Adaptation Futures 2016 covered a wide range of topics, from social science research focused on gender, to challenges with policy implementation, to the latest concepts in green urban design.

Many ASSAR members attended this conference as delegates, presenters and session leads. In this Spotlight our team members recount their experiences of the conference and describe the work they presented there.

the ASSAR SPOTLIGHT *on* Adaptation Futures 2016

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Contact Us

Tel: +27 21 650 2918 (*Project Management Unit*)
Email: lucia.scodanibbio@cariaa.net (*Project Coordinator*)
Website: www.ASSARadapt.org
Twitter: @ASSARadapt
YouTube: ASSAR Project

How can we rise to the adaptation challenge?

Learning from global best practice

by **Lucia Scodanibbio**

ASSAR Project Coordinator

University of Cape Town

At the beginning of the 2016 Adaptation Futures conference, Christiana Figueres, Executive Secretary of the UNFCCC, stated that it is our moral responsibility to align with the 1.5°C goal that was aspired to in Paris. This effectively means that the peaking of global greenhouse gas emissions should occur within the next five years, and from then onwards emissions should decrease. While Figueres jokingly – yet extremely seriously – invited scientists, policy-makers and practitioners alike to "swallow an alarm clock" in order to radically change what we are doing in the coming half decade, I asked myself how we will ever be able to rise to such an impending challenge.

In his opening presentation, NOAA's Roger Pulwarty encouraged the conference delegates to think of whether the decisions and actions we continue to take – largely tied to dependencies we have created and development choices we've made – are amenable to the problems ahead of us. Even if we agree that there are contradictions, it is not so easy to address them. "A changing climate leads to changes in extreme weather and climate events. [Yet] the rate at which these changes are occurring is faster than the rate at which our institutions are changing and [*of course!*] even faster than the rate in which many of our traditions have changed and adapted over time", insisted Pulwarty. The question is not whether we need to change paradigm, but rather "how often we should revise assumptions about the changing nature of the world".

It is clear that the way we live, issues we prioritise, technologies we favour, processes we use to take decisions, and the scale at which all of this happens need to be revolutionised. While humans are adaptive (as evidenced through our colonisation of even very inhospitable environments), we know that habits – both personal and collective – are very difficult to break. And to add insult to injury, the issues which are in greatest need of transformation, generally attract the most conflict.

Despite mankind's sluggishness to change, numerous sessions at the conference highlighted areas where experimentation is occurring, different technologies are emerging, and innovative ways to make and implement decisions are being explored and tested.

Adaptation Pathways

In the context of complex, contested, emergent and uncertain systems, the adaptation pathways approach described by colleagues from the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO) talks exactly to some of the challenges outlined above.

- By taking cognisance of the large number of drivers that operate and interact across scales; by designing processes that cater for different forms of knowledge, viewpoints and interests; and by attempting to tackle the systemic – in addition to the proximate – causes of vulnerability, some of the complexity of the challenge can begin to be addressed.
- By engaging directly with power and politics, with the awareness that these are continuously shifting, one moves beyond addressing climate issues in a "naïve" vacuum.
- By focusing on "climate compatible development", positive benefits should be achieved in three realms: for climate adaptation, greenhouse gas mitigation and poverty alleviation aligned with the Sustainable Development Goals.
- By framing Issues in relation to people's closest concerns, such as referring to the future in terms of individuals' children or grandchildren, we may have a higher chance of resulting in action.
- By creating learning spaces that are safe for making mistakes and where reflection is as important a component as analytical tools and scientific models, experimentation can occur within a context of trust and collaboration.
- By attempting innovative, yet seemingly intuitive pathways, we stop settling on the most obvious solutions to adaptation (such as vulnerability assessments), which are not appropriate for the scale of the problem, particularly when conducted in isolation.

