

Adapting to change in the semi-arid regions of northern Kenya

ASSAR's key findings

October 2018

www.assar.uct.ac.za



Photo: Martin Karimi EU/ECHO

Working in the semi-arid regions of seven countries in Africa and India, the five-year, multi-institutional ASSAR project (Adaptation at Scale in Semi-Arid Regions, 2014-2018) used insights from multi-scale, interdisciplinary work to inform and transform climate adaptation policy and practice in ways that promote the long-term wellbeing of the most vulnerable and those with the least agency.

ASSAR's focus in Kenya

From 2014-2018, ASSAR's Kenya team worked in the counties of Isiolo and Meru to investigate the regional **dynamics of vulnerability and adaptation to climate change**, and related problems. Made up of a team of researchers and practitioners from the University of Nairobi in Kenya, Addis Ababa University in Ethiopia, the University of East Anglia in the UK, and Oxfam GB, we used a case-study approach to analyse how **changing social and environmental conditions** interact in practice.

We centred our research on insights and priorities drawn from multiple rounds of stakeholder engagement at regional and national levels. Specifically, we used four themes to generate transferable knowledge on the changing nature of vulnerability and response to environmental change in the region's drylands:

- Intra-household dynamics and resource access under social transition
- Decentralisation and governance for adaptation
- Conservancy model for resource management
- Analysing perspectives on pasture scarcity

We hope that this detailed work can contribute to knowledge on how to enhance the ability of Kenya's communities, local organisations and government to adapt to climate change in ways that minimise vulnerability and promote long-term resilience.

Five ways to reduce vulnerability and enhance adaptive capacity in Kenya's semi-arid regions (SARs)

1. Adaptation policy approaches should consider that factors like gender, ethnicity, age, household composition, marital status, social capital, and class are important determinants of people's vulnerabilities, and of their capacities to respond to climate risks and impacts.
2. Building on the ongoing process of decentralisation, water governance and disaster risk management could be strengthened if there was a better understanding of and support for local challenges. This could be partly achieved by building the capacity of local actors to proactively engage in governance, and by providing more targeted support to improve resource management at local levels.
3. Conservancies need to balance the competing needs of wildlife, conservancy community members, and those communities outside of the conservancy to enable more sustainable and equitable approaches to natural resource management and livelihoods.
4. By engaging with traditional and religious leaders, and considering their value systems, adaptation policy makers and practitioners can promote adaptation responses that work in conjunction with cultural and social norms. Doing so will help to reduce group-specific vulnerabilities.
5. Recognising that interventions will result in trade-offs with some people winning and others losing is important. Identifying the main trade-offs will help to support more effective design and implementation of interventions, and help to ensure that the needs of those typically excluded from decision making are heard and valued.

Kenya's climatic challenges

Kenya is already vulnerable to climate change and weather extremes like droughts and floods, as recent events highlight. In 2018, some regions received the highest rainfall in 50 years. This led to flash floods that **affected 800,000 people**, displacing communities and causing 186 deaths. Since 2014, the country has also been dealing with a **persistent drought**, classified now as a national emergency. The drought has doubled food insecurity, led to a 99% decline in maize production along coastal areas, and exacerbated water scarcity in SARs.

Under **future scenarios of climate change**, Kenya is projected to become hotter and to warm to a greater extent than the global average. The country is also expected to experience more frequent extreme events. The potential for increasing losses and damages due to continuing flooding and drought may directly affect food security (through crop and livestock losses), human health (through water-borne diseases, malnutrition, death), and housing and manufacturing (through destruction of property, interrupted services).



But it's not just about climate

However, ASSAR research emphasises that climate change cannot be considered alone – it is part of an interlinked web of other issues.

For example, the impact of drought is shaped not only by weather but by other dynamics, including how land is used, and changes in people's access to pasture and water. This means that to really understand the impact of climate change and people's responses to their changing environment we need to have a clear picture of the challenges they face in their livelihoods.

