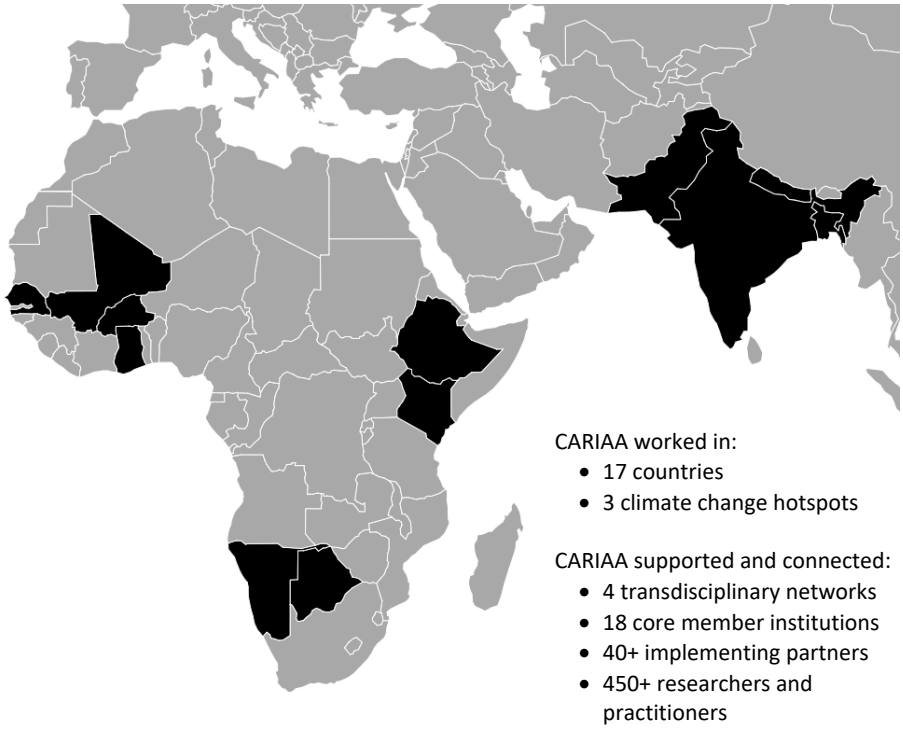

Figure 1: CARIAA focal countries

Explicit emphasis was placed on, and investment made in, R4I from the start of the programme. Consortia were supported to develop R4I strategies, and were encouraged to develop transdisciplinary partnerships with non-academic partners in order to enable impact (Cundill et al., 2018). Mid-way through the programme, a facilitated learning process was established to create an opportunity for R4I coordinators across the four consortia to stay in touch electronically and periodically meet face-to-face in order to reflect on and share lessons about their pursuit of impact from and through their research. Out of that process, one outcome was an R4I learning framework (CARIAA 2017).

Based on our experiences, the framework contains a variety of interrelated activities (Figure 2): capacity building of both researchers and research users; stakeholder engagement that is long-term, sustained, needs-focused and strategic; the generation of credible, relevant and contextualised evidence, often through knowledge co-production with potential users of the research; building of strategic partnerships with practitioners and other actors who could support the development and uptake of contextualised knowledge; research communication that is targeted, accessible and appropriate in form; and reflective monitoring that improves practices in all of the previous related areas of work.

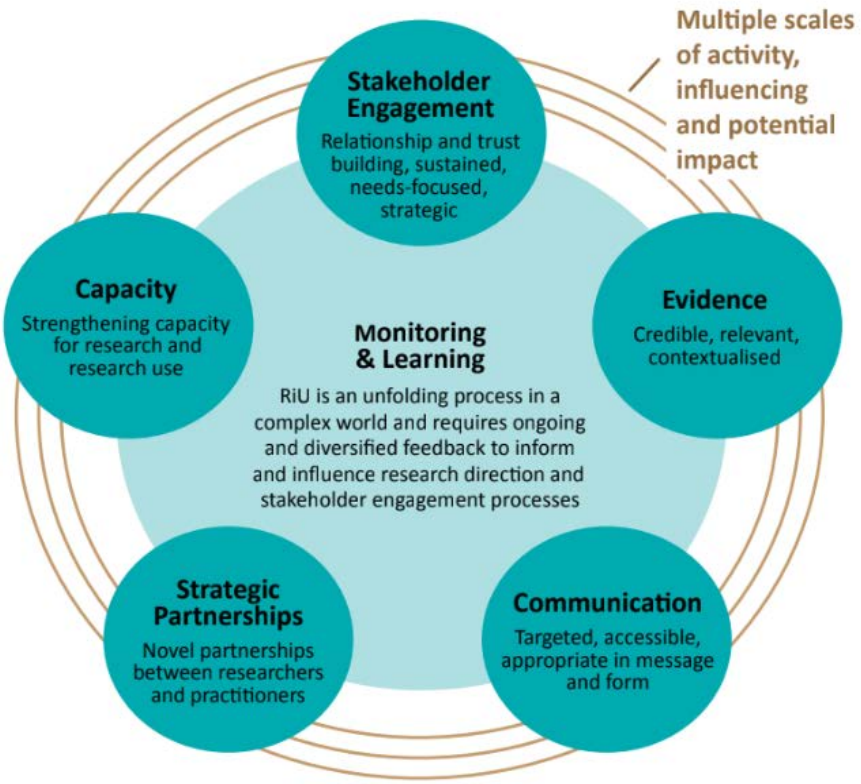

Figure 2: Key areas of activity to achieve research for impact in CARIAA, highlighting the multiple scales of potential impact (CARIAA, 2017)

While this common framework summarised key elements embraced by consortia and provided a shared language around which experiences could be discussed and learned from, each consortium developed very different strategies to pursue R4I in practice. These differences were evident in terms of the structural set-up of each consortium, how responsibility for pursuing impact was delegated, and in the relative emphasis that each consortium placed on the various activities in Figure 1. In many instances these differences emanated from the types of partners involved in the different consortia, and their history of prior collaboration as well as the relationships they already maintained with different types of stakeholders on the ground. They also reflected the local socio-economic, cultural and geographical contexts in which research for impact was being pursued. Each consortium's approach is briefly described below and shared in more detail where relevant in the lessons learned section that follows.

