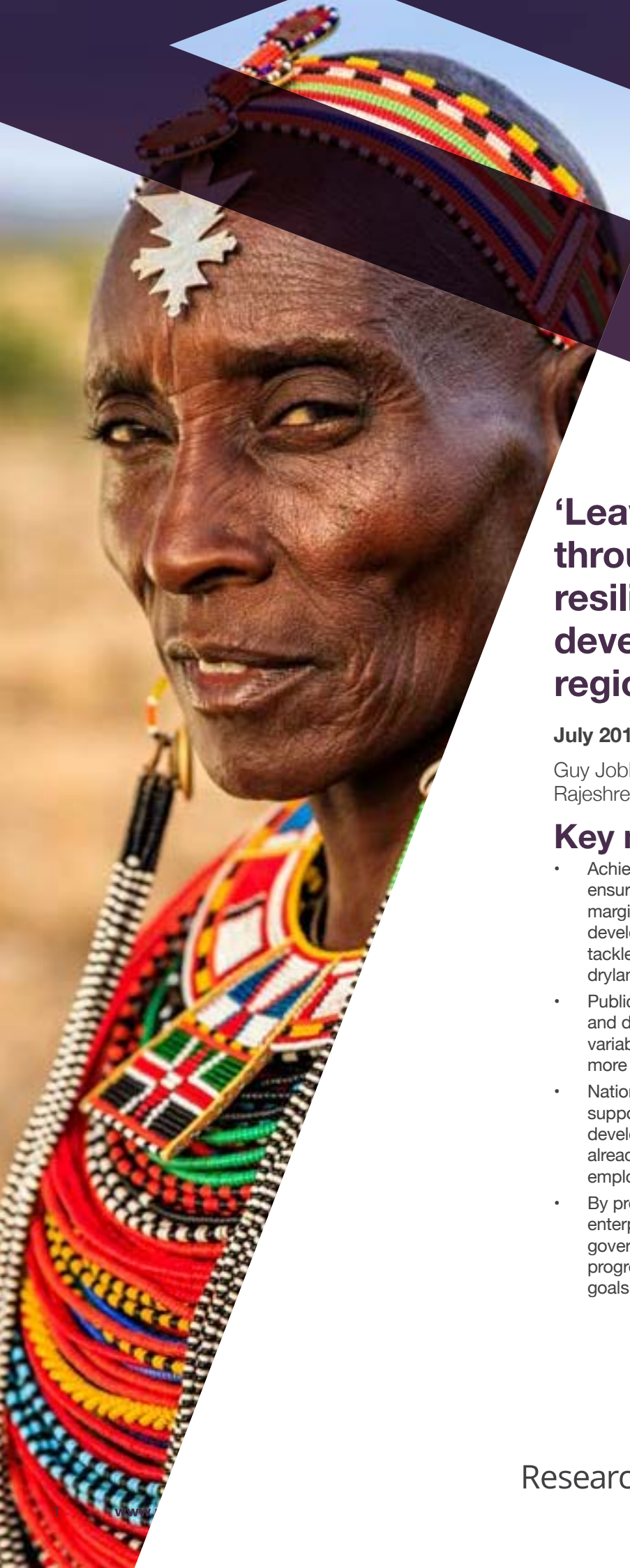

‘Leaving no one behind’ through enabling climate-resilient economic development in dryland regions

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Key messages:

- Achieving the Sustainable Development Goals (SDGs), ensuring that no one is left behind, and ending the marginalisation of dryland areas requires that governments, development partners and investors prioritise investments to tackle poverty and climate vulnerability in African and Asian drylands.
- Public policies and investments by national governments and development partners that recognise and work with the variability, seasonality and informality of dryland systems are more likely to support sustainable achievement of the SDGs.
- National governments and development partners can support dryland areas as drivers of inclusive, sustainable development by building on their productive sectors that are already major contributors to formal and informal trade and employment.
- By providing enabling environments for individuals and enterprises in drylands to adapt to climate change, national governments and development partners can spur real progress towards leaving no one behind and the global goals on climate adaptation.