Some of these ideas were echoed in different presentations throughout the conference. Netherland's Minister of Infrastructure and Environment talked about the importance of "living labs" where mistakes are accepted. Roger Pulwarty warned about "doing the *right* thing and not simply rushing to do *any* thing", while complaining that "we do not resource the long-standing collaborations that are needed for a changing world". Christiana Figueres asserted that the climate change lens should be used to address those issues which most hurt in each country, and that may be as disparate as health, cities' liveability or food security. As she urged delegates to stop hiding behind the aggregate level (and in the process failing at the individual level, which is where responses are most needed) Her Majesty Queen Maxima of the Netherlands agreed, stating clearly that no one should be left behind.

Will we be able to rise to these challenges and stop the alarm clock before it rings in five years' time? Is there any chance of meeting this most fleeting 1.5°C mirage? Do we have the luxury of a choice? Can we learn from the approaches and initiatives that are using out-of-the-box thinking, and attempt to scale those up? This was the hope – and motivation to keep going – for the more than 1,700 delegates attending Adaptation Futures.

Do local and national development priorities align?

Reflecting on the ASSAR-PRISE session

by **Mark Tebboth**

East Africa Researcher

University of East Anglia

A recent article in a UK newspaper that headlined '50 million Africans face hunger after crops fail again', describes the ongoing crises in eastern and southern Africa. The article described how a second year of drought-related crop failures – linked to the severest El Niño in 30 years – has led to the malnourishment of more than 1 million African children, and left an estimated 32 million people in southern Africa and 10 million people in Ethiopia in need of food aid. Similarly, in India, severe drought and extreme heat are reportedly claiming the lives of 300 people every month, with 330 million people unable to meet their daily water needs. Daytime cooking bans are in place and some states have outlawed the burning of crop stubble.

It is against this backdrop of severe drought, extreme heat and food insecurity that I found myself sitting in an air-conditioned room (I know, it jars) in the World Trade Centre, Rotterdam as part of the ASSAR-PRISE session of Adaptation Futures. Working in semi-arid regions under the CARIAA (Collaborative Adaptation Research Initiative in Africa and Asia) umbrella, ASSAR and PRISE are two research consortia with an express aim of building resilience and improving livelihoods to enable people and communities to better cope with the extreme weather events – and their associated impacts – that are likely to become more common under anthropogenic climate change.

So what did the session cover? More importantly, did I leave the session with a renewed sense of optimism that this research would contribute to some sort of positive change for a family in India without access to enough drinking water, or for a pastoralist in Ethiopia struggling to find fodder for his herd?

There were five presentations of case studies by both ASSAR and PRISE researchers, describing issues related to: (1) seed certification in Mali, (2) water policy in Ethiopia, (3) regulatory responses to protect groundwater in Maharashtra, India, (4) insights from the application of a value chain analysis in five countries in Africa and Asia (Kenya, Tanzania, Senegal, Burkina Faso and Pakistan), and (5) ways to create an enabling environment for the private sector in Senegal, Kenya and Tajikistan.

Through their case studies, the presenters described some of the connections and disconnections between national development strategies and local adaptation pathways.

Photo: Lucia Scodanibbio

For example, Edmond Totin from ICRISAT described how the implementation of the national seed policy in Mali created additional barriers for smallholder farmers. Farmers were often unable to afford the seed certification costs, which restricted their access to the seeds and meant most used their traditional or informal varieties. Suchita Awasthi from the Watershed Organisation Trust described the regulatory response of Maharashtra State, India for groundwater management, and the problems of implementation on the ground. These problems included a lack of capacity to enforce regulations, limited awareness of regulations in affected communities, a lack of acceptance by farmers, and limited buy-in from key stakeholders. Mohammed Assen from Addis Ababa University explored some of the contradictions between the national-level policy to build a climate-resilient green economy and the local-level need to maintain water access for farmers and pastoralists in the Middle Awash Valley. Specifically, Mohammed highlighted how, in some cases, the focus on lowering national emissions through the use of ethanol (produced in-country) and on producing sugarcane, was making it more difficult for agro-pastoralists to irrigate crops and for pastoralists to access water from the Awash River.

