



SPARC

Supporting Pastoralism
and Agriculture in Recurrent
and Protracted Crises

PASTORALISM AND AGRICULTURE IN CONFLICTS AND CRISES

A review of three years of SPARC research



About SPARC

Climate change, armed conflict, environmental fragility and weak governance and the impact these have on natural resource-based livelihoods are among the key drivers of both crisis and poverty for communities in some of the world's most vulnerable and conflict-affected countries.

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) aims to generate evidence and address knowledge gaps to build the resilience of millions of pastoralists, agropastoralists and farmers in these communities in sub-Saharan Africa and the Middle East.

We strive to create impact by using research and evidence to develop knowledge that improves how the UK Foreign, Commonwealth and Development Office (FCDO), donors, non-governmental organisations, local and national governments, and civil society can empower these communities in the context of climate change.

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ACRONYMS

CPED	Centre for Population and Environmental Development
DIRISHA	Drought Index-insurance for Resilience in the Sahel and Horn of Africa
DRIVE	De-risking, Inclusion and Value Enhancement of Rural Economies in the Horn of Africa
EAC	East African Community
ECOWAS	Economic Community of West African States
FCAS	fragile and conflict-affected states
FCDO	Foreign, Commonwealth & Development Office (of the United Kingdom)
FUDECO	Fulbe Development and Cultural Organization
GDP	gross domestic product
IDRC	International Development Research Centre
IGAD	Intergovernmental Authority on Development
ILRI	International Livestock Research Institute
NGO	non-governmental organisation
SHARED	Stakeholder Approach to Risk Informed and Evidence Based Decision Making
SPARC	Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises
TCAR	transboundary climate, adaptation and mitigation risk
UN	United Nations
UNEP-WCMC	United Nations Environment Programme World Conservation Monitoring Centre
UNGA	United Nations General Assembly
WDP	Ward Development Planning

INTRODUCTION

People living in the drylands are used to dealing with uncertainty. Pastoralists, agropastoralists and farmers in Africa and the Middle East have thrived for thousands of years, managing risks and seizing opportunities to make sustainable use of land and natural resources in harmony with climate variability.

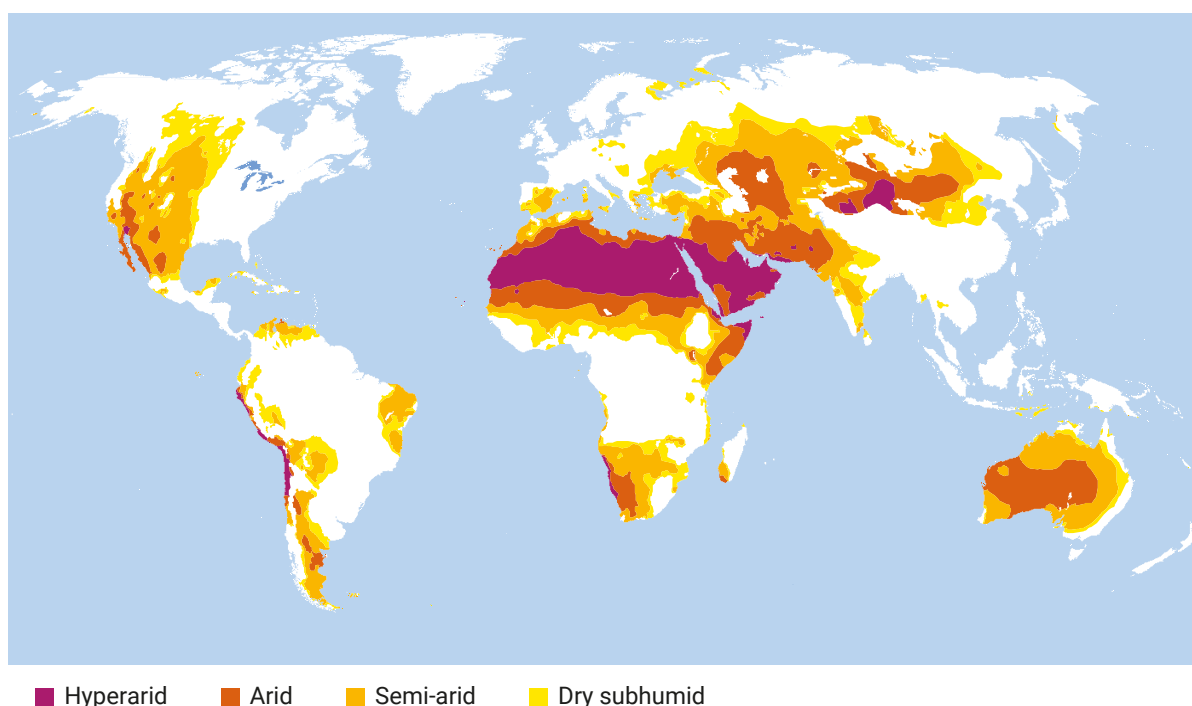
Far from being outdated or unproductive, pastoralism and farming in the drylands are highly adaptive, well suited to semi-arid to arid ecosystems, and form a critical part of regional food and economic security. Pastoralists in Africa's drylands are estimated to provide 75% of the continent's milk and more than half of its meat (ILRI, 2022). In Sudan alone, the export of livestock in 2021 – mainly to Egypt and Saudi Arabia – exceeded \$400 million, and trade has tripled since 2000 (Humphrey et al., 2021).

However, the resilience of people living in the drylands is being tested. Long-term conflicts between the state, non-state armed groups, militias and others are leading to displacement, weak governance, land tenure insecurity, and socioeconomic and political marginalisation in the drylands.

All of these exacerbate individuals', households' and communities' vulnerabilities to shocks, and they place a higher burden on people to cope and adapt to successive crises. These include locust plagues and drought, the COVID-19 pandemic, and international food price increases.

These vulnerabilities are particularly acute in the face of climate change. People living in fragile and conflict-affected states (FCAS) are some of the most vulnerable to increasingly intense and frequent climate extremes and disasters. This is because the institutions and capacities they need to adapt to a changing climate are weak, and because states and other actors are often ill-equipped to support them.

FIGURE 1: THE WORLD'S DRYLANDS AND SUBTYPES



Source: Adapted from UNEP-WCMC (2007)

Despite this, support to dryland communities remains fragmented, siloed, and often ill-suited to specific contexts. People living in the drylands are rarely asked what support they would like to receive, or what problems they are facing. Moreover, the fragile and conflict-affected nature of these areas deters many donors from intervening.

There is a tension between short-term humanitarian assistance and longer-term climate and development work, and often a lack of collaboration or coordination concerning the processes and solutions that would best support people living in these areas.

The Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) programme was commissioned by the United Kingdom's Foreign, Commonwealth & Development Office (FCDO) to provide more meaningful and cost-effective support to pastoralists, agropastoralists and farmers living in the context of climate change, protracted crises and ongoing conflicts.

It does this by developing, brokering and managing knowledge which helps the broader development community to make more cost-effective and feasible interventions in the drylands. SPARC has been funded partially by the International Development Research Centre (IDRC) since 2021.

BOX 1: A NOTE ON SCOPE AND DEFINITIONS

SPARC focuses on 'dryland communities': a term which covers a wide range of people engaged in food systems in the drylands, including pastoralists, agropastoralists, farmers and those experiencing transitional livelihoods, such as migrants. So far, SPARC has focused on communities living in: Afghanistan, Burkina Faso, Chad, Ethiopia, Kenya, Mali, Mauritania, Niger, Nigeria, Somalia, South Sudan, Sudan, Syria, Tunisia, Uganda and Yemen.

Drylands (see Figure 1) are areas defined by water scarcity and characterised by seasonal climatic extremes and unpredictable rainfall patterns. Climate change and variability are therefore important factors affecting dryland communities.