PRISE
Pathways to resilience in semi-arid economies

Research for climate–resilient futures

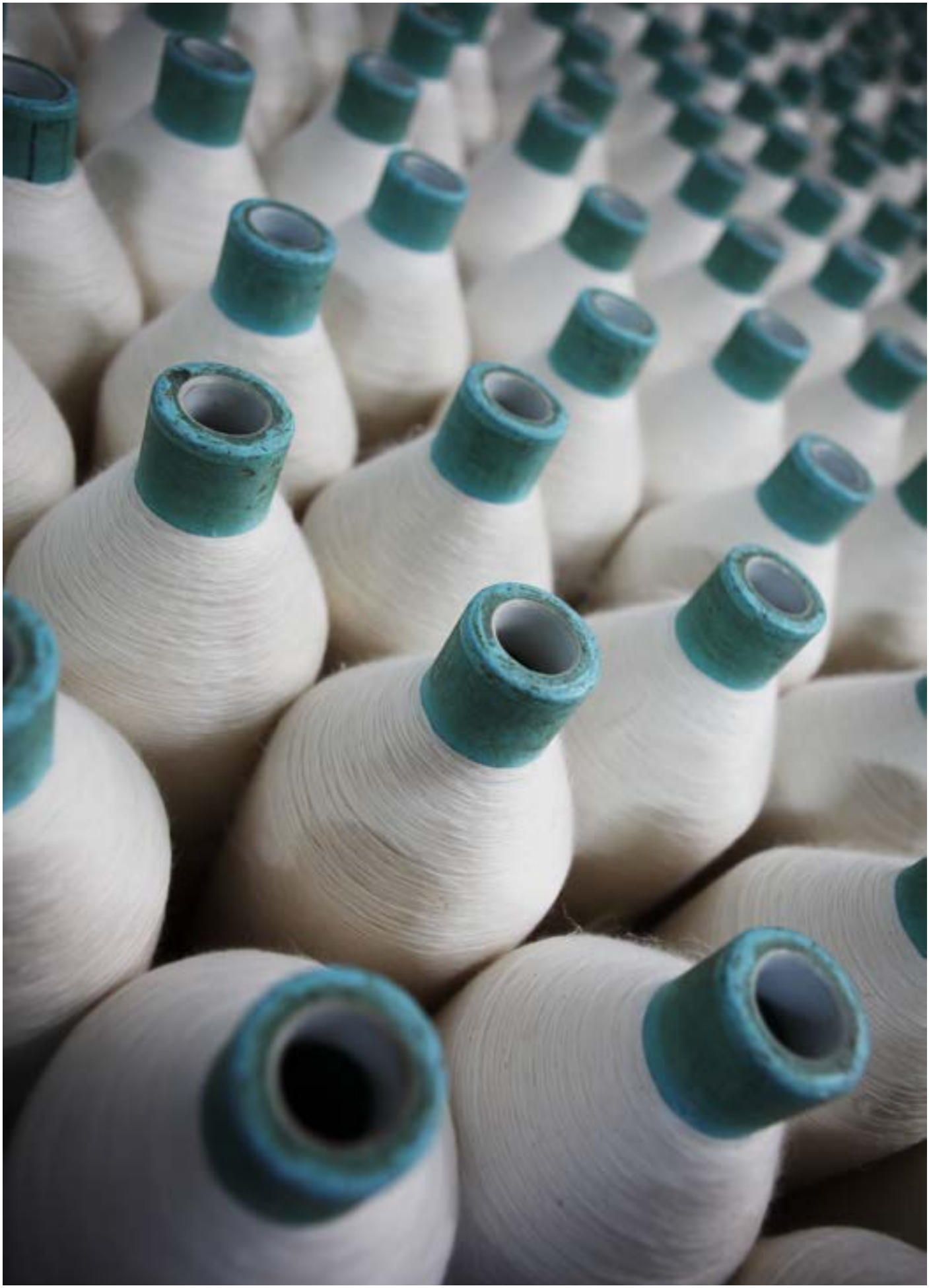

Image: iStock.com/Textile industry – cotton spools spinning thread, by Danish Khan
Cover image: iStock.com/African woman from Samburu tribe, Kenya, by Bartosz Hadyniak

About PRISE

Pathways to Resilience in Semi-arid Economies (PRISE) is a five-year, multi-country research project that generates new knowledge about how economic development in semi-arid regions can be made more equitable and resilient to climate change. PRISE aims to strengthen the commitment of decision-makers in local and national governments, and businesses and trade bodies, to rapid, inclusive and resilient development in these regions. It does so by deepening their understanding of the threats and opportunities that semi-arid economies face in relation to climate change.

This policy brief is the product of a collective effort based on the results of five years of robust, evidence-based and stakeholder-driven research carried out by the PRISE consortium in Senegal, Burkina Faso, Kenya, Tanzania, Pakistan, Tajikistan and Kyrgyzstan. The empirical basis for this briefing is provided by research from across PRISE, produced by the Overseas Development Institute (ODI, UK); the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science (GRI-LSE, UK); Innovation, Environnement, Développement en Afrique (IED, Senegal); Sustainable Development Policy Institute (SDPI, Pakistan); Kenya Markets Trust (KMT, Kenya); Regional Environment Centre for Central Asia (CAREC, Kazakhstan); the University of Ouagadougou (UO, Burkina Faso); and the Mountain Societies Research Institute at the University of Central Asia (MSRI, Kyrgyzstan).