These case study presentations, and the group discussions that followed, made it clear that national policies often conflict with local priorities: there are many disconnections and not many connections (between ministries, sectors, etc.). Clearly, governments are essential actors in protecting and providing public goods, but economic development and national priorities often trump climate adaptation and can result in local disbenefits. Similarly, many sectors and groups of people (small- and medium-sized enterprises, smallholder farmers and pastoralists) are left out of the discussions about economic development and the best ways to achieve pathways to resilience. This has the potential to result in ill-informed and poorly thought-through policies with negative impacts for the people they are designed to support.

This ASSAR-PRISE session provided a platform for researchers, practitioners and decision makers to discuss some of these barriers and to begin to explore opportunities for strengthening the interface between climate-resilient national development strategies and local adaptation pathways. Doing so would enable more widespread and effective responses to climate change that improve the wellbeing of the most vulnerable. The presentations were engaging and the discussions were lively and stimulating.

My one major disappointment in the session concerned the relative silence on the ways to address some of the issues and barriers that had been highlighted. To my mind, key questions remain around understanding how barriers to resilient livelihoods can be disrupted, circumvented or removed to ensure more locally supportive national priorities for communities that are historically marginalised and disempowered. Clearly, more research is needed but that research must have a well-defined and clearly articulated pathway to impact.

What now?

Both ASSAR and PRISE are only halfway through their five-year project lifetimes and I hope that a key focus of the remaining 2.5 years is on deepening the understanding of the current situation and exploring a range of potential futures. This should be done with a view to identifying potential ways of engaging and influencing decision-makers and other key actors who can bring about positive and lasting change for vulnerable and marginalised people in semi-arid regions.

Photo: Prathigna Poonacha and Tanvi Deshpande

Seed certification and marketing governance in Mali: Do farmers actually benefit?

By **Edmond Totin**

West Africa Researcher, ICRISAT

Agriculture constitutes approximately 70% of Mali's gross domestic product. However, the seed market still remains underdeveloped, and only a small amount of certified seed is available to farmers in local markets.

The Seed Law: Goals and challenges

In Mali, seed production, distribution and use are guided by the Seed Law – a policy enacted in 2006 to promote sustainable and competitive agriculture. Following this law, when offered for sale, seed must be certified with an official label indicating its kind and variety, germination rate, and date of testing. Any seed that is not properly labelled should not be sold. The Seed Law aims to achieve increased agricultural productivity and improved seed dissemination, and to facilitate farmers' access to high quality seed.

Why is it then that, despite the positive goals of the Seed Law, more than 80% of the seed used in Mali still comes from the unregulated traditional and informal seed systems?

The main problem with the Seed Law is that farmer associations cannot afford the certification costs. On average, the certification of a ton of sorghum seed costs around 85,000 CFA francs (almost US$146) for both field inspections and laboratory seed testing operations. While these costs are too expensive for most farmer cooperatives, they are particularly prohibitive for individual farmers based in marginal and remote areas. This is because the only Seed Laboratory in charge of all seed certification activities is located in Bamako and the certification costs increase with the distance of the production field to this seed control office. Given these challenges, although farmers still register as seed producers, they often continue to sell their seed in the informal system.

http://www.bioversityinternational.org/

Partnerships with private enterprises

To help deal with these challenges, private enterprises have recently begun partnering with farmer associations: the private enterprises pay for the seed production and certification costs and buy the resulting seed from the farmers. The aim of this partnership is to decentralise and increase the number of seed distribution points at the community level, improve the quality of the seeds, and help professionalise small-scale seed production and distribution. But there are challenges with this arrangement too. For instance, the agreement between seed producers and private enterprises does not allow for direct trade, so seed farmers cannot sell their produce to their peers. At the same time, the private enterprises sell the improved seed at a price higher than most smallholder farmers can afford. Furthermore, with the enterprises buying all the seed, seed producers do not develop the necessary skills and knowledge to properly market their seed (e.g., determining market preferences, developing mechanisms of price formation, developing strategies of advertising, packaging and branding). As a result, many formal seed producers begin to see themselves simply as service providers to the private enterprises. So, yet again, the majority of farmers revert to using the traditional and informal seed systems.

All in all, the Seed Law and current partnerships provide greater benefit to the private seed enterprises than to the seed farmers they intend to help. To change this status quo, the gaps between the national seed framework and the local context need to be reduced.