2.1 Adaptation at Scale in Semi-Arid Regions (ASSAR)

ASSAR shared a common conceptual framework and set of research questions related to the barriers to and enablers of effective adaptation, and worked in regional teams in order to develop context-specific methodologies to respond to the specific needs of stakeholders in those regions. For ASSAR, R4I was about maximizing the opportunities for research and stakeholder collaboration processes to contribute to changes in practice and policy. While conventional research uptake often follows a linear process whereby research is first produced (by researchers) and then disseminated to a range of users, the conceptualisation of R4I within the consortium went beyond this, and focused on engaging, influencing and communicating throughout the research process. ASSAR's R4I activities sought to build meaningful and long-lasting relationships with a wide spectrum of stakeholders (from national government to civil society and communities at local level) through the use of a range of tools (participatory scenario processes, targeted training activities, peer-to-peer learning, etc.). Capacity building was a core focus of R4I, both internally (to shift researchers' perception of impact) and externally to support vulnerable stakeholders to overcome some of the barriers to adaptation that ASSAR's research identified. Targeted communication of research findings increasingly became a focus of R4I activities, as stakeholder needs became clearer and research results became available. The most critical strategic partnership in ASSAR, which enabled R4I to become a central concern of all partners, was the presence of Oxfam as a core partner and co-lead of the project. As a development organization working to reduce poverty, Oxfam brought distinct perspectives to the research process, and the authority afforded them by their leadership position in the consortium allowed these interests to be taken seriously by research partners.

2.2 Deltas, Vulnerability & Climate Change: Migration and Adaptation (DECCMA)

DECCMA applied a uniform methodology to investigate climate change, migration and adaptation in deltas in Bangladesh, India and Ghana, focusing on producing policy-relevant

findings at scale to inform sustainable, gender-sensitive adaptation. Stakeholder engagement was recognised as critical from the start, with a dedicated work package to undertake power analysis (through interest and influence) and coordinate participation in various research tasks to minimise stakeholder fatigue; whilst also serving as an opportunity to communicate emerging findings. DECCMA took a two-pronged approach. On the one hand, "strategic opportunism" was important, where members of the consortium were able to identify and capitalise on windows of opportunity through the stakeholder power analysis, and then provide targeted, tailored and timely communication of user-relevant information. On the other hand, the project aimed to continuously grow a presence, credibility and legitimacy as a key source of information on migration and adaptation in deltas, thereby stimulating demand among the target audience.

The project-wide R4I strategy was complemented by country-level R4I strategies, which were periodically updated based on learning reflections. The R4I strategy focused on communications and stakeholder engagement in particular, although strategic partnerships were also emphasized.

2.3 Himalayan Adaptation, Water and Resilience Research (HI-AWARE)

HI-AWARE's goal was to increase the resilience of vulnerable people living in the Indus, Ganges and Brahmaputra river basins, and divided tits project into three work packages, one of which was specifically focused on R4I. HI-AWARE's starting point was that a necessary precondition for research uptake was the involvement of national and regional stakeholders in the implementation of research activities. As such, the R4I strategy sought to build on pre-existing relationships with stakeholders while focusing on four key areas of activity: (1) a stakeholder engagement strategy aimed at building relationships and networks, (2) an external communication strategy for developing tailored messages to key stakeholders, (3) a strategy for uptake of customized research outputs in policy and practice through pilot interventions, and (4) strategic partnerships. This focus shifted over time, and particularly in response to a mid-term review that allowed for adjustments to the approach. The initial phase of the project focused primarily on stakeholder engagement, the middle phase focused primarily on capacity building in concert with stakeholder engagement, and the concluding phase saw a shift toward knowledge management and communications.

2.4 Pathways to Resilience in Semi-Arid Economies (PRISE)

PRISE's goal was to strengthen the commitment of decision-makers to rapid, inclusive and resilient development in semi-arid regions, and it pursued this goal through seven work packages. PRISE saw R4I as a key part of all of its work packages, rather than creating a single work package focused only on R4I. PRISE adopted a demand-driven 'policy- and development-first' approach to engaging its target audiences, namely decision-makers in

local and national government, trade bodies and private sector and economic actors. This meant that significant emphasis was placed on stakeholder engagement from the outset of the project, in all work packages, with research questions being formulated and outputs developed in consultation with the stakeholders (i.e. the end-users of the research). Rather than starting with complex climate projections and the researchers' own research interests, PRISE worked directly with decision-makers to address their immediate knowledge gaps and priorities in policy and practice, using climate data to ensure long-term resilience and sustainability of their development plans and investment decisions. This greatly enhanced the potential for uptake of PRISE results and recommendations, as research was tailored to the direct needs of the audience, and supply therefore met demands. PRISE also emphasized capacity building through a strategic plan intended to improve the ability of both the individuals and project teams within the consortium to undertake and disseminate evidence-based, high quality research, as well as the stakeholders' capacity to integrate climate-resilience into their planning and decision-making processes. PRISE used Outcome Mapping to support its R4I activities and adjust its engagement strategies over time.

3. Lessons learned

Six key lessons emerged through the CARIAA experience. Each lesson represents the combined learning across all four consortia. One or more examples are provided from the consortia in order to illustrate the lesson in more concrete terms.

3.1 Sustained relationships with stakeholders are essential

CARIAA experience shows that research uptake in policy and practice relies on relationships with stakeholders that are nurtured from the early phases of a project. If engaged and involved in a structured way, stakeholders can contribute to co-creating knowledge, jointly analyzing results and formulating recommendations. Such a process can increase the utility and sustainability of results and potential for lasting outcomes in the form of changes to policy and practice.

There is a fine line between stakeholder fatigue through over-engagement and a superficial, tokenistic stakeholder presence. Striking the right balance reflects the project's vision for engagement—whether it is to inform or influence. Particularly when it comes to decision makers, we have found that success partly depends on the process of producing an output that is of direct benefit for stakeholders, bearing in mind that different stakeholders will have different needs and perceived benefits. It is therefore critical to start a project with a clear mapping of stakeholder needs, and—to the extent possible—to attempt to match those to the research focus. If the process of working with stakeholders also builds their capacity, then the commitment and ownership of stakeholders is likely to be enhanced, as the following examples describe.