The significance of drylands to 'leave no one behind'

'Leave no one behind' is a principle central to achieving the 2030 Agenda for Sustainable Development. The principle commits countries to ensure that none of the Sustainable Development Goals (SDGs) under Agenda 2030 will be considered met unless they have been met for everyone by undertaking the following actions:

- ending absolute poverty – in all its forms and ensuring that those who have been 'left behind' (in relative or absolute terms) can 'catch up' with those who have experienced greater progress;
- stopping the group and/or area-based discrimination that has resulted in unequal outcomes for some disadvantaged or marginalised populations;
- and prioritising and fast-tracking action for the furthest behind.

In this context, drylands[1] in Africa and Asia clearly emerge as neglected 'hotspots' of poverty and underdevelopment whose populations face great risks of being left behind. Drylands are home to 1 in 3 people of the world's population, and about half of them live in poverty. Sluggish economic growth, persistent shortages of water, food, and energy, and frequent climatic shocks are also typical in drylands.

Climatic and non-climatic stresses and shocks and socioeconomic inequalities affect populations in drylands disproportionately. For instance, drylands lose roughly 23 hectares every minute to desertification while at the same time they experience significant demographic shifts, including rapid urbanisation and a faster population growth than any other ecological zone. They also have some of the highest youth unemployment rates in the world, especially in the drylands of the Middle East and North Africa (MENA) region.

Achieving the global commitment to 'leave no one behind' seems especially daunting in dryland regions. It is here that governments must work to ensure that economic growth and social interventions to achieve the SDGs are tailored to the specific profile of the population and the economies in these areas and incorporate resilience to climate change as a central facet of any policy.

Challenges to achieving 'leave no one behind' in drylands

Drylands, which cover about 40% of Africa and South Asia, have seen rising temperatures over the past decades, as well as increases of extreme events such as heat waves, extreme rainfall and drought. Based on the IPCC's Fifth Assessment Report, climate change impacts will increase the risk of food insecurity and the breakdown of food systems in these regions, resulting in the loss of rural livelihoods and income due to insufficient access to drinking and irrigation water and reduced agricultural productivity, particularly for farmers and pastoralists.

The difficulties and shortfalls of development in drylands are often framed in terms of 'bad geography', including infertile soils that are prone to degradation, limited supplies of 'blue water' in rivers and lakes that can be used for irrigation to

compensate for low and unreliable rainfall, and being situated in landlocked interiors that limit access to markets. Worse, this view, rather than focusing on developing solutions that capitalise on the distinct ***qualities*** and ***opportunities*** of drylands, marginalises these regions and the communities and economies in them as areas and people that cannot drive economic development and progress towards achieving the SDGs.

This view also disregards the significance of dryland agriculture, including its livestock sectors, to national economies. In Kenya, the country's livestock sector contributes around 12% to the national GDP and employs around 50% of the agricultural workforce. The textile sector in Pakistan, which relies heavily on cotton produced in the country's semi-arid areas and is the largest sector in the country, accounts for 40% of the industrial labour force and provides income for 10 million farming families.

Socioeconomic systems in drylands also often tend to be highly mobile, based on livestock and pastoralism, rather than sedentary agriculture. This mobility, supported by social networks within these systems, makes traditional dryland people more resilient to droughts and other shocks. However, this mobility has come under increasing pressure in recent decades since governments find it easier to deliver services to, and tax, sedentary communities.

To provide evidence for alternative pathways to pro-poor, climate-resilient economic development in the drylands of Africa and Asia, PRISE has been working with policy- and decision-makers in these areas since 2014 to understand how different factors intersect to create marginalisation for drylands and ways to overcome these barriers.

Based on PRISE research there are two policy areas that, if prioritised by government investment, can achieve multiple SDGs (see Box 2) for the marginalised populations of drylands and achieve real progress to end the historic neglect of these areas and its people:

- **Focusing on major productive sectors in drylands:** Rather than viewing the seasonality, mobility and informality of dryland economies as weaknesses and barriers to sustainable development, successful approaches will build on the strengths, dynamics and characteristics of dryland systems, including their inherent adaptive capacity.
- **Enabling private actors:** Private actors in drylands, often migrants and informal enterprises, are key to dryland economies. Governments have a vital role to play in creating an enabling environment for the private sector, including larger firms and formal and informal micro, small and medium enterprises (MSMEs) to support this transformation.

Image: iStock.com/Cotton by Riley MacLean

SDGs of particular importance to drylands

SDGs 1 & 2: Large numbers of smallholders and livestock producers in drylands live in chronic poverty, challenged by low productivity, scarce water and degraded soils. This calls for a focus on the sustainable intensification and diversification of production systems, including livestock systems, and the sustainable transformation of value chains.

SDG 5: Women form over 45% of the agrarian workforce in developing countries, yet the gender gap in agriculture is significant. Gender-focused research, value chains and innovations, as well as diversified income sources, are required.