Adaptation pathways and maladaptation

By **Chandni Singh**

South Asia Researcher, Indian Institute of Human Settlement

Pathways approaches are gaining prominence for understanding how people and systems manage and respond to risks, and how decisions to one risk at a certain time can have repercussions on future adaptation options. The conference session "Adaptation pathways and maladaptation" drew on case studies from around the world to demonstrate the value of using pathways to chart future adaptation options and opportunities across multiple climatic and socio-economic scenarios. Crucially, the pathways approach was discussed as a way to interrogate who wins and who loses when a certain strategy is followed and what this means for adaptation and maladaptation at a systemic level.

Along with my colleague Sumetee Pahwa Gajjar, I presented a paper titled "Development Pathways as a Lens to Understand Adaptation, Maladaptation and Maldevelopment" which drew on examples from rural and urban India. As opposed to the other papers in the session that took a future-scenarios approach, our paper looked backwards to chart how historical development decisions lock systems into trajectories that are potentially maladaptive. Whether it is urban planning and lake degradation in Bangalore, or input-intensive agriculture stoked by the Green Revolution in India's rain-fed regions, we argued that past development decisions have implications for how people and systems adapt in the future. Our paper was well-received and sparked a lively discussion that will definitely help to refine future outputs.

Inspirations from Adaptation Futures

By **Rahinatu Sidiki Alare**

West Africa Researcher, University of Ghana

"With adaptation, we need to combine the love of science with the recklessness of the entrepreneur."

- Melanie Schultz van Haegen, Dutch Minister for Infrastructure and the Environment

"Think about the women, men and children. Think about the individuals. Because that is where we need to make a difference. The question that we need to wake up to every morning is: have we made the life of these people any easier and more liveable? That is what we need to answer, that is what adaptation is about."

- Christiana Figueres, Executive Secretary of the United Nations Framework Convention on Climate Change

These were some of the quotes that keep echoing to me after the Adaptation Futures Conference. With the growing recognition of the impacts of climate change on lives, ecosystems and livelihoods, adaptation has assumed centre-stage within the development discourse. Therefore, a conference with a focus on finding practical and effective adaptation strategies to build resilience to climate change was timely.

This conference was different from most local conferences I have attended. The blend of practitioners, researchers, policy makers and entrepreneurs in the event sparked lively, insightful and interesting discussions among participants. Impressed by the calibre of presenters, I was overwhelmed by the amount of knowledge I gained within such a short space of time.

I got confused each day as to which of the parallel sessions to attend, because I did not want to miss out on anything! I actually wished I could be in more than one place at one time! Besides exchanging knowledge, there were amazing opportunities for networking and I could not leave this event without updating my contact list with new names for future engagements.

Above all, I got my inspiration back! I'm now reinvigorated to actively contribute to providing the developmental needs of vulnerable people. I now wake up every day with the gentle memory of the voice of Christiana Figueres whispering '…*have we made the life of these people any easier and more liveable*?' Though haunting, these words are forceful enough to propel me to action each day. I hope as the ASSAR consortium develops, many lives will be improved through our collective efforts.

Photo: Prathigna Poonacha and Tanvi Deshpande

Photo: Daniel McGahey

Mobility as an adaptation response in Isiolo County, Kenya: Gendering the debate

By **Nitya Rao**

East Africa Researcher, University of East Anglia

Isiolo County in Kenya largely comprises semi-arid and arid rangelands which are subject to increased degradation of pastures, climate variability – particularly in rainfall patterns, and with consequent water scarcity – and growing conflict due to changing pressures on land and land use. While pastoralism, dominated by large herds of camels and drought-resilient small stock of goats and sheep, still remains an important source of livelihood, one finds a growing movement of people to urban and peri-urban locations. This movement is a response to the difficulties of finding water and pasture for livestock, but equally a reflection of changing aspirations and needs, particularly amongst the youth.