The types of 'adaptation' options people might benefit from include things like:

Diversifying livelihoods



Changing livestock or crop types



Photo: Martin Karimi EU/ECHO

Migrating to other locations for work



Building social support systems



Improving natural resource management practices



There are many different factors influencing the success of these adaptation options, including people's gender, age and other social characteristics. Responding to these issues requires different organisations, sectors and levels of government to work together. In this brief we outline some of the ways in which this can happen.

Ethnicity, gender and age affect the ability of people to respond to climate change

What we did

Our study of intra-household dynamics and adaptation under social transition is based on in-depth interviews with households in Isiolo and Meru counties, conducted in May-June 2017. These comprised life history interviews with a selective sample of 10 households each from three sites: two rural sites, one Meru (Gituli) and one mixed (Kachuru); one peri-urban largely Borana site (Kambiodha). For Gituli and Kachuru, we drew the sample from households that were previously surveyed. Where possible we interviewed two people in each household; in the peri-urban site this was often two women. We looked specifically at monogamous, polygamous, divorced/separated, widowed and consensual households to see how household type can mediate adaptation to climate change. Our overarching research question was: how do men and women (of different groups, ages and statuses) use changing household structures and relationships to respond to risks and adapt more effectively?



What we found

We found a clear difference in adaptive responses by gender, age and location. Older people – both men and women – were more easily able to adapt, given their positions of power and authority within households, than the younger generation. Younger men lacked livestock and alternate employment, hence were frequently unable to contribute to household incomes, and often took to drugs. Their inability to earn pushed women into a range of enterprises, to ensure the survival of themselves and their children, adding to their work burdens. Apart from lack of time, some of these women were also involved in risky ventures aimed at fulfilling their educational aspirations for their children, with adverse consequences for their health and wellbeing. The nature of these risks varied – from engaging in casual sex-work or unprotected relationships with men for short-term security (Kambiodha and Kachuru), to expanding their activities into pasture areas that were prone to conflict (farming by Meru women), to taking on excessive work burdens in terms of long hours of arduous labour. In the absence of adequate state support, young women in particular found it difficult to manage both productive and care work. Forming household units with their mothers or female kin was increasingly common as an adaptation response. New household types and forms of cooperation are emerging, and these need to be understood and better supported.

Recommendations

1. Adaptation and risk-reduction strategies are often **based on assumptions** about who is most vulnerable, how people respond to risk and what needs to be done to help them. However, greater collaboration with communities is needed to **better understand local contexts** and the intersecting factors leading to specific vulnerability profiles of communities and households.
2. **Households should not be treated as homogenous units**. Instead, researchers, practitioners and decision makers should recognise the diversity of each household, the ways in which power and responsibilities are shared, the relationships that exist within them, and how these factors lead to particular risk management outcomes and levels of wellbeing for different household members.
3. Adaptation policies and programmes should be more sensitive to the socially-differentiated nature of people's everyday realities and experiences. These strategies should seek to address the **underlying causes of vulnerability** and question the traditional and cultural norms that have led to unequal rights and opportunities among different groups. **Changing aspirations** (e.g., from rural to urban livelihoods) should also be considered when planning adaptation and development strategies.
4. **Livelihood diversification** is often promoted as an adaptation and risk management strategy, yet what people diversify into is critical. While it may increase incomes, it does not always improve resilience or enhance wellbeing. To counteract any negative effects, improved social protection and social safety nets should accompany livelihood diversification efforts.
5. **Vulnerable men and women need support to deal with the multiple challenges that they face**. They should be equipped with the technical capacity, basic skills (e.g., literacy), infrastructure (e.g., for improved access to potable water) and services (e.g., childcare, agricultural extension services) that they need to become more resilient. Providing information and improving access to jobs, resources and markets can help vulnerable people to diversify their livelihoods and ensure they are not driven into risky or illegal behaviour out of desperation.