DECCMA's approach sought to strike a balance between ensuring that stakeholders were actively involved as appropriate whilst not creating an undue burden. To coordinate research activities with stakeholders the project had a work package dedicated to stakeholder engagement. This work package convened several rounds of workshops at national and local level and coordinated the interactive and consultation-based activities that were integral to the various other components of the project. The stakeholder engagement work package commenced with a power analysis of stakeholders, comprising their interest and influence in DECCMA-related research. The R4I team built on this and maintained a regularly-revisited database, as well as liaised with high interest-high influence stakeholders to ensure that their communication preferences were known and respected to increase the potential impact of R4I activities. The trusted relationships built in this way created opportunities for R4I in all countries. In Bangladesh, government requested the team to expand their delta inventory of documented adaptations to cover the whole country to be used in the stocktaking part of the National Adaptation Plan (NAP) process. In India the state government of Odisha requested inputs to their draft action plan on climate change. In Ghana the MP who headed the National Engagement and Advisory Group sought inputs from the team on the Coastal Development Authority Bill.

PRISE engaged target stakeholders from the offset and throughout the project duration on a continuous basis to validate findings and refine policy recommendations to maximise policy relevance and the potential for impact. When research outputs were produced, these stakeholders, having already been engaged in the process early on, were more prepared to use the research as it had direct relevance to their work and planning decisions. This was an important aspect of this consortium's influencing approach, ensuring that research supply responded to demand. Stakeholder mapping was an important step in planning engagement and enhancing its effectiveness by ensuring the most strategic actors (with highest influence) were reached and that teams knew which groups to keep informed versus actively engaged (see example from Kenya in Figure 2). This targeted engagement approach led to noteworthy impact on the ground. At the county level, PRISE supported the development of the 5-year County Integrated Development Plans (CIDP) 2018-2022 in Kenya. At the national level in Kenya, PRISE supported policy makers with drafting the National Climate Change Action Plan 2018-2020 and the National Wildlife Conservation and Management Strategy.

The results of sustained engagement with stakeholders was evidenced by multiple examples of policy influence and impact on the ground in core PRISE countries. For example, sustained engagement of policymakers in Kenya by PRISE at the Kenya Market Trust led to a number of strategic inputs and contributions to national strategies and local/sub-national development plans. At county level, PRISE incorporated research findings, adaptation options and policy recommendations into the Narok county development plan (CIDP), and provided technical inputs on climate change into the Makueni County Spatial Plan. At national level, PRISE provided technical inputs to the National Climate Change Action Plan 2018–2020 in relation to climate change situation

analysis and projections and the potential impacts of climate change on agriculture, biodiversity and health sectors. Furthermore, a PRISE researcher was invited to join the strategy synthesis team to develop the National Wildlife Conservation and Management Strategy, launched in May 2018 by H.E. the Vice President of Kenya, William Ruto, as a blueprint that would guide Kenya in the conservation of its wildlife. These opportunities were demand-led, as a result of PRISE's ongoing stakeholder engagement with national policymakers, resulting in respective ministries inviting PRISE to input into these policy processes.

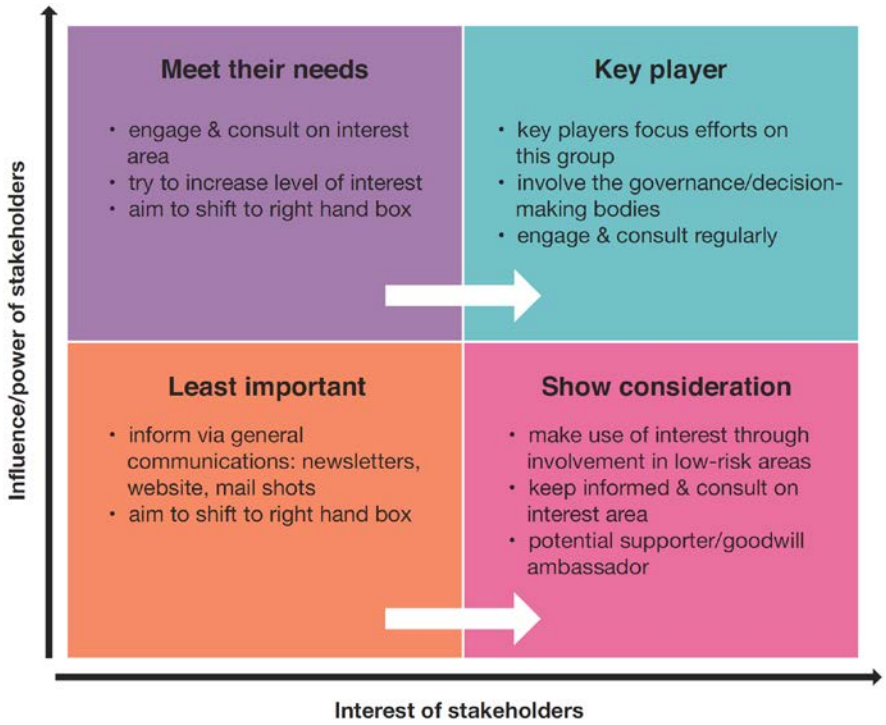

Figure 2: Example of Stakeholder Mapping decision making matrix used by PRISE to prioritize level of engagement with key stakeholders

In ASSAR, long-term stakeholder relationships and a novel partnership between the University of Botswana and Oxfam resulted in significant influence on district-level development planning across the country. The research team conducted an initial participatory vulnerability and risk assessment (VRA) in 2015 at the sub-district level in Bobirwa, which led to the rethinking of adaptation priorities in that sub-district. A senior planner commented that the findings of that exercise informed their District Development Plan and helped ensure that climate-related risks were incorporated into the strategy. That multi-stakeholder exercise attracted the attention of the national government, who in collaboration with the University of Botswana and Oxfam organized a country-wide training of district and economic planners from all of Botswana's districts in August 2018. The Acting Minister for Presidential Affairs, Governance and Public Administration said the methodology made development planning participatory, representative and inclusive. That

event resulted in another collaboration between the Botswana government, University of Botswana and Oxfam: a joint VRA in Chobe District to inform development and adaptation planning decisions in early 2019. This sustained collaboration with the government, made possible through the university-practitioner partnership, allowed ASSAR to constructively influence official views on development, climate and gender in Botswana. As an outcome of these sustained relationships with government stakeholders, ASSAR also influenced the inclusion of a climate change chapter in the District Development Plan of Bobirwa Sub-District, and directly informed the leading governmental agency in the development of a framework to inform the upcoming national drought management strategy.