SDGs 6 & 12: Water is at a premium in drylands. Yet agriculture consumes about 80% of the fresh water resources in these areas. Poor farming practices are degrading soils and reducing productivity. Improved water management and conservation agriculture are needed to manage this scarce resource effectively.

SDG 8: Drylands suffer from sluggish economic growth, and high unemployment and underemployment. Sustained, inclusive and sustainable economic growth that offers full and productive employment and decent work for all is a key requirement and can be achieved by increasing productivity within key sectors in drylands and diversification into related sectors.

SDG 10: Poverty is particularly pervasive in dryland areas compared to more humid regions. Dryland areas have long been marginalised and are characterised by under-capacitated public institutions and weak markets. Addressing inequality within and between countries through investments in human capital and policies that support the growth of dryland economies are needed.

SDG 13: Climate change is affecting drylands disproportionately, increasing the risk and challenges for crop and livestock production. Climate-resilient crop and livestock systems need to be strengthened and communities empowered to access climate-resilient technologies and knowledge, including early warning systems.

SDG 15: Land degradation in drylands is a serious issue, leading to loss of fertile soils and desertification. In irrigated areas, soil salinity is spreading fast and reduces productivity. A new global ambition of a Land Degradation Neutral World is required to tackle these issues.

SDG 17: Dryland regions have suffered from weak national agriculture research institutions. Strengthening national research capacities and establishing research partnerships are required to enable countries to tackle the specific challenges in drylands.

Sources: Jobbins et al., 2016; Carabine and Simonet, 2018; ICARDA; UNDP

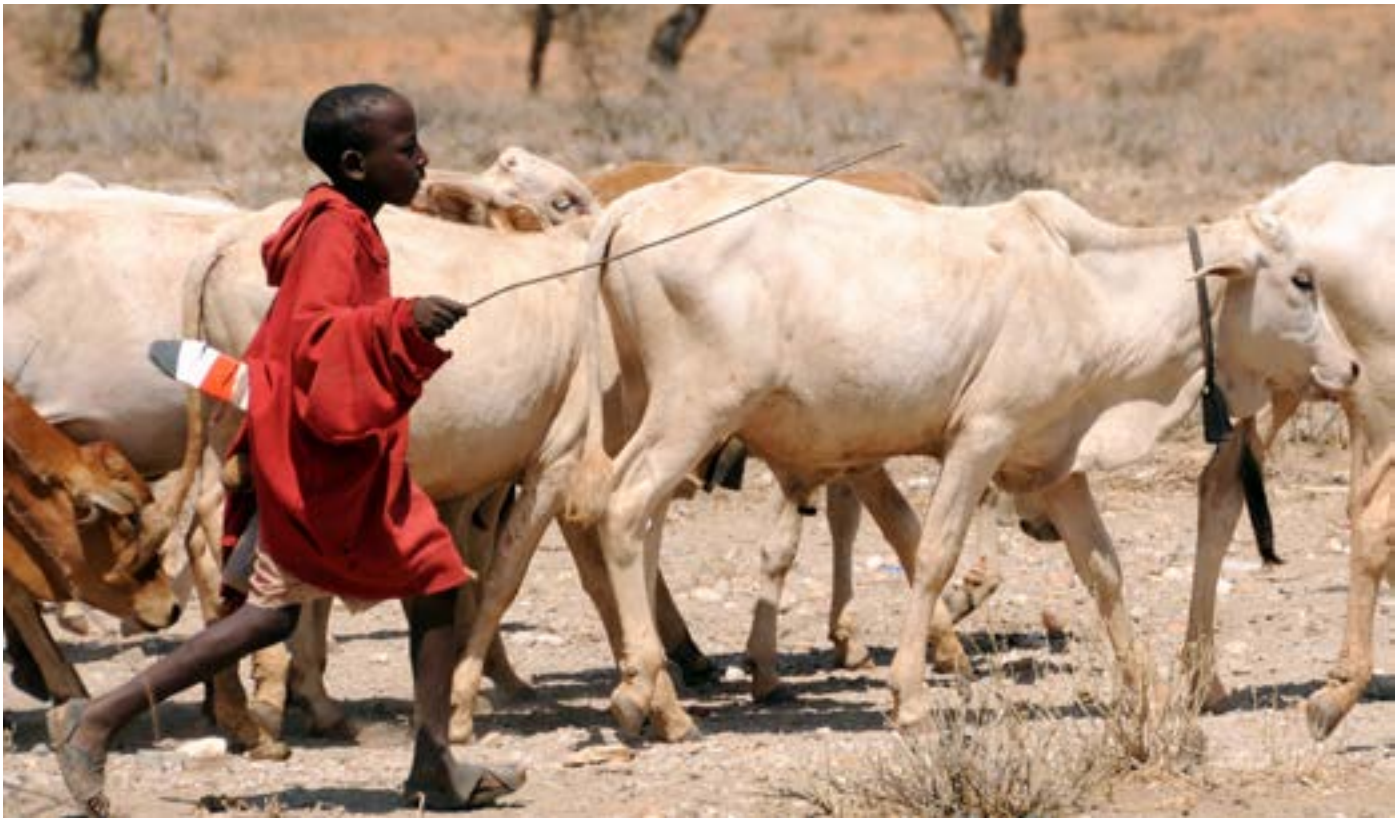

Image: Samburu boy herding cattle in Kenya by Ray Morris/Creative Commons License