For further information please contact Nitya Rao (n.rao@uea.ac.uk) at the University of East Anglia

Decentralisation presents opportunities and challenges for adaptation



Photo: Martin Karimi EU/ECHO

What we did

Decentralisation is a strong policy issue in Kenya following the adoption of the 2010 constitution; some sectors are more devolved than others. Despite the importance of decentralisation, there exists limited empirical evidence on the effects it has on local adaptation processes in the country, particularly so in the context of arid and semi-arid areas. Our research in Kenya focused on the impacts and outcomes of decentralisation on the management of water-related issues (water stress, drought and flooding). We focused on analysing different policy drivers (e.g., [Kenya's Vision 2030](#)), devolved planning processes (e.g. formulation of County Integrated Development Plans in Isiolo), and local experiences and expectations (at community/village levels). Our analysis is based on 24 semi-structured individual and group interviews at the local, county and national levels conducted during two rounds of fieldwork in March 2016 and February 2017.

What we found

There exists a [lack of coordination and integration](#) between different sectors and levels of government and with activities of other non-state actors in Kenya. The distance and disconnect between different stakeholders and levels of government is more pronounced between national and county levels than between county and local levels. There is also incoherence between planning and development cycles. Devolution has seen a substantial transfer of power and authority to county and local levels. However, different institutions and actors appear to have overlapping and competing relationships due to the incomplete nature of devolution, for example national bills and legislation are yet to be passed or changes have not been implemented. Despite this, devolution has afforded more opportunities for flexibility (e.g., Isiolo County's response to water crises) and participation, and there are some beacons of good practice to learn from (although these remain the exception rather than the norm). For example, the National Drought Management Authority's (NDMA) use of Ward and County Adaptation Planning Committees and a County Steering Group has resulted in better coordination of actions. Devolution has been accompanied by increased resources and there has been some improvement in access to service and information. However, there is also more competition between sectors, often greater bureaucracy and shortfalls in capacity and skills.

Recommendations

1. The management of a resource as scarce and susceptible to change as water is becoming increasingly critical, especially since future climate conditions are set to put more pressure on Kenya's water sector. Our findings indicate that a clear division of responsibilities and strong platforms for coordination are needed to make water governance more effective and inclusive.
2. While technical solutions are important, successful management of scarce water resources and better disaster risk reduction requires meaningful participation from local actors. As part of this, decision makers need to understand the unique context of each community, and consider how factors like gender, age, wealth, education level, and ethnicity impact people's abilities to participate in water governance.
3. Similarly, better preparedness and actively promoting responses that reduce the risk and impacts of disasters also requires a clear division of responsibilities and effective and inclusive platforms for coordination.
4. Devolution is creating opportunities and the potential to do things in new ways. Beacons of good practice need to be shared and applied at different levels of government and with other stakeholders to help further integrate and improve coordination.
5. A key aspect of integration is the [linking of different levels of decision-making](#) through institutional arrangements that also address the issues of coordination, capacity building and knowledge sharing. These are critical to support more effective approaches to climate change adaptation.

Harnessing conservancies to reduce vulnerability

What we did

Community wildlife conservancies have been held up as a good way to support livelihoods and promote community-based conservation. In northern Kenya, community wildlife conservancies were introduced in the early 2000s and have altered the way land is managed for livestock and wildlife through the introduction of new institutions as well as governance structures. The approach has been adopted by a number of communities and, as of 2017, there were over 36 conservancies established with support from the Northern Rangeland Trust (NRT). Our research focused on understanding the impact of these conservancies, and the ways their governance changes have affected access to grazing resources among the pastoral communities. The study involved 20 key informant interviews and 12 focus group discussions with the communities within and outside the conservancies, as well as with government officials and non-governmental conservation agencies.



Photo: Martin Karimi EU/ECHO

What we found

We found that the establishment of conservancies has brought benefits to communities in three main areas: governance, livelihoods and the provision of social services. First, the re-purposing and strengthening of traditional institutions (such as the council of elders), alongside a more representative approach (through the inclusion of women and youth), has enabled more inclusive governance within conservancies. Second, in terms of livelihoods, the conservancies have provided employment opportunities for members of local communities as rangers, managers and lodge attendants. Additionally, micro-financing through cooperatives has supported community members to start small businesses. Third, through the conservancies, social amenities such as schools, health centres and water facilities have been provided, and bursaries have increased access to schooling.