The paper I presented at Adaptation Futures, based on preliminary data collected from two sites in Isiolo county (one rural and one peri-urban), seeks to better understand the implications of current mobility patterns on livelihood security and wellbeing, as well as gender and generational relations. Interestingly, local adaptation responses, including the move from pastoral to sedentarised lifestyles, have brought to the fore two key changes in the social domain: a) women's growing engagement in a range of businesses as well as wage-work to ensure enough food for survival; and b) a breakdown of reciprocal gender relations, with male inability to take on provider roles leading to both delayed marriages and increased divorce.

During my session, there were great discussions on issues of scale, especially in light of the need to take account of natural, socio-economic and institutional contexts when planning and implementing adaptation responses. By highlighting the temporal and spatial complexity of mobility patterns and their gendered nature, the research provides opportunities for critical reflection and learning lessons in the process of policy planning. It emphasises that households are not unitary entities. Rather, their diversity and variations in strategies need to be taken into account in order to move towards ensuring community wellbeing.


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Comparison of wellbeing and vulnerability approaches for informing adaptation decisions
University of Cape Town
ASSAR


Impacts of the climate risks

From the Tool Shed to a Learning Space

A short workshop on Vulnerability and Risk Assessments

By **Jesse DeMaria-Kinney & Dian Spear**

The Adaptation Futures conference provided a wealth of information, ideas and networking opportunities for the 1,700+ people in attendance. And with 155 sessions, plus the Adaptation Expo and special 'Tool Shed' pavilion, all taking place simultaneously, attendants had to make some difficult choices! So, as we set up for our 30-minute Tool Shed session on Oxfam's Vulnerability and Risk Assessment (VRA) we had no idea what kind of a turnout to expect. Needless to say, as people flooded into the Tool Shed, leaving standing room only, we were thrilled! But what did everyone come to see?

Our ASSAR team members – Dian Spear and Irene Kunamwene (University of Cape Town) and Daniel Morchain (Oxfam GB) – described the VRA process, and shared their experiences of running VRA's in Namibia and Botswana. We then invited the audience to participate in an experiential learning activity where they were guided through the five steps of the VRA: Preparation*, Initial Vulnerability Assessment, Impact Chain Exercise, Adaptive Capacity Analysis, and Aligning Findings with Opportunities.

What is a VRA?

Oxfam's VRA methodology brings together a wide range of stakeholders – from communities, and local-, district-, and national-level organisations and government – to identify the full range of hazards that make individuals and communities vulnerable. Stakeholders then help to jointly design measures to reduce their risk to these hazards, promote their resilience and enhance their wellbeing.

Experiential Learning Activity

First, we asked participants to imagine being in a semi-arid area where vulnerable subsistence farmers are exposed to variable and unpredictable climatic conditions, with increasing extreme weather events, and live on staple foods such as pearl millet, sorghum, melons, beans, maize, and ground nuts. Next, we gave the participants different roles to enact, including: village elders, teachers, mopane worm harvesters, women traders, out of school youth, agricultural extension officers, and officials from the Department of Gender. We based these roles on the social groups and livelihood activities identified during our recent VRA in Bobirwa, Botswana.

We then asked participants to consider their vulnerability – framed in terms of exposure and sensitivity – to a range of hazards and issues. Using more examples from the Bobirwa VRA, these included social inequalities and injustices, a lack of access to services and natural resources, and climate change.

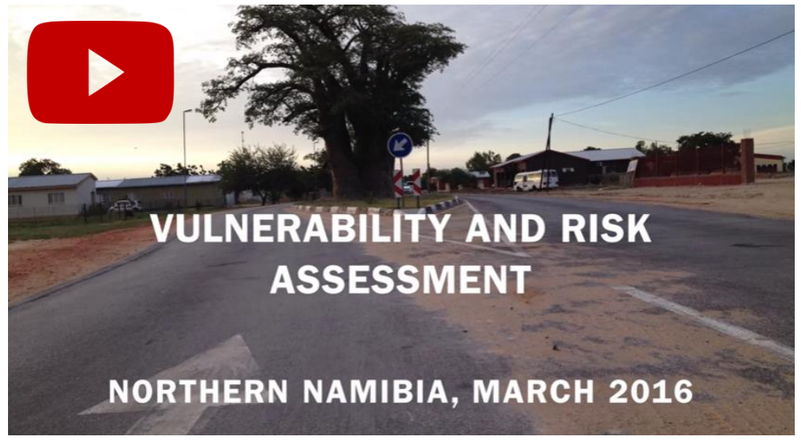
FRAMING EXPOSURE: *"What is the potential extent to which a social group (or a livelihood activity) could be affected or damaged by the occurrence of a hazard or an issue?"*