Pastoralism is the extensive livestock production system that involves the tracking and use of grazing and water across a given landscape. Typically practised in dryland areas, mobility is key to this system.

Agropastoralism is slightly different to pastoralism in that it integrates crop production and livestock production, and it is practised amongst settled, nomadic and transhumant communities.

SPARC is situated to support responses in both protracted and recurrent crises. Definitions for both are important as they reveal different types of responses.

Protracted crises are defined as when a significant proportion of the population is vulnerable to death, disease or disruption of their livelihoods over a long period of time (over three years). Such situations are often complicated by violence and natural disasters such as flooding and drought. Protracted crises result in a mixture of acute and long-term needs, often combining high levels of malnutrition, mortality and disease alongside high and chronic levels of poverty, food insecurity and a lack of economic opportunity.

Recurrent crises generally occur in areas of chronic poverty, exposure and vulnerability, where predictable shocks – primarily those related to natural hazards, such as flooding or droughts – trigger repeated humanitarian crises. Responses to recurrent crises focus government efforts to improve the ability of communities and individuals to withstand disasters and other shocks and stresses.

SPARC's geography includes a large number of **fragile contexts**. This is commonly used to describe those low-income economies that are subject to conflict, political instability, macroeconomic imbalances and natural disasters.

The knowledge SPARC generates creates change in two ways: by informing and influencing decision-makers about specific policies, programmes and practice, and by reframing how these actors think about key concepts and issues. SPARC does this by:

- generating policy-relevant and accessible evidence on dryland communities for decision-makers across a wide range of sectors, including donors, non-governmental organisations (NGOs), banks and funds, investors and the private sector
- developing and identifying innovative programmes, policies, technologies and systems to support livelihoods in the drylands
- providing technical assistance to the UK government, as well as other governments, NGOs and a wide range of humanitarian, climate and development actors.

SPARC is a consortium led by fund manager Cowater, working in partnership with ODI, the

International Livestock Research Institute (ILRI) and Mercy Corps. These partners' broad range of expertise and reach creates a unique network for developing knowledge and effecting meaningful cross-sector change in how people intervene and invest in the drylands (See Figure 2).

This report, commissioned midway through SPARC's six-year run, synthesises SPARC's work in the period 2020 to mid-2023. Chapter 1 reviews SPARC's research into critical knowledge gaps and outlines how this research is designed to generate change in perceptions, policy-making and aid programming.

Chapter 2 looks at the impacts of SPARC's work so far: how knowledge is being used to support different actors to engage more effectively in the drylands, and how it is being embedded into wider conversations in the humanitarian, climate and development sectors. Finally, Chapter 3 considers the role and importance of SPARC's research in the years ahead, in shaping longer-term programmes, policies and investments that are sensitive to the unique needs and issues affecting the drylands.



Cattle traders at the animal market in Forobaranga, West Darfur, Sudan.
Credit: Albert González Farran/UNAMID

FIGURE 2: SPARC IN STATISTICS

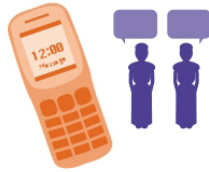
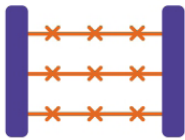
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) is helping drive the agenda on a number of critical issues in the drylands and conflict-affected countries, including:

Reframing aid and resilience



Supporting livelihoods and markets

Understanding land dynamics and farmer-herder conflict



Identifying innovative solutions


Working in a changing climate



Generating new data on gender and social dynamics

SPARC in numbers since 2020:

16  The number of countries in which SPARC has worked

10  SPARC's work includes 10 of the world's 20 most fragile states

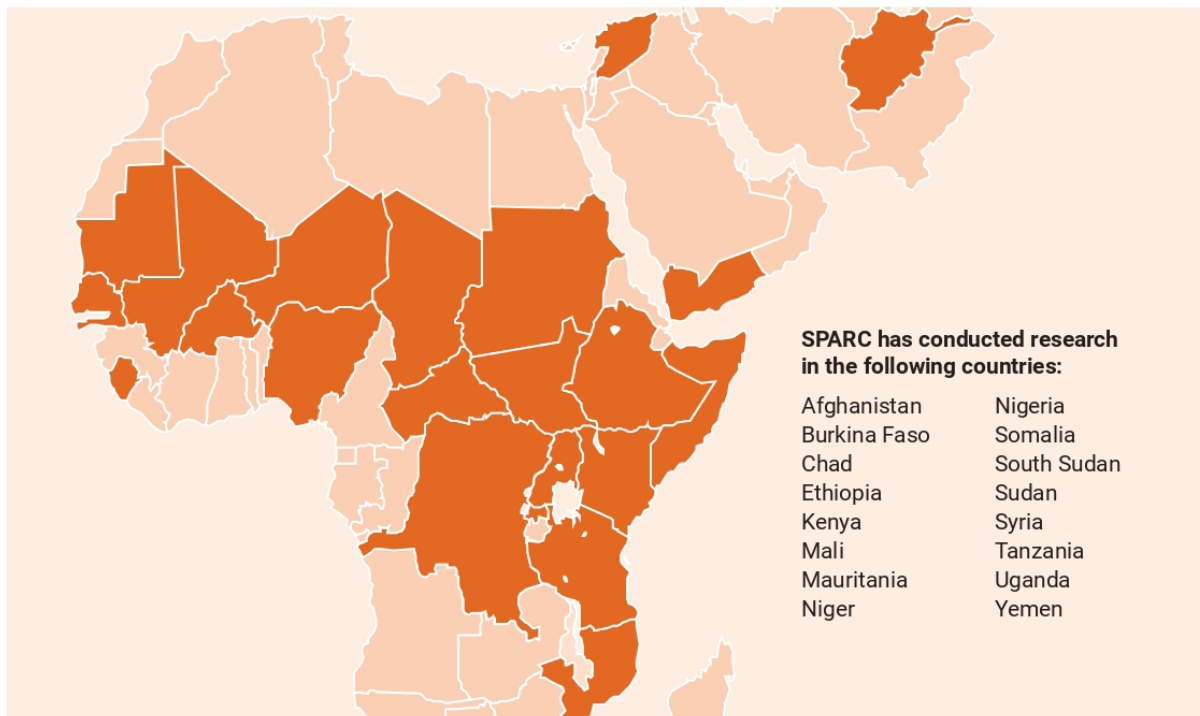
11  Declarations, decision texts and strategies which SPARC has informed

6  Major international events where SPARC has guided discussions and shaped outcomes

20+  Pieces of technical assistance provided to governments, banks and development organisations

54  Reports published, including 10 in French

>GBP 1.5 million  Leveraged in additional funding for research on gender equality and food price increases



Source: SPARC 2024. Data runs from January 2020 to December 2023

1. KEY LEARNINGS FROM SPARC RESEARCH

SPARC was established in 2020 in response to a pressing need to assist pastoralists, agropastoralists and farmers living in the context of climate change, protracted crises and ongoing conflicts. Importantly, this engagement includes not just humanitarian aid and development support, but also work to help realise the significant opportunities for growth and investment in dryland areas. A core tenet of SPARC's work is the need to recognise drylands as dynamic areas that play an important role in regional food security and economic growth, despite years of underinvestment, marginalisation and misdirected or ineffective development support.

While the research agenda of SPARC is always evolving, since 2020 the programme has worked to develop answers to a number of key questions. These interlinking considerations can be loosely categorised under three themes: understanding land tenure and conflict in the drylands, reframing how we look at aid and resilience, and analysing markets and livelihoods.

Within these, additional cross-cutting themes include: the role of innovative processes and technologies in changing pastoralists' and farmers' ways of life, the impact of climate change on lives and livelihoods in the drylands, and how gender and social dynamics shape people's experiences and the impact of development interventions. This chapter summarises some of the key lessons from SPARC research under these key themes.