However, a number of challenges persist. The co-existence of livestock and wildlife has increased, rather than decreased, human-wildlife conflict. Communities continue to lose livestock and crops to predators without compensation. Perhaps more significantly, some community members report that wildlife are prioritised above their own interests. This issue is compounded by the inadequate provision of preventative health interventions for livestock, as the presence of wildlife increases the opportunities for disease transmission. The relationships between communities inside the conservancy and those outside remain problematic. For example, issues persist in terms of finding suitable ways to manage resources within the conservancy, especially during times of scarcity. Furthermore, the effectiveness of grazing management bodies is undermined by actions of some members who use their positions to facilitate access to conservancy resources by non-members (by passing off livestock as their own and selling livestock from outside the conservancy instead of resident stock).

Recommendations

1. As long as the main source of livelihood for Kenyan pastoralists is extensive livestock production, conservancies must ensure that pastoral communities get sufficient access to pasture and water. This is critical, as restricting access to conservancy resources renders neighbouring non-member communities vulnerable to the impacts of droughts, climate variability and climate change.
2. It's necessary to strike a balance between conservation and pastoral livelihoods. For example, the incentives for communities to co-exist with wildlife should be significant enough to compensate for (1) the opportunity costs of dedicating critical grazing areas for conservation, and (2) the ongoing wildlife-related losses of crops and livestock.
3. Practical measures to support conservancy functioning include:
 - All conservancies would benefit from a register of members for ease of identification. This is important for key decision making that may require voting (such as election of officials) as it will help to ensure that only genuine members vote.
 - Each conservancy needs to brand their livestock with unique marks for ease of identification. This will help for theft reports, to identify any non-member livestock grazing on the conservancy, and to identify 'genuine stock' during offtake by NRT Trading.
 - For successful co-existence of wildlife and livestock, a livestock disease preventive health plan is needed to counteract potential health challenges associated with the possible increase of wildlife populations.

For further information please contact Oliver Wasonga (oliverwasonga@gmail.com / oliverwasonga@uonbi.ac.ke),
University of Nairobi

Governance of natural resources requires better engagement with traditionally-marginalised stakeholders

What we did

Pasture scarcity is a huge issue for pastoral and agro-pastoral populations in the SARs of Kenya (and elsewhere), [impacting on livestock and the wellbeing of populations](#), contributing to increased levels of population mobility, creating conditions for conflict, and leading to other negative impacts. To date, management interventions have not been effective. In our [research on pasture scarcity](#) we focused on understanding both the problem and its potential solutions, including understanding how different ways of managing the problem are viewed by different people, and what helps or hinders different approaches. There is an urgent need for effective interventions, yet these are currently designed with [generally little voice given to local perspectives](#), increasing the likelihood that interventions will fail with potentially negative consequences for populations already experiencing the impacts of pasture scarcity. We used a technique called [Participatory Scenario Analysis \(PSA\)](#) with three communities in the case study area to explore the positive and negative trade-offs associated with different scenarios or visions of the future. The PSA work was augmented by key informant and semi-structured group interviews on how the problem was perceived and which solutions were most preferred in the study area.

What we found

Across the three communities and both the government and NGO groups, [two scenarios](#) – (1) zoning of land to establish regulated patterns of land use and seasonal pasture, and (2) changing herd composition to encourage a shift from grazers (cattle and sheep) to browsers (camels and goats) – consistently scored the highest and received the highest number of first and second choice preferences. The zoning scenario was generally the most favoured, although their positions were reversed in one community and among the NGO representatives, where herd composition change was prioritised. The strong favouring by community members of a zoned pattern of land management, compared with a more individualised basis of private pasture enclosure (which was the least favoured scenario), matches the arguments being made by many commentators on sustainable management of pastoral lands and, at least in part, reflects equity concerns. With regard to the changing herd composition scenario, in both government and NGO groups there was a sense that this change in livestock composition toward more drought-resistant animals was something already happening and likely to continue. This scenario also had slightly higher support among women. In two of the communities a scenario of transitioning out of pastoralism also performed quite well. Many community members, while nervous of the economic risks of transitioning, and its familial and cultural implications, may be actively considering or aspiring to a different livelihood arrangement.