Focusing on major productive sectors in drylands

Successful approaches to development will build on the strengths, dynamics and characteristics of dryland systems. This means looking at sectors and livelihood activities that are already common in drylands and which provide a livelihood for many of the world's poorest and most vulnerable people. These sectors represent important economic opportunities in dryland countries, and climate change provides a window of opportunity to garner political support for them.

The work PRISE has carried out with its Value Chain Analysis for Resilience in Drylands (VC-ARID) approach since 2014 shows how government policies can support these sectors to adapt to climate change and expand economic opportunities for marginalised populations. In Kenya, Pakistan, Senegal, Burkina Faso, Tajikistan and Uganda, efforts to transform the beef, dairy, and cotton value chains include working together with actors involved along all steps of the value chains to identify climate risks and develop adaptation options and opportunities in the following ways:

Remedy the disconnect between producers in drylands and everyone else along the value chain: Producers across all value chains are often subject to inequitable price conditions and incur transactional costs, which can result in unequal distribution of the added value along the chain, challenging the achievement of SDG 1 to end absolute poverty and SDG 2 to achieve food security. Producers at the lower end of value chains get paid much less than they should in comparison to the profit margins realised by actors at the higher end of the chains. When geographic marginalisation overlaps with economic marginalisation, producers are expected by other sectoral stakeholders to manage most of the risks affecting the sector, but they do not always have the capacity to do so. There are opportunities for efficiency improvements along the chains by supporting greater vertical integration (for instance through an improved enabling environment provided, for example, through government policies or access to finance and information) while retaining the important characteristics of the production system that maintain adaptive capacity.

Improve access to trade and export markets: In all the value chains studied, there are challenges to accessing the benefits of international trade and export markets. As such, there are opportunities to consider in strengthening the exports in these value chains and ensuring that marginalised dryland areas receive access to better trade terms, which would support meeting SDG 10 to reduce inequity within and among countries.

Invest in diversifying economic sectors and in producers' ability to be climate resilient: Across all the value chains studied, combinations of horizontal integration (for example, the creation of jobs in service industries such as financial and animal health services) and vertical integration (for example, improved quality of livestock and cotton products and the transformation of beef and raw cotton into premium cuts and textiles) not only offer opportunities to increase productivity within sectors, it also supports diversification into related sectors, such as tourism in the case of Kenya's rangelands. However, to be sustainable and inclusive, adaptation options must be socially acceptable as well as economically viable and climate resilient if they are to meet SDGs 1 (end poverty), 2 (achieve food security), 8 (achieve sustainable economic growth and decent work for all), 13 (combat climate change) and 15 (maintain terrestrial ecosystems).

Focusing on producers in drylands is important as they are often less aware of adaptation options. For example, cotton producers have limited climate information in order to plan, whereas textile manufacturers are well aware of risks but are not compelled to invest in value chain adaptation. There is a need to tailor services to close this gap, for example by providing targeted financial and climate information and extension services to these producers in order to meet SDGs 1, 2 and 13.

Box 1. What is climate-resilient economic development?

PRISE defines climate-resilient economic development as: The full range of evolutions undertaken by the economy and by society towards sustainable development. This is characterised by a shift towards sectors that boost inclusive and adaptable growth, and a gain of productivity within sectors and that enables all aspects of the economic system (i.e. the means of producing, exchanging and distributing goods and services) to avoid, absorb and adapt to climate impacts. This increase in growth and productivity must be attained without putting extensive pressure on natural assets and without generating negative environmental spill overs that cannot be internalised. All in society must share the benefits of this growth and productivity and have access to opportunities.