This research has not only provided nuance and clarity on previously under-researched areas; it has been used to shape government and donor programming. And it has helped move the dial on how highly politicised issues in the drylands – such as the causes of farmer-herder conflict, or the most effective ways to build climate resilience in FCAS – are discussed and framed. Chapter 2 provides specific examples of how SPARC's research has informed changes on the ground.

Reframing aid and resilience

Over the past decade or more, consensus has grown on the need to move beyond the 'care and maintenance' model of aid for people affected by crises, and instead to reduce the numbers of people reliant on responsive aid. However, even though building resilience now attracts huge investment, little is known about the impacts of most resilience-building efforts on long-term food security and poverty. SPARC research has shed some light on the barriers to, and opportunities for, aid and resilience-building in places afflicted by complex, protracted and interconnected crises.

Protracted conflicts are immensely costly in lives and livelihoods and pose a grave threat to development. In a key review (Wiggins et al., 2021a), SPARC has examined the impacts of protracted conflict on markets and livelihoods in 11 countries and has assessed how successful governments and aid agencies have been in responding to these impacts. Information from these countries has yielded a few general conclusions, as well as a range of recommendations for interventions in relief, social protection and livelihood support (see Box 2).

As this review shows, prolonged conflicts and recurring crises can make it more difficult for external actors to know when and how to intervene. SPARC's work on aid and resilience interrogates commonly held assumptions about resilience and aid. It argues, for example, that anticipatory action does not always have a great role to play in protracted food crises (see Box 3), and that an excessive reliance on 'resilience speak' can be harmful for effective interventions (Levine, 2022).

One area that highlights the difficulty of supporting successful action in FCAS is climate finance. More than half of the 25 countries most vulnerable to climate change are also affected by armed conflict violence and instability. Yet as SPARC-supported research shows, finance for climate adaptation in these places remains far below the level needed (International Committee of the Red Cross et al., 2022). On a per capita basis, more than half of the countries in the Sahel and the Horn of Africa received less adaptation funding than the average for least developed countries, despite ranking near the top of climate vulnerability indices (Cao et al., 2021).

This 'conflict blind spot' in climate finance merits urgent attention. SPARC has reviewed the barriers to increasing adaptation finance flows to FCAS (Cao et al., 2021; Quevedo et al., 2022; Quevedo and Cao, 2022). Obstacles include climate funds' inflexible requirements and a strong aversion to risks, as well as a lack of coordination between humanitarian, climate and development agencies. This renders efforts to build long-term climate resilience less effective.

While these analyses have focused on climate finance, some of the conclusions drawn – such as the importance of more coherent work between

BOX 2: HOW CAN GOVERNMENTS AND AID AGENCIES SUPPORT MARKETS AND LIVELIHOODS MORE EFFECTIVELY IN PROTRACTED CONFLICT?

The first conclusion of SPARC's review is that most people survive conflict largely as a result of their own ability, together with family and community, to support themselves – 'if only because in most conflicts, the aid sent is so much less than potential need' (Wiggins et al., 2021a: 9). This is based on an analysis of interventions across Afghanistan, the Democratic Republic of the Congo, Mali, Nepal, Nigeria, Somalia, South Sudan, Sudan, Syria, Uganda and Yemen.

When providing relief or livelihoods support, the researchers note that cash is almost always cheaper, quicker and more effective than aid in kind. That said, cash often needs complementing with other measures, such as technical training, nutrition and healthcare support, or help to access land and public services.

The review also shows that while many households affected by conflict do not receive any support directly, interventions made at community, district and national levels can be an important source of indirect support. These include for example, improving roads to market, supplying better technical and market information to producers, and providing public services such as schools and health posts.

Another key lesson is that social protection – a dependable transfer to those facing hardship – should be a critical part of the response in areas experiencing protracted conflict and crises. The researchers note that this particular approach would require agencies to commit funds for extended periods and have adaptable programming which is flexible to change. Perhaps for this reason, the report only finds a few examples of social protection programmes in the countries under study, most of which have been pilots rather than institutionalised systems.

The report further highlights that the benefits of aid interventions are not shared equally. For example, in some areas cash transfers have been conditional on labouring, despite women in need having very little spare time. The same is true of livelihoods programmes, which have tended to promote small-scale, labour-intensive activities. In addition, very few reports reviewed by SPARC mention the circumstances of seniors or people living with disabilities, despite both groups making up a substantial fraction of those affected by conflict.

Finally, given that evidence on what is effective and why is almost always lacking – and in any case, is hard to collect in conflict-affected areas – management of aid interventions must be flexible and ready to use learning processes to adapt to new changes.

humanitarian, climate, development and peacebuilding actors in FCAS, and the need for investors and aid agencies to embrace 'business unusual' – are equally applicable to other areas of investment. SPARC has also published a more detailed technical report (Wane and Kaïre, 2023) laying out some practical recommendations for countries in the West African Economic and Monetary Union to access climate finance, as well as internal reports focusing on country-specific obstacles to accessing climate finance in Somalia and Niger.

As of July 2022, SPARC research continues to work on key knowledge gaps that prevent more successful aid and resilience efforts in the drylands. This includes a review of

how investors, donors and policy-makers can strengthen food security in 14 famine-risk countries, with a deep dive into Ethiopia, Somalia, Yemen and South Sudan. Furthermore, it looks at how development finance institutions can address constraints in food systems in these countries.

SPARC is also undertaking a study in three countries to examine the medium-term impacts of resilience investments in the drylands, and to answer the question: what happens when projects close? Returning to projects that finished two to five years ago, the researchers are focusing on how changes have rooted, whether they have spread beyond the project area, and who, if anyone, has benefited.

BOX 3: CAN ANTICIPATORY ACTION BUILD RESILIENCE IN SOMALIA?

Somalia has been beset by overlapping shocks since 2019. Plagues of locusts, economic disruption caused by Covid-19, and seasons of below-average rains and flooding have occurred in a country that is already experiencing protracted conflict and insecurity. These continued shocks are making it harder for even pastoralists, agropastoralists and farmers to adapt.

SPARC's research suggests that activities undertaken in the expectation of a crisis are less useful in contexts such as Somalia beset by protracted and current crises, where many communities are already operating at the limits of adaptation. These activities are variously described as anticipatory action, early warning, early action, forecast-based action/finance or livelihood protection.

Between 2020 and 2022, SPARC researchers interviewed farmers and pastoralists across three study sites in Somalia: Somaliland, Puntland and the Middle Shabelle Region (Levine et al., 2021; Weingärtner et al., 2022). The studies provided a real-time learning exercise to understand how these groups were adapting to the worsening threat of drought and other shocks in Somalia, and where anticipatory action might help. A follow-up report in 2023 uses conversations held during roundtables with the United Nations (UN), NGOs, meteorological and government organisations, and the Red Cross to understand how the humanitarian sector can support anticipatory action (Levine et al., 2023).

While SPARC's interviews have shed light on several coping strategies that farmers and pastoralists are already employing, the researchers could not identify any specific constraints that could have been alleviated by anticipatory assistance. Coping strategies include trucking cattle to water holes, buying water and warning each other by mobile phone in advance of locusts arriving. The main constraint to taking anticipatory actions was the dearth of alternative opportunities. But neither the interviewees themselves nor experts convened at roundtables in 2022 could identify much that farmers and pastoralists could have done differently, even with hindsight.

Ultimately, SPARC's research strikes a cautionary note about the ability of anticipatory action to be useful in a context such as Somalia, which 'presents a very different context from that of more straightforward and predictable crises' (ibid: 46). Until there is a fundamental change in the economic opportunities and infrastructure available in that country, anticipatory action is likely to play a limited role in crisis management, and more money should be invested in building longer-term resilience.