Similarly, ongoing engagement and trust building with national governments in Nepal was a cornerstone of HI-AWARE's substantial inputs into the NAP in that country. The Government of Nepal, being a Party to the United Nations Framework Convention on Climate Change (UNFCCC), has initiated the NAP formulation process, currently led by the Ministry of Population and Environment and working groups that are coordinated by nine concerned ministries. HI-AWARE offered a variety of technical support, including assistance with mapping key climate risks and impacts in the country's major river basins. The methodology and data used for climate trends and scenarios at the river basin level was then further expanded to include a country level assessment. HI-AWARE learned through this experience that capacity building can be key part of relationship and trust building. For example, HI-AWARE's approach to R4I in the initial stages focused on extensive stakeholder engagement at local and national levels. While the local stakeholders were disengaged and unaware of the NAP process, the national stakeholders and concerned ministries were unsure of local capacities that could be harnessed. It was clear that unless capacities were developed at both levels, the bridging of local and national scales would not happen through the NAP process. HI-AWARE understood this and accordingly incorporated capacity building modules into its R4I approach and strategy for informing the NAP. Following a consultation in 2016 that gathered national and local stakeholder representatives, a six-month certification training programme was developed and delivered by HI-AWARE in Nepal. This led to the development of a memorandum of understanding with a local university as the demand for the courses grew, including from groups in Nepal beyond government agencies involved in the NAP. It was HI-AWARE's willingness to adjust course and offer the capacity building required for a successful NAP process that facilitated the trusting relationships that ultimately allowed also for thematic impacts on the content of the NAP itself.

All examples in this section illustrate the value of long term relationships in R4I. The examples form Botswana and Nepal illustrate the very close connection between capacity building and relationship building, and also the need to be flexible in responding to requests or the identified need for capacity building arising during a project. The example from Kenya illustrates the value of a careful approach to identifying influential and strategic stakeholders with whom to pursue long term relationships.

3.2 Pair a clear desired outcome with a flexible and iterative approach

Some of the greatest successes with regard to R4I in CARIAA were achieved based on the ability of teams to be flexible in the pursuit of pre-identified outcomes. In many instances, the outcomes achieved were quite different to those planned at the outset, however, this does not mean that they were accidental. Indeed, the difference between planned and actual outcomes is most commonly a product of adaptive management, active learning and being responsive to a changing context. In other words, when outcomes are different to those intended, that can be a strong indicator of a successful project.

ASSAR's approach to R4I was grounded in the development of an overall theory of change supported by country-level impact pathways that linked research and R4I activities to desired outcomes and impacts in policy and practice. The impact pathways identified clear activities and outputs that were intended to guide the R4I strategy and provide a strategic focus at the country level rather than serve as a rigid planning document. While the initial planning process was fundamental, it was equally important to periodically review the impact pathways considering changes in the external and internal environments, and change planned or foreseen activities to respond to windows of opportunity or change course if negative feedback suggested this. In Botswana, ASSAR's impact pathway included an aim to enhance capacities of government ministries to remove barriers to and strengthen enablers for climate change adaptation. The journey toward this outcome required flexibility to respond to requests for support from government agencies (see previous example from Botswana), and ultimately the outcome was different to that planned: the integration of climate and gender considerations, as well as participatory principles, into district development planning nationwide. This flexibility enabled greater impact by responding to windows of opportunity opened by local and national government demand for support in capacity building, which was not planned for at the outset. Yet the impact resulting from strengthened capacities may be significant in the long term, as district economic and development officers are now developing their plans in a participatory manner, responding to needs on the ground, resulting in enhanced ownership of those plans.

PRISE's R4I approach integrated iteration and flexibility as two key working principles. This allowed PRISE projects to deal with the increasing interest of stakeholders over time, and enabled them to adapt to the uncertainty of the political context. PRISE put great emphasis on responding to policy windows. In Pakistan, for example, PRISE partner the Sustainable Development Policy Institute applied the insights from PRISE research to give feedback on Nationally Determined Contributions through the Civil Society Coalition for Climate Change's platform, as well as provided inputs on climate change policy actions for political manifestos of major political parties in Pakistan before elections in 2018. Furthermore, iteration enabled PRISE to ensure that its research continuously responded to the needs and priorities of the stakeholders, for example by responding to requests for information

and technical assistance, and integrating stakeholders into the research products themselves, which ensured consistency with their demand-driven approach.

Dealing with uncertainties, especially when it comes to engaging with decision makers at political level, can pose a noteworthy challenge. However, having flexibility within both a project's R4I budget and strategy, increases the chance of success and the sustainability of research uptake activities with stakeholders. In Senegal for example, a change was identified through tracking governmental bodies using PRISE's Outcome Mapping system. Migration and remittances issues were not only dealt with by the Ministry of Foreign Affairs, but there was an increasing interest from the Ministry of Economy and Finance to engage with PRISE research, as a result of recognition of the contribution of migrants to national GDP. This was a positive sign of the impact of PRISE research and stakeholder engagement activities. However, building the relationship with the Ministry of Economy and Finance, and maintaining it over time, required that the project was able to adjust their budget allocation to take into account new activities that weren't initially planned, such as strategic face-to-face meetings or capacity building events with the ministry.

Within DECCMA, building trust between the project team and key stakeholders provided opportunities to respond to emerging policy windows. For example, the Mahanadi delta is within Odisha state in India which had a State Action Plan on Climate Change 2010-15. Some delays occurred in the development of the second iteration of this plan (which in the end was 2018-23), meaning that DECCMA had an unexpected opportunity to provide input. This policy window was not anticipated since the project had assumed that discussions on the second iteration would commence prior to 2015, and thus before DECCMA had research findings to share. The Forest and Environment Department, who led the development of the Action Plan, became aware of the DECCMA team and its work through participation in various meetings as part of the project's stakeholder engagement. In particular, during one meeting a presentation of gender analysis of the initial State Action Plan on Climate Change was presented by DECCMA. This coincided with the consultation period for the second iteration, and the Director of Environment cum Special Secretary of the Department of Forest and Environment and Special Scientist of the Climate Change Cell requested that DECCMA provide inputs, feedback and suggestions on the new draft Action Plan. Because of DECCMA's submission, the Odisha State Action Plan on Climate Change 2018-23 contained a separate chapter on gender for the first time (Government of Odisha, 2018). This substantial R4I outcome, unanticipated at the outset of the project, was partly the result of political delays in the development of the Action Plan (outside of DECCMA's control), and partly the result of a nimble response to a window of opportunity opened through stakeholder engagement.