Recommendations

1. Whilst the views of communities were reasonably consistent there was some divergence between the socially-differentiated groups (older men, younger men, older women and younger women) within each community. Consequently, it's necessary to recognise that affected populations experience the impacts of pasture scarcity in socially-differentiated ways and, crucially, have varying views and opinions on the most appropriate responses to the issue at hand.
2. The views and perspectives of affected communities must be included within decisions on the most appropriate ways and means to manage environmental change. To achieve this, meaningful and effective consultation is required to allow a plurality of opinions and voices to be heard.
3. Any intervention will produce trade-offs. Exposing and making these trade-offs explicit, particularly those that affect marginalised populations, can aid institutional actors in identifying not only which interventions are preferred, but by whom and at what cost or benefit.

For further information please contact Mark Tebboth (m.tebboth@uea.ac.uk), University of East Anglia or Oliver Wasonga (oliverwasonga@gmail.com / oliverwasonga@uonbi.ac.ke), University of Nairobi

Please also see the detailed [report on PSA](#).

ASSAR's ongoing work in Kenya

As ASSAR draws to a close, we will be working in a number of ways to extend the influence of our work beyond the lifetime of the project:

- We will continue engaging with stakeholders at different scales to more widely influence practice and policy at local and national levels. More specifically, we will use ASSAR's findings to: (a) influence the region's development agenda, particularly the quest by the Frontier Counties Development Council (FCDC) to harmonise county policies and sector plans; (b) create synergies and input on debates relating to inter-county water and pasture issues; and (c) develop recommendations for binding agreements that could resolve inter-county issues or enhance collaboration (e.g., conflicts over resources during droughts).
- We plan to strengthen research and ongoing action on key issues such as migration, youth aspirations and, especially, conservancies and pasture scarcity.
- Following on from our [PSA work](#), we will continue to build on the training programme we delivered to community members, local government and NGO representatives, to further enhance the capacity available for addressing issues linked to pasture scarcity and natural resource management.
- Through our [peer-to-peer learning process](#), we will continue to facilitate engagement between the communities, NGOs and government departments involved in the livestock sector, and to promote collaboration in social learning and adaptive management.
- We will continue working with NRT and other stakeholders, and communities within and outside of conservancies, to identify any [potential pitfalls and possible solutions](#) relating to future expansions of conservancies in the region.



Photo: Martin Karimi EU/ECHO

ABOUT ASSAR

ASSAR used insights from multiple-scale, interdisciplinary work to improve the understanding of the barriers, enablers and limits to effective, sustained and widespread climate change adaptation out to the 2030s. Working in seven countries in Africa and South Asia, ASSAR's regional teams researched socio-ecological dynamics relating to livelihood transitions, and the access, use and management of land and water. One of four consortia under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), ASSAR generated new knowledge of climate change hotspots to influence policy and practice and to change the way researchers and practitioners interact.

For more information please contact Oliver Wasonga (oliverwasonga@gmail.com / oliverwasonga@uonbi.ac.ke), University of Nairobi or Mark Tebboth (m.tebboth@uea.ac.uk), University of East Anglia



UNIVERSITY OF NAIROBI



This work was carried out under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA), with financial support from the UK Government's Department for International Development (DfID) and the International Development Research Centre (IDRC), Canada. The views expressed in this work are those of the creators and do not necessarily represent those of DfID and IDRC or its Board of Governors.

Creative Commons License

This brief is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. Articles appearing in this publication may be freely quoted and reproduced provided that i) the source is acknowledged, ii) the material is not used for commercial purposes and iii) any adaptations of the material are distributed under the same license. © 2018 International Development Research Centre · Editing and layout: Tali Hoffman · ASSAR photographers: Jennifer Leavy and Daniel McGahey © Photographers