Understanding land tenure and conflict in the drylands

Land tenure in dryland areas is a matter of strong debate, and it influences nearly all development interventions and investments in the drylands. Moreover, various forms of violent conflict – ranging from localised disputes over natural resources, to criminality and banditry, to civil strife that impacts at the national level – continue to disrupt pastoral and agropastoral livelihoods in the drylands. SPARC research focuses on natural resource management in these regions, and particularly tenure and rangeland governance in pastoral areas, to improve programming and policy-making. This includes looking at the causes and dynamics of conflict over natural resources.

SPARC's major review published in 2022 looks at how increased pressures and competition for natural resources and pastoral lands in East and West Africa have affected pastoralists' governance and tenure systems (Flintan et al., 2022). The review shows that pastoral tenure systems have become increasingly more complex in response to new challenges and changes. This includes the development of new hybrid types of property systems, which either strategically privatise land to access broader rangeland resources, or conversely recreate the commons, by taking down fences and reinstating collective access and management.

Given these different tenure types, and the interrelationships amongst them, Flintan et al. conclude that it 'should not be surprising' that state land tenure frameworks, which have focused for a long time on creating clearly defined, exclusive and non-overlapping property rights over discrete parcels of land, should face difficulties in implementation (ibid: 54). Rather than such tenure formalisation solving problems, the report shows that it can actually leave some landholders more vulnerable than before. The key lesson is for policy-makers to reconsider how they design and implement tenure formalisation schemes, and to understand that pastoralist practices of layering property rights, although 'messy', may 'be more effective in protecting land than one single "tidy" land-holding certificate' (ibid: 54). One key recommendation is to focus on securing linchpin resources for pastoralists, such as dry season grazing lands with permanent water access.

Additionally, social dynamics play an important role in access to land and experiences of land tenure governance. As the report shows, women, young people and poorer members of a community are often not part of key decision-making processes and they stand to be most impacted by changes in tenure, such as fragmentation of land. However, as pastoral societies change and adapt to new or more intense challenges and opportunities, so do gender relations. In some geographies, the report shows that the role of women has strengthened in recent years, in response to the increasing reliance on social networks – where women play a stronger role than men – in order to access land and resources.

Conflict between farmers and livestock herders in Africa has received much attention in recent years, and it is a highly politicised issue, with herders and their practices often blamed for starting conflicts. SPARC's recent report (Nassef et al., 2023: 6) notes: 'There appears to be no consistent narrative in the media on the causes of farmer-herder conflict'. This, combined with a lack of robust evidence, can lead to policy-makers 'cherry picking' from a wide range of stated causes of conflict.

By reviewing academic and think-tank literature on the causes of farmer-herder conflicts, SPARC researchers have identified a number of trends and potential knowledge gaps that are important to understanding how such conflict is framed. The review finds that more work on this issue is beginning to emphasise the governance, political and social factors underlying conflict rather than just focusing on biophysical factors such as resource scarcity or climate change. But it concludes that there remain large gaps in the literature and a critical lack of primary case studies. Complex issues such as pastoralists' land tenure insecurity are still not being considered in depth, suggesting that analyses often fail to go to the root causes of farmer-herder conflicts and focus instead on 'what is seen or can be easily quantified and explained' (ibid: 28).

The review also highlights the continued neglect of women and youth in literature on this topic, with 72% of papers failing to mention women, and 67% youth. The role that both groups play in conflict, and how they are impacted by conflict, is something SPARC is hoping to redress. The

BOX 4: COULD EDUCATION AND AWARENESS REDUCE CONFLICT DRIVEN BY LAND TENURE INSECURITY IN NIGERIA?

Land tenure insecurity, often linked with the issue of sociopolitical marginalisation, is a significant driver of conflicts between agropastoralists and farmers in Nigeria. The violence is often portrayed as religious in nature – as being between Muslims (Fulani pastoralists and agropastoralists) and Christians (farmers or agropastoralists of non-Fulani heritage). But public discourse and policy responses fail to appreciate the multiple factors creating the increased competition over natural resources.

SPARC, working with Nigerian research partner and pastoralist network the Fulbe Development and Cultural Organisation (FUDECO), has been interviewing agropastoralists in Hayin Ade (Kaduna State) and Wuro Alhaji Idrisa Bappate (Taraba State). This is to develop a more nuanced understanding of the causes of conflicts with farmers, the impacts of conflict on agropastoralists' lives and livelihoods, and the conflict mediation steps they are taking (Opitz-Stapleton et al., 2022a; Opitz-Stapleton et al., 2023). The research finds that inequitable access to land and resources – the legacy of pre-colonial, colonial and post-colonial governance – is continuing to lead to land disputes at both locations. However, this land tenure insecurity is driven by different factors at each site. In Wuro Bappate, pastoralists experienced violence and property destruction when their lands were invaded by illegal artisanal miners, and which culminated in the Mambilla Plateau massacre in 2017. The resulting anti-open grazing ban by Taraba State to prevent further violence has reduced pastoral mobility and increased poverty. In Hayin Ade, by contrast, increasing land prices, attempted land grabs and extortion are threatening the tenure security and livelihoods of even those who have land purchase agreements guaranteeing their land tenure.

Pastoralists and agropastoralists in both communities are not sufficiently aware of their rights regarding land tenure or their rights to compensation for land grabs (Hayin Ade) and degradation (due to the mining in Wuro Bapate) as set out in Nigerian law. Through SPARC research, FUDECO has become cognisant of the land tenure security issues the two communities are facing, and it has since initiated rights education as well as support to FUDECO members through dispute resolution methods and legal services.

programme has also conducted research into the impact of violent and non-violent conflict on herders and farmers in Nigeria, Somalia and South Sudan, and how these conflicts interact within broader political contexts and current crises, including Covid-19 (see Mayhew et al., 2021; Opitz-Stapleton et al., 2022a; Opitz-Stapleton et al., 2022b; see also Box 4 for an example).

Supporting markets and livelihoods

Livestock marketing and trade are critical elements of pastoral livelihood systems and are becoming an increasing focus of investment and aid interventions. But while selling livestock from the drylands can be lucrative, marketing can also be hit by shocks, such as livestock disease, weather events and pandemic-related restrictions. Understanding the structure, functioning and

performance of livestock supply chains, and what is needed to support the development of more resilient markets, is therefore an important focus area for SPARC.

SPARC research looks at a number of market and livelihood shocks. In the Horn of Africa, livestock exports to Saudi Arabia and the Gulf have been interrupted several times by outbreaks of disease in recent years, usually Rift Valley Fever. Moreover, the cancellation of the Hajj in 2020 and 2021 – a major source of livestock export for the Horn of Africa – owing to the Covid-19 pandemic, has had a further impact. Two SPARC studies (Humphrey et al., 2021; SPARC, 2021), commissioned to review how dryland communities were handling the loss of Hajj-related exports, find that, overall, 'the worst fears [of NGOs] have not been realised', and that pastoralists' and traders' long experience of adaption and resilience, combined with above-

normal rainfall in 2020 and functioning alternative markets, cushioned the impact. Both reports conclude that policy interventions should focus on medium- to long-term changes, such as improved access to animal health services and vaccinations, and that markets should be left to recover by themselves in the short term.

In addition to Covid-19-related market disruptions, since SPARC began in 2020, a global increase in food prices following Russia's invasion of Ukraine has sparked significant media attention. SPARC has assessed the vulnerability of four countries – Kenya, Mali, Sudan and Yemen – to increases in world prices of cereals, fuel and fertiliser (Wiggins, 2022). More detailed studies of Mali and Sudan (Wiggins et al., 2023a) show that, while staple food prices in both countries have risen by twofold or more since 2020, international events explain only a small fraction of this increase, most of which has arisen from local conditions such as failed harvests, conflict or rampant inflation. Bringing down high prices for staple food depends largely on reducing variability of local harvests, reducing conflict and, in Sudan, reducing overall inflation. Ultimately, while the war in Europe has done no good for Africa, 'for most people domestic issues matter more' (Wiggins, 2023).