All of these examples illustrate the critical nature of agility and flexibility for R4I. These elements of an R4I strategy can only be achieved when moments for reflection and learning are factored in (see next section), and when budgets, strategies and team members

(including funders) are flexible enough to change course and take hold of opportunities for impact when they arise.

3.3 Monitoring, reflecting and learning are essential in R4I

It is not always easy to know whether research is being used by stakeholders to support their decision making. This is made difficult because of the multiple sources of information that decision makers tend to draw on in their decision making, the often long timelines involved (beyond the lifespan of a project), and incremental and seemingly small steps taken in the policy development process. Setting up a good monitoring, evaluation and learning (MEL) system at the beginning of an R4I process is essential to analyzing and understanding changes among key stakeholders and the level of their engagement with the project, identifying how the research contributed to observed changes, and adjusting course when approaches are not working or new opportunities arise. An effective MEL system helps research teams to improve R4I activities, for example, by giving insights into whether communication strategies are working, and whether the team is on track to achieve the desired impact. It is essential to see MEL as a learning process rather than as an administrative burden linked to project reporting.

PRISE projects used the Outcome Mapping system as a MEL tool to track R4I activities, stakeholder action and research uptake at project, national and global level, and to alert researchers in time to change activities when necessary. The Outcome Mapping system is an actor-oriented approach for planning, monitoring and evaluating change in stakeholder behavior and thinking (see Figure 4).

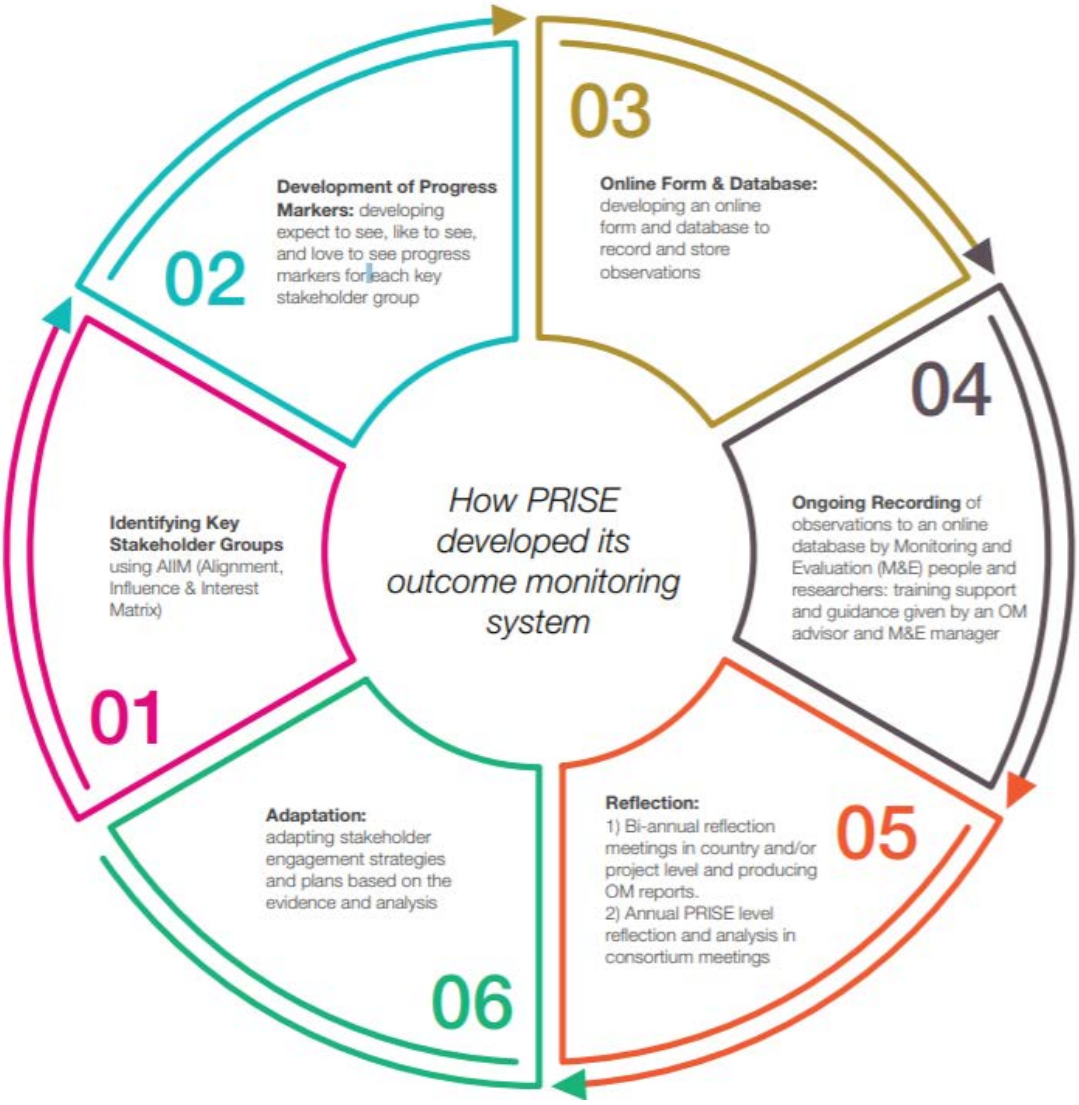

Figure 4: PRISE process to implement an Outcome Mapping system

Similar systems were also established in other consortia. For example, like ASSAR, HI-AWARE developed a MEL system linked with impact pathways. The project tracked progress every three months. The MEL framework was developed based on consultation with consortium partners and stakeholders in participating countries. The purpose of these consultations was to develop a comprehensive MEL framework that met the needs and expectations of different stakeholders. The purpose of the MEL framework was to generate, analyze and report data for accountability, learning, communication and overall improvement of the HI-AWARE programme. The framework also ensured a common process for monitoring and reporting at multiple scales, particularly vital in a multi-partner programme. Figure 5 illustrates the steps involved in implementing the MEL framework. A visual representation of the theory of change in the form of a poster was provided to all project leaders in order to facilitate a constant revisiting of the core ideas around the theory

of change. There were six-monthly review meetings with members to assess progress and make further changes to the MEL framework. The HI-AWARE mid-term evaluation was completed with independent evaluators, which further helped the team to revise the project targets.