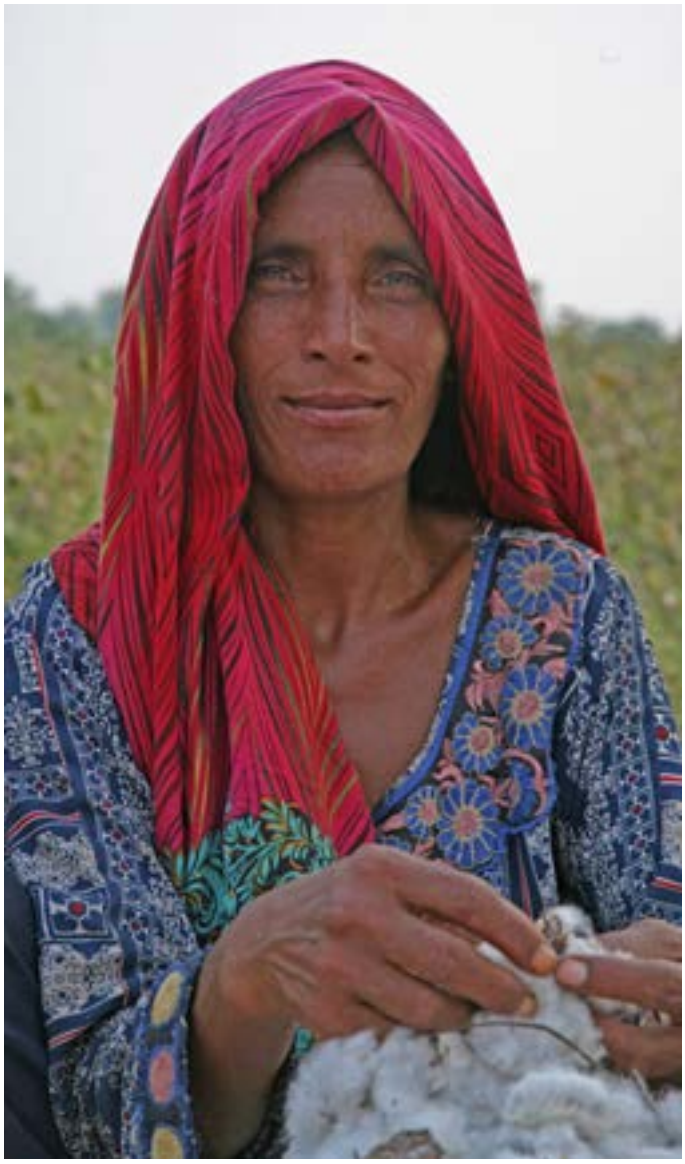

Image: A cotton picker in Punjab, Pakistan, by Rajeshree Sisodia/PRISE

Enabling private actors

The decisions made by private individuals and firms are critical to drylands and their economic development. MSMEs in semi-arid areas engage in vibrant economic activity in key sectors, such as livestock or agricultural trade, and are the engines of economic growth and employment. Remittances sent back by migrants to their homes in the dryland areas of Senegal and Tajikistan are used to fund collective investments that benefit entire communities and economies, such as investments in solar energy. The importance of successful migration, and remittances, illustrates the power of the individual decisions that private actors make to support transformation and development in drylands. However, because of the overlap between geographic and sociocultural marginalisation, private actors in drylands are often excluded from decision making that directly affects their lives. There is huge untapped potential for the local private sector in drylands to contribute to inclusive, climate-resilient economic development (see Box 1) and achieve the SDGs. Key factors that can support this include:

Access to extension services are key drivers of private adaptation decisions made by dryland populations: Access to extension services plays a key role in explaining private adaptation decisions. In particular, early warning systems (including price and climate information) and access to loans are critical for private adaptation and for enabling producers to respond and cope with change in time to minimise effects on their well-being and meet SDGs 1, 2, 13 and 15.

Recognising the different roles of women and men in value chains and adaptation: Comparing parallel value chains in the livestock sector – beef and milk in Kenya and Senegal – shows that local milk value chains provide affordable products to poor people and offer significant economic opportunities to women, while long value chains based on large herds that sell to the wealthy in cities generate jobs for men. There are opportunities to increase the productivity and performance of local markets and enterprises, especially for women, which supports progress towards achieving SDG 5 on gender equality. This is particularly relevant as women entrepreneurs are more likely to engage in sustainable adaptation in response to climate risks, while men tend to adopt unstainable coping strategies such as the distress sale of assets. Women also often spend income on the most important household needs including health, education and food security, all of which contribute to development and climate resilience. In Tajikistan, for example, households where women control the family budget spend on average twice as much on basic necessities and expenditures related to human capital than households controlled by men.

Investing in addressing barriers to adaptation: Private actors in drylands are constrained by a broad range of financial, technological, infrastructural, informational, social, institutional and regulatory barriers that undermine their ability to plan and implement adaptation options. This is reflective of the relatively marginalised position of semi-arid lands in national economies. Clearly public policies need to remain responsive to the varying needs of dryland economies and actors, including those in informal enterprise, to address marginalisation and support economic growth that is both climate resilient and inclusive, and able to meet the SDGs.

Conclusion

Focusing on climate-resilient economic development in drylands must be a precondition to meet the 'leave no one behind' principle, given the pervasively high poverty levels in drylands, the marginalisation and discrimination of these regions and the socioeconomic groups that live in them, and the impacts of climate change that affect the people and the economies in drylands disproportionately. If not addressed, all these factors have the potential to undermine development gains made so far.