As well as exploring how markets and livelihoods are affected by shocks, SPARC research offers some lessons for building market resilience. In the western Sahel, for example, SPARC's policy brief shows how livestock raising and marketing can be further strengthened by upgraded infrastructure, improved marketing, production of fodder and tailored financial services such as insurance (Simonet and Carabine, 2021). However, further research into formal financial services – such as savings, payments, credit and insurance – finds that livestock traders in Kenya, Mali and Somalia make very little use of such facilities (Banerjee et al., 2022). Instead, traders rely on informal sources of money, such as savings and accumulated profits, help from family and friends, and the occasional personal loan from a trader in the marketing chain. Strikingly, some interviewees were more interested in the development of rural infrastructure, including recognised livestock migration corridors, water points and better-equipped market centres, than access to capital or insurance. Ultimately, the report authors note that the development of rural financial services may be served better not so

much by a full, fixed range of facilities, but more by creating an 'ecosystem of finance' that would allow users to choose from an array of services provided formally – by more than one type of agency – and informally, as users see fit.

One practical way in which SPARC has contributed to more resilient livelihoods is through its participation in the design and scaling up of index insurance. In partnership with ILRI, SPARC is co-funding the project Drought Index-insurance for Resilience in the Sahel and Horn of Africa (DIRISHA, which also means 'window' in Swahili). This is to inform the design of drought insurance at regional level, and to assess the feasibility of such a market in drought- or conflict-prone zones (see Box 5).

Conflict has a big impact on agriculture and markets. But while much work has focused on building back economies after war, there is little research about how to support farmers and agriculture when the fighting stops. A 2023 report by SPARC (Wiggins et al., 2023b) reviews the experience of 'farming after fighting' in Cambodia, Mozambique, Peru's southern highlands, Rwanda, Sierra Leone and northern Uganda, and extracts lessons on how governments and the aid sector could have better supported farming and farmers. The report finds that, in almost all cases, once conflict ended, agriculture experienced a remarkable recovery, usually quickly surpassing pre-conflict levels, despite a lack of government support to smallholder farmers. The report authors stress that recovery could have been all the more rapid and strong had farmers been better supported. They make a number of specific recommendations for governments and the aid sector to support smallholder farmers. This includes supporting farmers to restore the local leadership structures that form an important part of the social fabric of rural society and trade; supporting with post-conflict land disputes; and investing in at least a minimal set of rural services: roads and irrigation repaired, and schools and health posts improved or established.

As well as exploring how markets and livelihoods are affected by shocks, SPARC research offers some lessons for building market resilience.

BOX 5: A REGIONAL APPROACH TO FACILITATING INSURANCE PAY-OUT FROM DROUGHT

Index-based livestock insurance is an innovative form of insurance that will pay out in advance of disasters, based on a number of triggers. It can be an important safety net for livestock keepers who are facing increasingly severe and frequent drought, giving them the means to protect their livestock rather than waiting to be reimbursed after livestock die.

Commissioned by the FCDO and undertaken by SPARC consortium partner ILRI, in collaboration with the Centre for Disaster Protection and the African Development Bank, the DIRISHA project aims to scale up index-based livestock insurance schemes – which are already functional across several countries of East Africa – to a regional level.

DIRISHA reviews lessons learned from different index-based livestock insurance schemes and assesses the feasibility of scaling up this approach. Its 2021 feasibility report (Lung et al., 2021) concludes that there is a ‘strong rationale to implement index-based livestock insurance at the regional level’ and provides detailed options for how this could be structured. Implementing one regional scheme, the authors say, could be more cost effective, and would create a larger market which attracts greater private-sector interest.

DIRISHA’s findings are already being used to inform several initiatives, including the World Bank’s De-risking, Inclusion and Value Enhancement of Rural Economies in the Horn of Africa (DRIVE) project, and the African Development Bank’s Programme for Building Resilience for Food and Nutrition Security in the Horn of Africa Region. DIRISHA has also galvanised actors such as African Risk Capacity to develop new methods for sovereign-level insurance, and continues to be a reference for development partners that are introducing new investments in this space. Further, DIRISHA is collaborating with the Kenya Livestock Marketing Council and provides markets data to Kenya’s National Drought Management Authority to inform the design of drought response strategies.



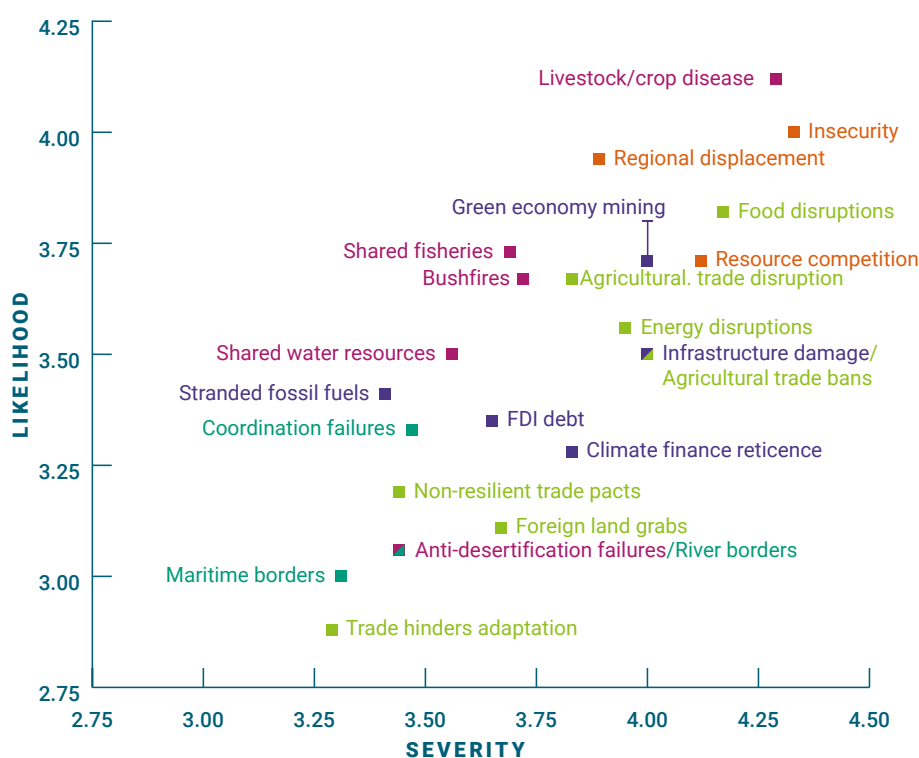
Traders walk past a herd of camels at a livestock market in Beletweyne, Somalia in 2016.
Credit: AMISOM

Working in a changing climate

Climate change is already causing increasingly intense disruptions to pastoral and agriculture systems in the drylands of Africa and the Middle East. This manifests as more extreme and frequent weather events, more variable rainfall and a rise in annual surface temperature. This is only predicted to worsen, posing an existential threat to dryland livelihoods and amplifying food insecurity. SPARC is looking at how transboundary climate, adaptation and mitigation risks (TCARs) will impact dryland communities, and how to incentivise the financial sector to take part in managing these risks.

The climate change risks that pastoralists, agropastoralists and farmers face do not respect national boundaries, while the mitigation and adaptation strategies taken by one country can create risks for neighbouring countries and regions. Despite this, very little work has focused on how to manage TCARs, and adaptation to climate change is often treated as a local concern (Anisimov and Magnan, 2023). To address this gap, in 2021 SPARC looked at how current national and regional policies in Africa identify and frame TCARs (Opitz-Stapleton et al., 2021). Researchers first identified 24 TCARs from national climate policies across East and West Africa and assessed how regional economic communities perceived their severity and likelihood (see Figure 3).