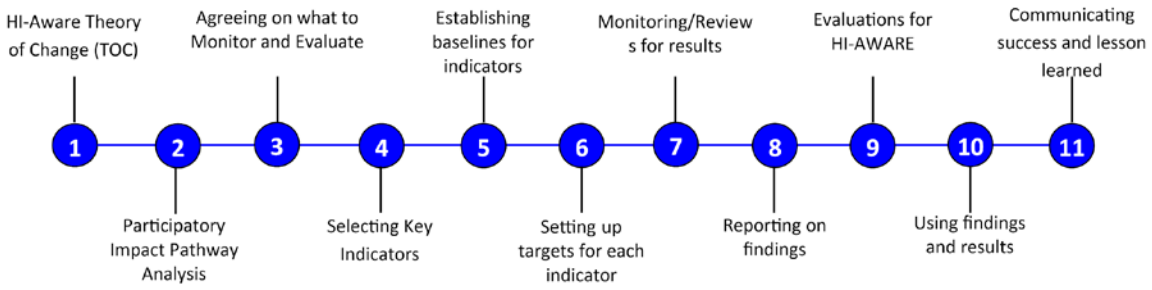

Figure 5: A step-wise representation of the HI-AWARE Monitoring, Evaluation and Learning Strategy

Midway through the CARIAA programme, a Research-into-Use Learning Guide (CARIAA 2017) was developed specifically to assist R4I teams with learning about the practice of R4I, as distinct from meeting reporting requirements. This guide was intended to systematize an approach to learning across the programme, and within each consortium, to better understand the effectiveness of R4I activities, and to support the adjustment of R4I plans based on learning and new opportunities. The guide focused on the five R4I activities outlined in Figure 2. Among other things, the reflection moments encouraged in this guide supported the development of common lessons, as shared in this working paper.

3.4 Novel multimedia communication and branding are important for the uptake of research findings

Multimedia communication is an important element of R4I, and involves a two-way exchange between researchers and users. All of the CARIAA consortia employed wide-ranging communication strategies, with products targeting a range of audiences. These include the more traditional ways of communicating through peer-reviewed papers, briefs, websites and social media, as well as through the production of infographics (Figure 6), videos and photo essays. A key lesson in this regard has been the attention that needs to be paid to specific target audiences for any type of communication product. In CARIAA we learned that iterative questions about identifying key messages, target audience, and how to access that audience were key in planning communication products. A range of videos (documentary-style and animations), infographics, radio shows and games have also been explored to reach the variety of more or less literate audiences that different consortia targeted.

In the case of ASSAR, for example, the Namibia team developed a simple brochure (in English and Oshiwambo) aimed at communicating adaptive versus non-adaptive behaviours

to a community-level audience. This was accompanied by infographics translated into the Oshiwambo language which explain how gender alongside many other intersectional factors affects vulnerability and responses to climate change. A weekly six-part series radio show in Oshiwambo further helped explain some of the key project results, while games like the vulnerability walk and farming juggle helped to drive some of the concepts home, by helping participants experience them and thus learn in an experiential manner. A simple manual (in English and Oshiwambo) to explain basic climate change concepts and some of the actions that can be taken to adapt was also developed, based upon requests from community stakeholders who expressed a desire to understand what climate change is. In this case, ASSAR developed a very wide variety of outputs targeting local populations, recognizing that community members get information through a variety of sources, not just one, and understanding the importance of also communicating in people's local language.

PRISE developed a 76-page report on value chain analysis for resilience in drylands that assessed climate risks and identified adaptation options in four value chains in five semi-arid countries. The audience of the report was broad and included donors, governments, researchers and international organisations. To make the key findings more accessible to decision-makers, PRISE translated the longer report into more targeted 15-page and 4-page summary documents, drawing out key policy recommendations and specific actions to be taken. Furthermore, PRISE developed policy-relevant recommendations ahead of major global events as part of their global influencing strategy, which included a policy brief on 'Leaving no one behind' through enabling climate-resilient economic development in dryland regions that they launched ahead of the High-level Political Forum on Sustainable Development. PRISE therefore developed a range of products for different audiences, and also paid attention to events over time where the findings could be shared and re-packaged if necessary.

Our experiences show that professionally-presented products with visual appeal have a higher impact than low-tech alternatives where national and international audiences are the target. Compared to previous low-tech outputs, DECCMA, for example, achieved a wider reach, and had more positive feedback, and greater evidence of research uptake on its series of professionally designed "delta briefs"[1], outlining emerging evidence on the biophysical vulnerability, migration patterns, economic structure, adaptation and governance systems of its case study deltas. Non-textual communication was also critical for this consortium, where drone video footage of coastal flooding in the Volta delta resulted in a great deal of

[1] http://generic.wordpress.soton.ac.uk/deccma/wp-content/uploads/sites/181/2017/10/68439-A4-DECCMA-VD_final_web.pdf
http://generic.wordpress.soton.ac.uk/deccma/wp-content/uploads/sites/181/2017/10/68439-A4-DECCMA-MD_final_web.pdf
http://generic.wordpress.soton.ac.uk/deccma/wp-content/uploads/sites/181/2017/10/68439-A4-DECCMA-IBD_final_web.pdf
http://generic.wordpress.soton.ac.uk/deccma/wp-content/uploads/sites/181/2017/10/68439-A4-DECCMA-GBM_final_web.pdf

political buy-in for the risks related to coastal flooding. The success was based on the way in which the raw footage powerfully highlighted the risks to coastal populations, thereby catalyzing interest from local parliamentarians.

Figure 6: Examples of infographics from ASSAR (left) and DECCMA (right)

HI-AWARE's external communication strategy emphasized the creation of a space that allowed for the sharing and co-creation of research findings. First conceptualized in the form of a touch-table (an interactive space combining layers of map data of various biophysical and meteorological characteristics), this was initially shared with local and national representatives of various government and nodal agencies (Figure 7). Although the touch-table was a useful tool for data representation and visualization, initial testing revealed that the use of the technology to inform decision making would require a great deal more investment to generate more comprehensive and disaggregated datasets. These datasets did not exist at the local level. The team therefore changed tack, and a second iteration was developed, in the form of an interactive story-map that mapped data overlain with interactive multimedia content in a cohesive narrative structure, which later became the adaptation solutions portal. Further refinement based on user feedback resulted in the adaptation portal using this story-map format to represent adaptation options based on key

hazards such as heat stress, floods, landslides, droughts and fire. Through this iterative refinement of the communication tool based on user feedback, HI-AWARE was able to adaptively develop a tool that was fit for purpose and audience.