Shifting the narrative around marginal areas such as drylands is one way in which the transformation needed to enhance sustainable development and address the climate challenge can be driven. The starting point for achieving these twin goals is recognising the wealth of opportunities marginal areas such as drylands offer and identifying entry points for investment and action by both public and private actors.

PRISE has shown that investments in marginalised dryland areas can support economic development that allows for the achievement of the SDGs and adaptation to climate change. Investing in individual SDGs will not be enough. A holistic, territorial approach to economic development that understands the qualities of dryland systems and builds sustainably on indigenous livelihood systems and sectors that have their production rooted in drylands is a better way forward.

Recommendations

- Achieving the Sustainable Development Goals, ensuring that no one is left behind, and ending the marginalisation of dryland areas requires that governments, development partners and investors prioritise investments to tackle poverty and climate vulnerability in African and Asian drylands.
- Public policies and investments by national governments and development partners that recognise and work with the variability, seasonality and informality of dryland systems are more likely to support sustainable achievement of the SDGs.
- National governments and development partners can support dryland areas as drivers of inclusive, sustainable development by building on their productive sectors that are already major contributors to formal and informal trade and employment.
- By providing enabling environments for individuals and enterprises in drylands to adapt to climate change, national governments and development partners can spur real progress towards leaving no one behind and the global goals on climate adaptation.

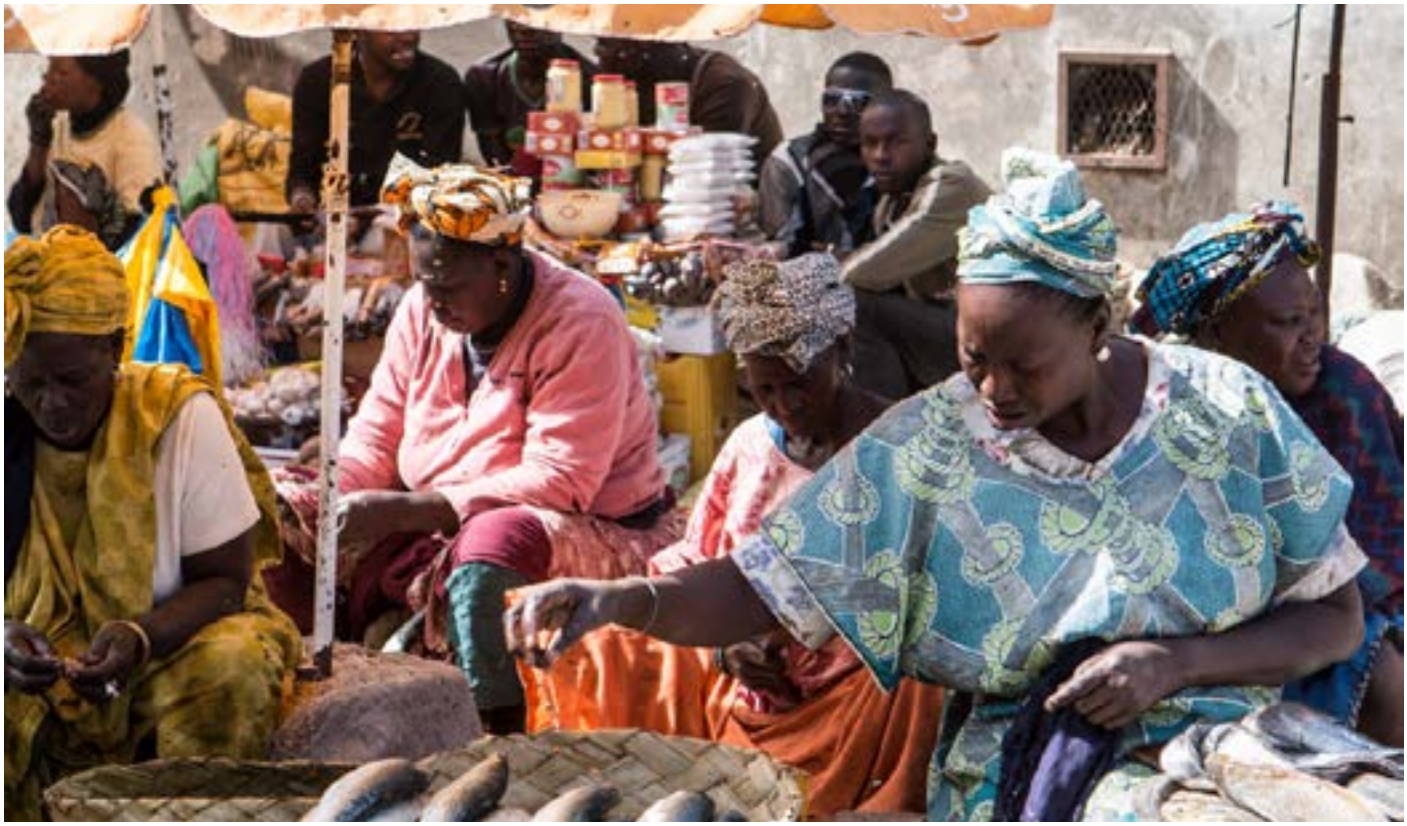

Image: Saint Louis market scene by Carsten ten Brink/Creative Commons License

1. According to the Millennium Ecosystem Assessment (2005), the term drylands includes hyper-arid, arid, semi-arid and dry sub-humid zones. As such, where the term drylands isused in this brief it includes – but is not synonymous with – semi-arid lands.