FIGURE 3: LIKELIHOOD AND SEVERITY OF 24 TCARS FROM SPARC’S RISK PERCEPTIONS SURVEY



KEY: Risk pathway

- Biophysical
- Trade
- Financial
- People
- Geopolitical

Top 5 TCARs by likelihood

- Livestock/crop disease
- Insecurity
- Regional displacement
- Food disruptions
- Shared fisheries

Top 5 TCARs by severity

- Insecurity
- Livestock/crop disease
- Food disruptions
- Resource competition
- Three-way tie: Agricultural trade bans, green economy mining, infrastructure damage

Source: Opitz-Stapleton et al. (2021)

The review finds that many actors are aware of TCARs and that regional economic communities are already offering regional visions and coordination frameworks to tackle them. However, implementing these plans is another story. Donors can support in a number of ways: by building capacity and sensitising non-climate change staff on climate change issues, and by funding work that supports greater collaboration and implementation of regional adaptation actions, as well as activities to monitor, assess and report on progress.

Safeguarding pastoralist livestock systems against TCARs should be a critical priority of governments, given the importance of pastoralists' contributions to the livestock sector and national gross domestic product (GDP) in drylands countries. In a 2023 issue brief (Opitz-Stapleton, 2023: 5), SPARC shows that, while pastoralists are no strangers to environmental variability, they are 'losing access to their linchpin climate-resilient strategy: mobility'.

The segmentation and loss of rangelands, restrictions on moving herds within countries and across national borders, and increasing pressure on resources, are all restricting pastoralists' ability to adapt to more frequent and intense weather events, and to the knock-on impacts of these events. SPARC's research makes clear that pastoralists' challenges need to be recognised explicitly within adaptation policies and linked to the appropriate government, judicial and customary systems.

Illuminating how gender and social dynamics impact lives in the drylands

In the drylands of Africa and the Middle East, as elsewhere, various dimensions of social identity – such as gender, age, (dis)ability, class, education, language and sexuality – shape people's lives, livelihoods and vulnerabilities in profound ways. Policies, investments and technologies need to be designed to take into account these dynamics, so that they do not reinforce existing inequalities and the marginalisation of particular groups. Despite this, SPARC has found very little nuanced understanding of gender and social dynamics in the literature.

In 2021, SPARC studied the research landscape on gender in agricultural and pastoral livelihoods in SPARC focal countries (Vincent, 2022). This study, which reviews more than 150 academic papers, finds a small, but growing, body of literature that looks at gendered differences in access to assets and resources, perceptions of environmental changes, and vulnerability to climate change. But studies are geographically uneven, and there is a need for more methodological nuance in exploring how gender differences arise and manifest.

This review prompted SPARC to partner with IDRC to fund three Africa-based institutions to examine how to better integrate gender equality and social inclusion in pastoralism and agropastoralism research. These are the Centre for Population and Environmental Development (CPED), FUDECO and Kenyatta University. While the study is ongoing, emerging findings have been presented at the High-Level Regional Conference on Land and Conflict in the East and Horn of Africa, which SPARC co-organised, and at the International Association of Landscape Ecology 2023 Congress in Kenya.

Other research activities within SPARC have helped make gender differences and social dynamics more visible. SPARC's ongoing series of longitudinal interviews with pastoralists include perspectives from women as well as from a broad range of age and ethnic groups, that provide insight into often neglected perspectives (see, for example, Mayhew et al., 2021; Opitz-Stapleton et al., 2022a and 2022b; see also Box 6).

Another study (Dupar et al., 2021) focuses on the factors that shape opportunities for young people in the drylands, providing recommendations for external actors on how to expand the 'opportunity spaces' for decent work. As that report shows, the drylands offer a range of economic opportunities for young people, including tourism, processing and service industries, renewable energy production and the use of new and green technologies. Yet too few policies and programmes to date have targeted education, skills development and employment support for youth.

The overarching recommendation of the study is for development organisations to engage far more extensively and openly with young people, and particularly young people from pastoralist

communities, whose access to educational and training services has been extremely poor to date. Specifically, there are vast, unmet needs and opportunities to invest in more locally relevant, climate-smart education, vocational and technical training, and in transitions into decent work for young people in the drylands.

Since January 2023, a SPARC intervention started to look explicitly at how to provide gender-sensitive veterinary services in Kenya and Sudan. This initiative, developed by SPARC partner MarketShare Associates, is based on the understanding that women play an important role in livestock management, maintaining the health and resilience of pastoralist communities' most valuable assets. The research will consider how pastoralist women can be supported with veterinary health products, services and technologies, and how existing products can be tailored to be more responsive to gendered social norms.

Promoting innovative solutions for resilient pastoral and agricultural systems

Innovative technologies, policies and processes could play an important role in supporting dryland communities, and particularly those facing recurring and protracted humanitarian crises, where there remain gaps in approaches, programmes and policies that build long-term resilience. SPARC studies social technologies and digital services in relation to livelihoods, markets and land, and innovative approaches to governance in FCAS contexts, which often fly under the radar of investors.

SPARC has adopted a broad definition of 'innovation' to include solutions, processes, business models and services – including digital technologies – that help pastoralists, farmers

BOX 6: UNEARTHING 'UNKNOWN UNKNOWN': SPARC'S INTERVIEW-BASED RESEARCH

SPARC uses longitudinal, interview-based studies to support several areas of research, spanning hundreds of individuals across pastoralist communities in countries including Kenya, Nigeria, Somalia and South Sudan (Elsamahi et al., 2021). This approach is a critical component of SPARC's work. By inviting participants to explain the problems they face and the support they would like to receive in their own words, through a series of semi-structured, open-ended conversations (Levine et al., 2021), SPARC researchers can avoid 'leading with solutions' and instead gain a deeper understanding of the problems that pastoralists face, and the choices they would like to have.

The importance of this approach can be seen in SPARC's work in Somalia. As described in Box 3, at the outset, SPARC's 2020–2023 interview series in Somalia aimed to track people's coping strategies as the serious drought crisis unfolded and identify opportunities for aid agencies to support with anticipatory action.

However, the interviews revealed a different story: one in which there were very few opportunities for anticipatory action to meaningfully support women and men, most of whom had very limited options to adapt. The research lesson, then, is that while anticipatory action can be a critical tool in certain contexts, it is less useful in complex situations, and aid efforts should focus instead on building resilience. An interview-based approach has been critical to understanding this perspective.

In South Sudan, meanwhile, interviews with pastoralists have helped reveal nuances and large discrepancies in how pastoralists consider their livelihoods: breaking down the research binary that positions pastoralism as either a 'dead-end' livelihood system or a traditional way of life to be preserved. The main takeaway from SPARC's South Sudan interview series is the need, ultimately, to support pastoralists by offering them choices.

and agropastoralists to manage risks, take opportunities and build resilience in the context of recurrent and protracted crises.

SPARC innovation research started with a landscape study in 2021 (Makokha et al., 2021), reviewing 38 technologically enabled innovations specific to FCAS contexts in the Horn of Africa and the Sahel. This includes new products and services, or innovations in processes or business models, which improve access to finance, information, markets and more, via radio, social networks, text messages and smart phones.

Some key findings have emerged from SPARC's work on innovations in the drylands. First, innovative technologies and processes have significant potential to create positive change in pastoralists' lives and livelihoods. This is particularly true of social technology – that is, any technology that facilitates social interactions and is enabled by communications such as the internet or a mobile device. This is already enhancing pastoralists' ability to trade, monitor livestock and market conditions, receive weather and climate information and share it within and beyond pastoralist communities.