Figure 7: HI-AWARE R4I leads demonstrate the touch-table to the President of Nepal, December 2017 (Photo credit: Jitendra Bajracharya, ICIMOD)

3.5 Do not assume researcher buy-in or capacity for R4I

Building the capacity of research teams to understand the importance of research uptake in policy and practice, and building their capacity to practically pursue such impact, is a critical component of R4I. The academic training undertaken by researchers rarely includes these skills, and skepticism toward time investment in R4I was commonplace in the early stages of CARIAA across most consortia. More than 200 early career scientists (masters students, PhDs, post-docs, interns and research assistants) were supported through CARIAA, and programme-wide training was offered in the form of webinars on social media and blogging. Each consortium also provided its own internal training not only to early career scientists, but across the board.

A survey that was run among ASSAR members in late 2016 indicated that one of the key highlights with regard to their experience of working within ASSAR was tied to their new way of thinking about impact, communications and the societal benefits of their research. This was achieved through team workshops on R4I approaches and influencing, webinars, and exposure to tools like vulnerability and risk assessment, transformative scenario

planning, stakeholder mapping and power analysis. In addition, responding to internal requests to write blogs and articles for ASSAR's website, and to develop easily digestible communications outputs (e.g. briefs, infographics, one-page research briefs) forced researchers to think differently about the usefulness and implications (for policy and practice) of their results. This shift in internal capacities has created a new cadre of academically strong adaptation researchers that think about influence and impact as an integral part of their work and roles. To ensure the legacy of this, ASSAR developed a Massive online Open Access Course (MOOC), into which other consortia provided insights, on how to achieve R4I.

PRISE supported researchers to increase their capacity to undertake high quality research and use it to influence and inform key stakeholders. Building the institutional buy-in of members' home institutions was an important element of this. Furthermore, one of the consortium's key objectives was to 'support the emergence of a new cadre of policy-oriented researchers working on climate resilient development, engaged with key Southern institutions'. The capacity of researchers was increased through extensive online and in-person training (e.g. on data analysis, climate information, gender considerations, research instruments), annual in-person meetings, support for master's and PhD degrees, and numerous opportunities and support to lead projects and present findings in major regional and international fora. It was also important to increase researchers' capacity to inform, engage and build the capacity of target stakeholders on a continuous basis.

CARIAA experience suggests that it should not be taken for granted that: a) individual researchers buy into the need to invest time in R4I activities such as communications, relationship building and capacity building of end users; b) host institutions have the incentives in place to recognize time invested and excellence in this area (on the contrary, this is normally not the case); or c) that researchers actually have the capacity to pursue R4I in the absence of substantial investment in support. Seriously pursing R4I therefore requires budget allocations for in-house capacity building too, and not only for end-users of knowledge.

3.6 R4I requires dedicated and trained personnel

R4I should not be an add-on to any project but should be conceptualized and budgeted for in terms of dedicated staff time from the beginning. R4I is specialized work and requires skillsets that are unconventional in traditional research teams. Each of the four consortia applied a different approach to operationalizing R4I and in allocating both staff and responsibilities related to R4I across the consortium.

In addition to research being conducted as a demand-driven process in the Hindu Kush Himalayan region, for HI-AWARE it was important to start by identifying the various groups that would use and engage with the knowledge being produced. This consisted of identifying 1) who the knowledge was for, 2) how the knowledge would be used, and 3) how partners could take this relevant knowledge to stakeholders. This required an internal

reflexive exercise for researchers in which the quality and effectiveness of the messages was gauged. To achieve this, knowledge management and communication (KMC) focal points were established for each of the consortium member institutions, as well as for strategic partner organisations. An interesting trend that emerged from the continuous involvement of researchers with the KMC units was that a sense of ownership for the quality of messages being shared was developed by the researchers. They no longer saw communications as a separate activity, as they might have done at the start of the project. Various internal exercises between the KMC units and researchers allowed for a better scripting of these key messages, which were then tailored to suit the needs of various stakeholders. With the inclusion of the monitoring and evaluation (M&E) process described earlier, researchers, the KMC units and the monitoring unit collaborated increasingly to identify key target audiences and events, and to prioritize stakeholders. As a result, R4I developed over time into an independent standing entity within the project with its own set of deliverables.

In DECCMA, the organizational structure was comparatively lean—partly because R4I only became important after the beginning of the project and in this case was not originally planned for. DECCMA therefore had a decentralized R4I team, and various changes were made to the staffing of R4I positions as the needs became apparent over time. At project level there was a part-time R4I "champion", charged with strategic oversight, complemented by a coordinator responsible for day-to-day management of social media, communications products, and capacity building. In recognition that it was not possible for a centrally-based person to effectively manage the context-specific R4I needs in the focal deltas, additional funds were allocated to employ a part-time coordinator in Ghana and a full-time position in Bangladesh. Funds were not available for a position in India, so in-country R4I was led by the DECCMA India project coordinator. Recruiting for the R4I positions was difficult because the job description called for a specific skillset. When recruiting the coordinator, the institution that led the consortium struggled because its usual "academic" recruitment media did not draw people with R4I skills. The R4I "champion" therefore spent most of her time acting as a bridge or boundary agent between researchers and users in this project, ensuring that research findings were "translated" to different audiences and that users informed research design. Interestingly, the two dedicated R4I staff that were employed in Ghana and Bangladesh had very different backgrounds, with one being a recent university graduate with an interest in applied research, and the other being a former government staff member who was well integrated in policy processes. In addition, there were very few applications for either position, suggesting that this career pathway is not being pursued by many graduates, and/or alternative advertising approaches should have been used.

PRISE adopted a decentralised R4I model and M&E was an integral part of R4I activities. At the outset, an external specialist in M&E and R4I was hired to develop Progress Markers to track research uptake in the form of step-changes and transformative shifts in stakeholder perceptions and actions using an Outcome Mapping system, and to create guiding

documents and templates. In parallel, PRISE appointed central M&E and R4I leads that oversaw the overarching M&E and R4I frameworks, including the Outcome Mapping system, log-frame reporting and stakeholder engagement strategies. The M&E Manager designed the M&E system and conducted programme-wide analysis of stakeholder observations entered into the Outcome Mapping system by researchers on the ground, working closely with the R4I Manager who supported PRISE's research uptake strategies. Four joint R4I-M&E in-country focal points were appointed to input data into the Outcome Mapping system on a regular basis. They were based in PRISE member organisations in Senegal, Pakistan, Kenya and Tajikistan for the duration of the programme, with technical support from individuals based in London and Ottawa. In-country focal points were a critical part of the PRISE learning system. Their responsibilities were not limited to the routine quantitative monitoring of the implementation of project research and stakeholder engagement activities, but incorporated a strong qualitative analysis of results and learning. The Outcome Mapping system assumes this dual function in order to allow tracking and sense-making of M&E results on research uptake and policy influence. The above activities and R4I-M&E focal points were supported throughout by the external expert, who continued to provide overall guidance, coaching and feedback. The approach of having local R4I and M&E leads that undertook data analysis in-country (with support from central experts), meant that teams were able to respond quickly to information demands on the ground and redirect and adapt their engagement approaches and communication strategies, as well as ensuring that they were tailored to the individual and specific needs of different stakeholder groups.