FRAMING SENSITIVITY: *"What is the actual impact of a hazard or issue on a social group (or on a livelihood activity) over a set period of time in the past (usually 15 years)?"*

Finally, we asked participants to once again use role-play to create an impact chain for drought, focusing specifically on how drought affects the sensitivity and exposure of small-scale farmers and women.

The interactive nature of this exercise gave people a welcome break from slideshow presentations. But more than this, our session seemed to light a spark in participants, and conversations about VRAs continued even after our lightning-quick session had ended.

Photo: Gina Ziervogel



"This exercise will influence and contribute to draft our district development plan, particularly the activities related to climate change"

– Pelaelo Master Tsayang, Principal Economist & District Planning Officer, Bobirwa Sub-District, Botswana

Next steps

ASSAR has already run VRAs in Bobirwa, Botswana and Omusati, Namibia. These provided an open space for diverse voices to be heard on crucial issues. Conversations contributed to clarifying the challenges affecting various levels of governance, and helped to build a common understanding of the root causes and drivers of vulnerability. The VRAs also helped to reach a better understanding of how climate change impacts different social groups, and to explore initial ideas about how to address these impacts and improve the resilience of diverse stakeholder groups.

Finally, the participatory-nature of the VRA demonstrates the potential for research-oriented activities that are done with, by and for stakeholders, to maximise the uptake of research findings and to contribute to a change in people's lives.

*The Preparation step requires the identification of two groups of players critical to the VRA: the Planning and Facilitation Team and the Knowledge Group. For further information about the two groups and the methodology see Oxfam's full guidance on VRA methodology here.

ABOUT ASSAR

WHY WE FOCUS ON SEMI-ARID REGIONS

As the global impacts of climate change become more clearly understood, so too does the need for people to effectively respond and adapt to these changes. Home to hundreds of millions of people, the semi-arid regions of Africa and Asia are particularly vulnerable to climate-related impacts and risks. These climate-change hot-spots are highly dynamic systems that already experience harsh climates, adverse environmental change, and a relative paucity of natural resources. People here may be further marginalised by high levels of poverty and rapidly changing socio-economic, governance and development contexts. Although many people in these regions already display remarkable resilience, these multiple and often interlocking pressures are expected to amplify in the coming decades. Therefore, it is essential to understand how to empower people, local organisations and governments to adapt to climate change in a way that minimises vulnerability and promotes long-term resilience.



To date, most adaptation efforts have focused on reactive, short-term and site-specific solutions to climate-related vulnerabilities. Although important, these responses often fail to address the root causes of vulnerability, nor shed light on how to proactively spur larger-scale and longer-term adaptation that has positive effects on socio-economic development. Using both research and practice to address this information shortfall, the Adaptation at Scale in Semi-Arid Regions (ASSAR) seeks to produce future-focused and societally-relevant knowledge of potential pathways to wellbeing through adaptation.

Our research framework

ASSAR's overarching research objective is to use insights from multiple-scale, interdisciplinary work to improve the understanding of the barriers, enablers and limits to effective, sustained and widespread adaptation out to the 2030s. Working in a coordinated manner across seven countries in India, East Africa, West Africa and Southern Africa, ASSAR's research is case study based and strives to integrate climatic, environmental, social and economic change. The dynamics of gender roles and relations form a particularly strong theme throughout our approach.

Each of ASSAR's teams conducts regionally-relevant research focused on specific socio-ecological risks/dynamics that relate centrally to livelihood transitions, and access, use and management of land and water resources in water-stressed environments. Focal research themes in each region are: agro-intensification in West Africa; land and water access in East and Southern Africa; and land use, land cover and livelihood changes in India.