SPARC's work with online platform Wowzi and Nendo Advisory (Teyie, 2023a; Teyie, 2023b) has explored how social media is enlarging pastoralists' networks in East Africa, enabling them to exploit information and communication services to gain information, make payments, access insurance, engage in local and regional planning and politics, and grow their communities.

However, there are still relatively few meaningful and scalable innovations originating from or directed towards pastoralists and agropastoralists in drylands, compared to those for other agricultural areas. This is largely due to the perceptions of investors and businesses that agriculture is lower risk, with a known demand for certain products. This is compounded by low levels of infrastructure, including digital infrastructure, in the drylands and FCAS, and the fact that some types of innovation in FCAS are locally specific and cannot easily be scaled up.

More generally, decades of political, economic and cultural marginalisation of dryland communities have resulted in a lack of knowledge about the services people need, and the specific nature of challenges they face. It is also important to acknowledge that these innovations have limits. Few innovations are able to overcome chronic challenges such as insecurity, poor infrastructure and low literacy levels in the drylands. Women, in particular, have lower access to devices and Internet use, and the Covid-19 pandemic has triggered a retraction of some of the recent gains in technology access for women. Unless participation is widened to include everyone, strides forward in digital technology can end up reinforcing existing inequalities. As such, SPARC's work shows that innovations must accompany – rather than drive – meaningful change in these areas.

SPARC's work on innovative governance processes includes a review of the Ward Development Planning (WDP) model and the Stakeholder Approach to Risk Informed and Evidence Based Decision Making (SHARED) tool. WDP is an innovative participatory planning approach currently implemented in five counties in Kenya's drylands, which gives pastoralists the opportunity to take part in government planning processes (Bedelian et al., 2023). SHARED, meanwhile, is a governance tool designed to improve decision-making within complex and fragile environments (Hakiman and Stull-Lane, 2022; Hakiman and Stull-Lane, 2023).

SPARC continues to review innovations to include on the SPARC Innovation Dashboard (<https://www.sparc-knowledge.org/innovations>): a resource for funders, decision-makers and other stakeholders. The site has a crowd-sourcing function that enables anyone to suggest additional innovations in dryland regions for review and inclusion. In addition to its own dashboard, SPARC is also collaborating with AgriFin Accelerate¹, ISF Advisors and Briter Bridges to integrate its learning into AgBase, an investment platform which includes the databases of innovators, investors and enablers in agriculture across the Global South. With SPARC support, AgBase will integrate opportunities to invest in innovation in the drylands of East and West Africa that have typically been excluded from similar platforms.

1 FCD0 is also a funder of AgriFin via its partnership with the Bill & Melinda Gates Foundation.

Positioning SPARC's research to respond to new challenges

For research to be used in decision-making processes, it must be timely, relevant and useful. These characteristics have been embraced in SPARC's design: the programme generates and presents practical knowledge over short time periods in response to new policy priorities or requests for support. So far, this has enabled SPARC to pivot to respond to new issues such as Covid-19, the evolving drought in East Africa and the global spike in food prices, amongst other emerging topics.

SPARC's work continues to provide field analysis of evolving climate variability and drought in East Africa: for example, a 2023 research brief outlines the situation in mid-2022, noting low levels of inter-communal violence, a focus on short-term coping mechanisms and the use of debt to mitigate drought impacts on food security and livelihoods (Mayhew et al., 2023). Related work in South Sudan (Humphrey et al., 2023) suggests some solutions,

including the need to redouble efforts to maintain markets and ensure their functionality, to provide pastoralists with information to proactively address challenges, and to design initiatives that focus on how new livelihood strategies are designed for, and might impact, women.

In 2021, SPARC assessed the impact of the Covid-19 pandemic, complemented by a summary of lessons from nine previous crises (SPARC, 2021; Wiggins et al., 2021b). These led to several recommendations on how policy-makers could sustain rural livelihoods and maintain food systems. They are: invest in understanding what is happening – early analyses can be deceptive – and engage with local communities to do so; be flexible; employ those with expertise from managing previous crises; and recognise capacity limits when devising feasible options to cope. SPARC research has also showed that health interventions in the drylands failed to take into account the social nature of many people's livelihoods, offering recommendations for future use (see Box 7).

BOX 7: UNDERSTANDING HOW PANDEMIC POLICIES CAN BE BETTER TAILORED FOR PASTORALISTS

Following the outbreak of Covid-19, SPARC interviewed farmers across Nigeria (Elsamahi et al., 2021; Mayhew et al., 2021) and South Sudan (Gony et al., 2021). It reviewed lessons from previous crises (Wiggins et al., 2021a), and conducted a rapid evidence assessment of impact of the restricted Hajj in 2020 and 2021 on livestock exports through and from Somalia (SPARC, 2021) and South Sudan (Humphrey et al., 2021).

One of several lessons that emerged from SPARC's work in South Sudan is that formal movement restrictions, combined with Covid-19 messaging that promoted social distancing, created a strong climate of fear among farmers, pastoralists and agropastoralists and it severely undermined their abilities to work, trade and support one another.

This was a critical loss for these groups, who rely on social interactions to do business, and who routinely share cattle, food, cash and tasks to support each other through hardships. In the SPARC reports, the researchers posit that while such messaging may well have hindered the spread of Covid-19, it also damaged the informal livelihood support groups that are a critical source of aid for pastoralists in South Sudan's current protracted humanitarian crisis.

The research recommends several ways to keep the social nature of farming and pastoralism at the forefront of programme design and implementation in future pandemics. These include prioritising community-based health messaging involving trusted community members and leaders, and suggesting adaptation strategies that consider the social nature of pastoralists' livelihoods. An example is encouraging farmers and herders to adopt a system of using 'pods', whereby close social interaction is limited to small groups of families, rather than discouraged completely.

Context is widely understood to be critical when planning a successful development intervention in any country. But too often contextual analysis misses the mark or fails to be incorporated adequately into programme design. In a forthcoming suite of reports on the need to 'take context seriously' when planning aid interventions, SPARC analyses how the effectiveness of 20 years of development work in Afghanistan has been undermined by programmes that do not take context into account (Levine and Pain, 2024). It offers some general lessons for aid programmers (see Box 8).

SPARC generates and presents practical knowledge over short time periods in response to new policy priorities or requests for support. So far, this has enabled SPARC to pivot to respond to emerging issues such as Covid-19, the evolving drought in East Africa and the global spike in food prices.

BOX 8: WHAT DOES 'TAKING CONTEXT SERIOUSLY' REALLY MEAN FOR AID PROGRAMMING?

As a programme covering vast and diverse geographies, one of the key lessons from SPARC's research is the need to take context seriously. In particular, one report draws lessons from the experience of interventions in Afghanistan, where huge investments up to 2021 have achieved little in terms of reducing levels of poverty and food insecurity (Levine and Pain, 2024).

While almost all programme design clearly puts effort into understanding the context in which activities take place, this is rarely translated into programming. Afghanistan is just one striking example of this. The authors identify ten common traps.

They include: a tendency to impose 'ideal', western templates of governance and institutions, instead of working to improve existing local governance and norms; reliance on implicit theories about how behavioural change happens; using standard technical solutions – varying from social protection, agricultural extension, micro-credit and community-led development – which ignore the primacy of social, not economic, relations in some areas; not engaging with the impact of interventions on different geographies and across different groups; an overly rigid focus on processes, parameters and accountability, which does not allow for discretion or deviation and can often hinder meaningful outcomes; and the lack of context when monitoring and evaluating interventions.

As well as offering a corrective for each of the ten traps, the authors propose putting context analysis at the end of a project document, after the project description. This seemingly incongruous step makes contextual analysis (including gender analysis, conflict analysis and power analysis) much more manageable, since it has a focus: the proposed intervention.