Operationally, Oxfam anchored the R4I processes within ASSAR, through the involvement of a co-lead for the consortium and a full-time coordinator based at Oxfam GB in the United Kingdom. At country level, a range of strategies were used, depending on the presence of Oxfam country offices: (i) one full-time R4I coordinator sharing his time between Kenya and Ethiopia, based in the Oxfam Ethiopia office; (ii) two part-time coordinators hosted by local NGOs in Namibia and Botswana, given there was no Oxfam presence in either country; (iii) remote support and involvement during key moments provided by Oxfam GB's coordinator in India and West Africa (Mali and Ghana). This decentralized R4I team, constituted of dedicated local and global staff, was responsible for leading stakeholder engagement activities, raising ASSAR's visibility in-country and monitoring the national adaptation landscape to be responsive to local processes and needs. The Oxfam team was also responsible for building the capacity of ASSAR researchers to use a range of R4I tools and techniques tied to influencing, stakeholder mapping and power analysis, writing for impact, etc. In addition, ASSAR's project management unit at the University of Cape Town hosted the communications team (composed of three staff members). They were responsible for production and dissemination of ASSAR's research findings and evidence, including through a website; production of communications products; organization of webinars; maintenance of ASSAR's social media presence, etc.

These four examples illustrate the variety of ways in which R4I responsibilities can be distributed within a consortium, and how much dedicated staff time is necessary for the task. ASSAR and HI-AWARE arguably dedicated the highest proportion of full-time staff to the task, while DECCMA adaptively developed their strategies as time went on, and PRISE tied R4I activities directly to their M&E activities, thus providing some level of efficiency in activities. We have learned that there is no 'right' way to do this—all consortia amassed impressive examples of significant impact on policy and practice. However, all of them did require dedicated staff whose main responsibilities revolved around R4I activities such as communications, stakeholder engagement, capacity building and M&E (Figure 2). Figure 2 can therefore be used as a basis from which to negotiate and develop terms of reference for R4I staff in future projects.

4. Conclusion and looking forward

R4I is about seeking opportunities for research to create positive change in the face of complex sustainability challenges. There are no easy steps for achieving impact. This working paper does not offer 'solutions' to the challenge of how to pursue research for impact as there is no "one size fits all approach". However, by sharing the varied experiences across the programme, hopefully it has provided some pointers about the activities involved, and examples of how to implement those activities in ways that our experience suggests can work.

Despite the inherent diversity of possible approaches and context-specific considerations that will matter in all cases of R4I, there are some universal lessons that we have found transcended context, research focus and research teams. Simply put, the lessons from CARIAA are the following: prioritizing long-term relationships and trust building, being flexible and willing to change course, investing in building researchers' buy-in and capacity for R4I activities, and budgeting for the dedicated staff required to achieve all the above, are all fundamental to success.

When CARIAA started, there was an assumption that each of the consortia had a common understanding of what R4I meant, what it involved in terms of activities, and especially that the consortia bought in to the need to foreground a focus on R4I, and invest in it, from the beginning of the projects. This was of course not the case: each consortium understood the importance and activities involved in R4I differently—and this evolved significantly over the lifetime of the programme. While some consortium leaders understood the importance of R4I, others resisted strongly (even passionately) against investing too much time in impact-oriented activities when their central role was research. Despite the programme's log-frame including R4I as one of the components of consortia's success, thinking beyond academic impact constituted a shift from the way research had been conducted before, across a large number of partners. Ensuring an appropriate incentive structure, and capacity building activities for researchers, was necessary to facilitate this process.

For everyone, the CARIAA experience has been an unfolding journey of shared learning about each other's priorities, aspirations and understanding of the nature of research, as well as the nature of impact itself. We learned that it is important to make room for the full spectrum of standpoints involved, and to bring as many people along for the learning journey as possible. In this vein, the issue of gender deserves closer scrutiny. Some questions about gender that we hope others will explore in the future include: how the gender of researchers influences the kinds of relationships that they are able to forge in the pursuit of impact, how women researchers and practitioners can be supported to pursue impact in patriarchal contexts, and how R4I activities need to be gender-sensitive in process and gender-responsive in outcome, contributing towards a situation of gender equality.

In CARIAA, creating the opportunity for shared learning among R4I leads required the donor (IDRC) to play a leadership role in terms of co-developing a shared language and mission about R4I across the programme, and to create the opportunities (and allocate the resources) to allow for experience sharing across the consortia. IDRC only realized the need to do so mid-way through CARIAA based on a learning review, and we learned that in the future this should be planned for in similar programs from the outset.

For everyone, from all four consortia and the CARIAA programme as a whole, every success we've had has been as a result of being open to learning, being flexible, and being humble enough to acknowledge that a path needs to change. Truly internalizing the need for this level of flexibility has significant implications for donors, researchers and practitioners alike in future programs. Funders need to support research teams to be responsive to their growing understanding of the contexts they're working in, and the leverage points for change, by building flexibility into grant agreements. Researchers and practitioners need diversified teams where the skills needed to both identify opportunities for impact, and to support learning and reflection, are present. Opportunities for reflection and course adjustment must be budgeted for at the outset of a project, as should flexible funds that allow teams to mobilize swiftly in response to opportunities for impact. In large programs that involve multiple partners working in diverse contexts, it is important to create opportunities for a dedicated group of R4I leaders to emerge. Regular face-to-face engagements, and a common language and set of practices, are key to succeeding in this. Training is crucial to strengthen specific skills required to influence policy and communicate effectively, and to build an understanding among researchers of how changes in policy and practice happen—including recognizing that quality knowledge can sometimes play only a minor role in achieving impact.

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