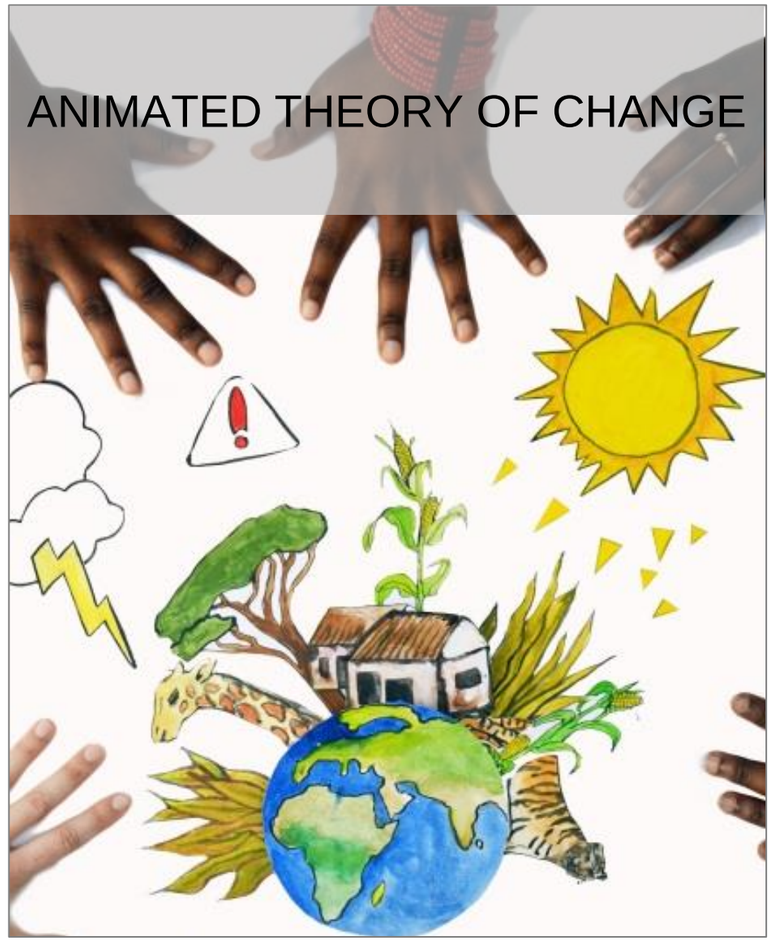
Over its five-year lifespan (2014-2018), the cross-regional comparison and integration of research findings will enable ASSAR to develop a unique and systemic understanding of the processes and factors that impede adaptation and cause vulnerability to persist.

Putting our work in practice

To ensure that project case studies are aligned with the needs and realities of those living and working in semi-arid regions, and to increase the chances that findings and recommendations are taken up, ASSAR builds relationships with a wide spectrum of stakeholders from communities, civil society organisations, research institutions, governments and non-governmental organisations.

By guiding stakeholders through participatory scenario planning processes ASSAR aims to build a common understanding of current adaptation needs and past adaptation failings, while promoting the co-production of adaptation responses that can yield appropriate, tangible and lasting benefits. By using stakeholder mapping and analysis to better understand the power dynamics of different stakeholder groups, by working with and alongside boundary organisations and the private sector, and by engaging in effective communication, capacity building and advocacy campaigns, ASSAR seeks to inform and promote sustainable development pathways that have the best prospect for enhancing the wellbeing of the most vulnerable and/or marginalised in the coming decades.

Through these activities, ASSAR will better integrate the domains of adaptation research, policy and practice. By building the adaptive capacity of primary stakeholders, policy and decision makers, practitioners, boundary organisations, and academic researchers, this integration could bring about previously inconceivable strategies for change and transformation. In time these efforts could also contribute to a change in the attitudes and behaviours of key stakeholders, prompt easier and better access to resources by vulnerable groups, and enhance the power and agency of vulnerable groups to lessen or remove adaptation barriers, and exploit adaptation enablers.