This report is part of a set of SPARC publications that draw lessons from programming in Afghanistan up to 2021, to help identify the long-term drivers of food insecurity, what new programming could do to address these, and how interventions in agriculture and rural livelihood could better support women and their economic empowerment. Accompanying policy briefs consider how a better application of context regarding local governance, informal credit, markets, post-harvesting processing and storage, and rural differentiation, could have led to more effective development interventions in Afghanistan and to more effective programming elsewhere in the future.

2. PUTTING KNOWLEDGE INTO ACTION

Since 2020, SPARC's work has been used to frame policies and to facilitate more effective discussion around key issues in drylands development.

Supporting the development of an integrated approach to building climate resilience in FCAS

SPARC's work builds on an emerging understanding in the climate, development and humanitarian sectors: that it is not possible to build climate resilience without also addressing the structural causes of fragility and conflict in FCAS. Moreover, humanitarian, climate and development actors must work together to meaningfully reduce people's climate vulnerability.

SPARC's research and advisory services in this area have supported the creation of a cross-directorate approach within the UK government, which focuses on climate finance for countries with high levels of humanitarian need. SPARC has also helped foreground the conflict blind spot in climate finance as a key priority for several departments within the UK government.

More generally, SPARC's work has informed conversations within the aid and climate communities about the need for integrated, coordinated action among humanitarian, climate and development actors in FCAS. SPARC has been supporting a coalition of multilateral development banks, international financial institutions, UN agencies and key humanitarian actors to find a common narrative for climate adaptation in conflict-affected settings. This is through a series of private roundtables, as well as at UN climate conferences and other events including the Riyadh International Humanitarian Forum in February 2023.

SPARC research... has informed conversations with a number of key players on how they might more effectively support climate-resilience efforts in the Horn of Africa.

Improving how climate finance is accessed and used in the drylands

SPARC is currently supporting the UK government, as well as other humanitarian actors and programmes, to improve climate finance flows and scale up action in climate-vulnerable countries that have high levels of humanitarian need. This includes identifying the barriers that FCAS face in accessing and using climate finance, mapping and coordinating flows from development finance institutions, and supporting more joined-up action across different sectors to build long-term climate-resilient development. This last point is particularly critical in the context of FCAS, where peace, socioeconomic development and strong institutions are key to reducing the vulnerabilities of countries and communities to climate shocks.

SPARC is also strengthening the national capacity of the governments of Chad, Niger and Somalia to attract and use climate finance. This involves working with a range of governments, donors and aid agencies to enable more effective and coordinated climate work, forming a climate finance taskforce, and carrying out a stocktake of climate finance mobilisation, adaptation and resilience priorities.

Reconsidering anticipatory action in places affected by recurrent and protracted crises

SPARC research in Somalia (see Box 3) encourages aid actors to rethink the usefulness of anticipatory action for people living through recurrent and protracted crises. The outcomes of this research have informed conversations with a number of key players on how they might more effectively support climate-resilience efforts in the Horn of Africa, including: the START Network, Tufts University, the Centre for Humanitarian Change, the Famine Early Warning Systems Network and Building Resilient Communities in Somalia.

The SPARC research team is also providing technical support to Save the Children on its regional work on anticipatory action.

Supporting countries to move beyond national adaptation planning

SPARC is engaging with several regional economic communities in Africa – the Economic Community of West African States (ECOWAS), the East African Community (EAC) and the Intergovernmental Authority on Development (IGAD) – to better understand transboundary climate risks and how to manage them.

In 2023, this included a workshop which brought together representatives from a number of regional bodies to discuss relevant TCARs related to trade, livestock and financial flows, and how to mainstream climate risk management into relevant policies and mechanisms. The workshop provided impetus to many of these bodies to integrate TCARs into their work, SPARC is continuing to meet with the event organisers to keep the momentum going and to raise the profile of this issue at regional levels.

Promoting the uptake of innovative approaches and technologies in FCAS

SPARC is helping to shape the innovation landscape in fragile and conflict-affected parts of the drylands. In November 2022, SPARC experts showcased research on innovations in the drylands to over 450 participants of the AfriFin Accelerate Annual Learning Event in Nairobi, Kenya. SPARC's engagement generated significant interest from a wide range of innovators, investors and development partners on how to engage best with digital innovation in fragile, dryland contexts.

SPARC's work on innovative technologies and approaches in the drylands has also been shared widely by influential regional publications: 'What's #trending in pastoralist Kenya?' was published in Kenya's *The Elephant* in March 2023, and 'Re/claiming the utility and novelty of mobile phones and social media' in Nigeria's *The Republic* in April of the same year (Teyie, 2023a; Teyie, 2023b).



A Samburu woman in northern Kenya enters data into the Mbiotisho app.
Credit: ILRI/Kabir Dhanji

3. LOOKING TO THE FUTURE

Pastoralists, agropastoralists and farmers will continue to play a vital role in the development of Africa and the Middle East. Understanding these people's lives, livelihood aspirations, and which of their practices could be further supported and scaled up, will help realise the huge potential of the drylands as sources of employment, economic growth, food security and environmental stewardship.

SPARC's work on the drylands and pastoral livelihood systems ties into several emerging debates within the humanitarian, peacebuilding, anticipatory action, early warning, climate and development sectors.

In the climate arena, there is growing pressure on developed countries to support climate change adaptation in the world's most climate-vulnerable countries. As many of these countries are also fragile or affected by conflict, attention is turning to the need to invest in and build climate resilience in complicated and high-risk contexts. This is a topic that formed a key part of negotiations at COP 28 in December 2023 and that will continue to gain traction. SPARC's research contributes fresh perspectives and evidence to these discussions, and the programme helps convene a diverse group of actors to propose workable solutions to scale up finance and effective climate action in FCAS.

In the face of increasingly protracted, complex and interconnected crises, the whole aid system needs to come together to support more sustainable, climate-resilient development. There has been much discussion around the 'humanitarian–development–peacebuilding nexus' but, in practice, much work remains siloed and collaboration is difficult. As a consortium of organisations with different focus areas and expertise, SPARC provides actionable, evidence-based knowledge on how stakeholders can work together to achieve concrete progress on shared goals.

In recent years, pastoralism – historically a neglected and marginalised practice – has been gaining increasing recognition as a valuable livelihood system, source of nutrition and means of ecological stewardship. The UN has designated 2026 as the International Year of the Rangelands

and Pastoralists, and calls upon all relevant actors 'to fill knowledge gaps relating to rangelands and pastoralism and to promote innovative solutions for the sustainable management and ecological restoration of rangelands' (UNGA, 2022: 3). SPARC is well placed to support this call, not only through its generation of primary evidence and interview-based research, but also by interrogating the commonly held assumptions that have underpinned much work in pastoral communities.

Mobile phones have become integral to the lives of many pastoral communities in recent years. With increased adoption, there are increased opportunities for humanitarian and development stakeholders to leverage mobile phones to share information with, and to encourage sharing of information within, pastoralist communities digitally. These are just some of the innovative technologies and processes that SPARC continues to track and promote, and which have the potential to build social resilience, provide much-needed financial and weather information services, and offer opportunities for growth in the drylands.

More generally, over the next few years, SPARC's work will continue to fill critical gaps in evidence and research in the drylands: contributing primary case studies and country-specific analysis, and providing essential information on the people and perspectives that are missing from current work. This includes a much-needed focus on gender and social dynamics. No innovations or changes in the drylands can exclude women and youth, since the former are an integral part of the pastoral and farming ecosystem, and the latter will shape the future of life and work in these regions.

The issues that SPARC works on are not easy to resolve. In particular, the question: what does meaningful support to dryland communities look like? will continue to hold relevance far beyond the end of this programme in 2025. By bridging knowledge gaps and establishing the drylands as a unique set of contexts, which require specific attention and research, SPARC can contribute to future interventions in the drylands that are informed, empowering and effective.

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Kebele, Somali region of Ethiopia.
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