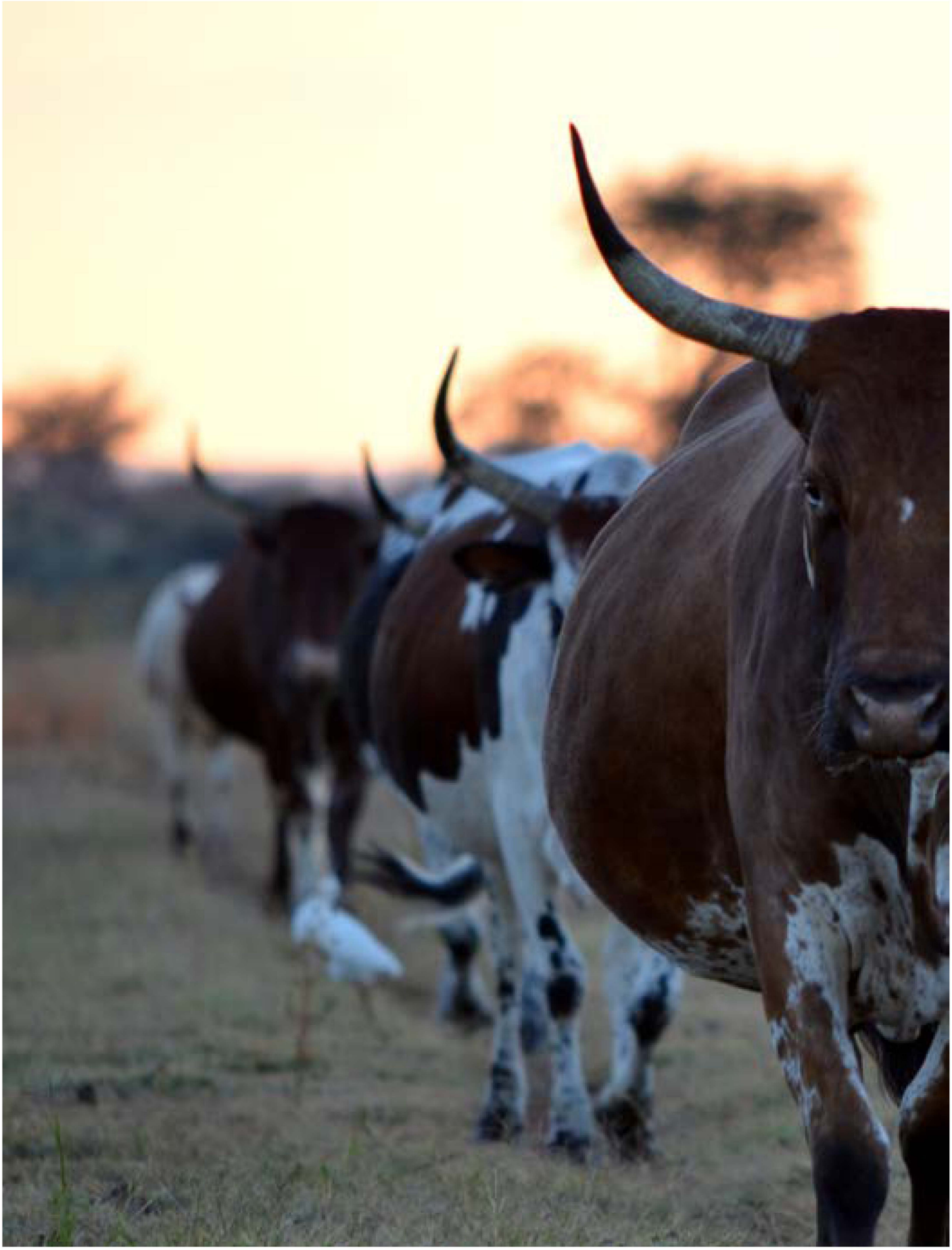

Image: iStock.com/Succession of African Nguni cattle walking in the bush, by ChanelBCreating

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Research for climate-resilient futures

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This briefing has been produced as part of a series of papers to guide the long-term research agenda of the Pathways to Resilience in Semi-arid Economies (PRISE) project. PRISE is a five-year, multi-country research project that generates new knowledge about how economic development in semi-arid regions can be made more equitable and resilient to climate change.

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