Photos (L-R): Salma Hegga, Poshendra Satyal, Tali Hoffman

ASSAR OUTPUTS

Some of the outputs produced by the ASSAR team during 2016

Working Paper

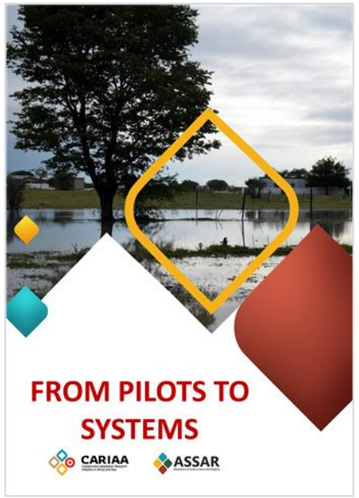
Assessing climate change risks and contextual vulnerability in urban areas of semi-arid India: The case of Bangalore

Working Paper

Transformative adaptation in semi-arid regions

Working Paper

From Pilots to Systems: Barriers and enablers to scaling up the use of climate information services in smallholder farming communities



Working Paper

Policies, Projects and People: Exploring the adaptation-development spectrum in India

Information Brief

Gendered vulnerabilities and responses to climate risks

Short Report

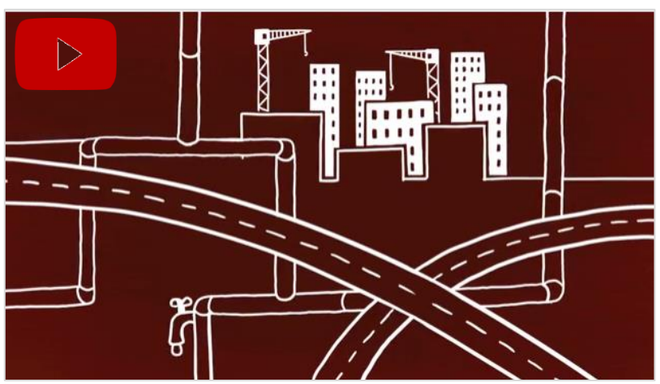
Climate change vulnerability and risk analysis in the Bobirwa sub-district, Botswana: Towards improving livelihood adaptation to climate

Floods and Droughts in Namibia

A TV documentary

Climate Change in the Semi-Arid Regions of India

A Warli-style animation

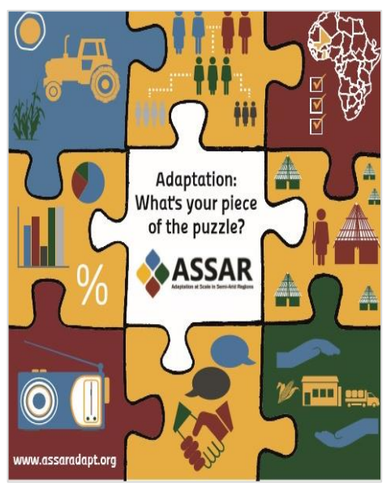


Pilot Radio Podcasts

For Mali and Ghana

Jigsaw Puzzle

Adaptation: What's your piece of the puzzle?



ASSAR PARTNERS

The international and interdisciplinary ASSAR team comprises a mix of research and practitioner organisations, and includes groups with global reach as well as those deeply embedded in their communities.

LEAD ORGANISATIONS

University of Cape Town · iYunivesithi yaseKapa · Universiteit van Kaapstad

University of East Anglia

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OXFAM

PARTNER ORGANISATIONS

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SWEDISH DREN
Enhancing decision making for sustainable development

INTASAVE CARIBSAVE Group
Working together in a changing climate

UNIVERSITY OF GHANA

ADDIS ABABA UNIVERSITY

ICRISAT
Science with a human face

INDIAN INSTITUTE OF TROPICAL METEOROLOGY PUNE

ATREE
Ashoka Trust for Research in Ecology and the Environment

WOTR
water gives life

RED CROSS/RED CRESCENT CLIMATE CENTRE

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CARIAA PROGRAMME

ASSAR is one of four hot-spot research projects in the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) programme, funded by Canada's International Development Research Centre (IDRC) and the United Kingdom's Department for International Development (DFID).

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International Development Research Centre
Centre de recherches pour le développement international

Canada